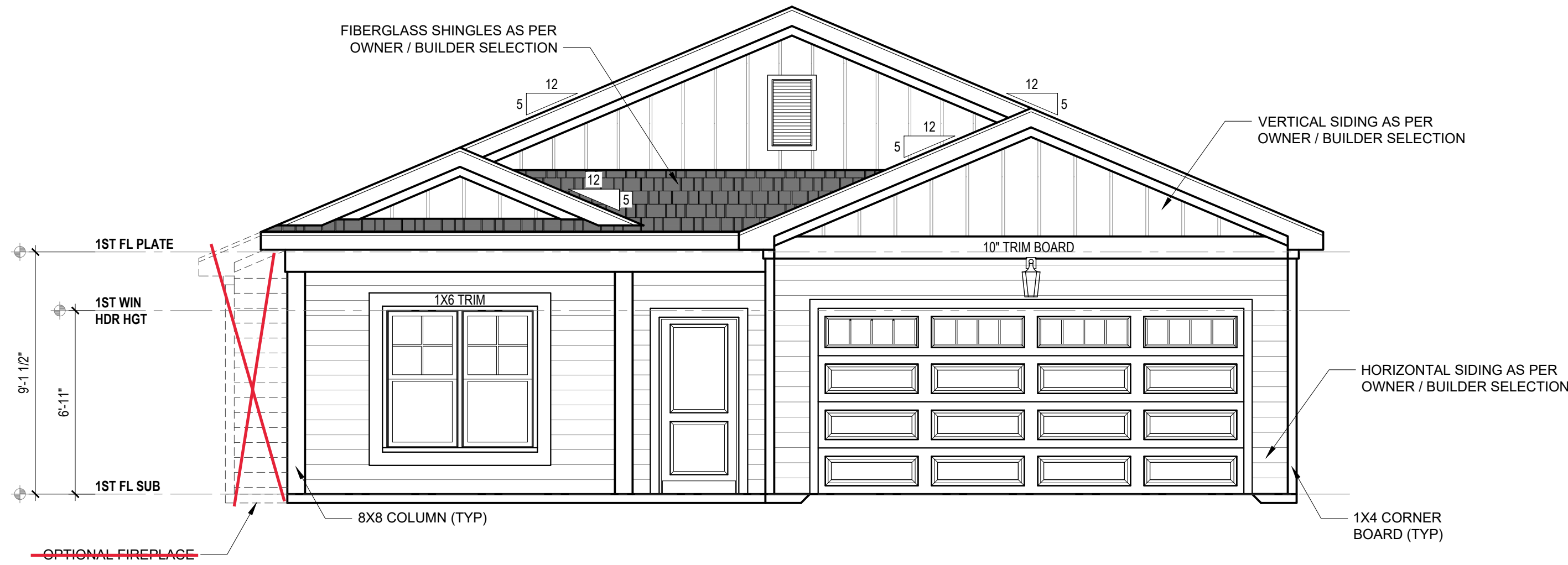
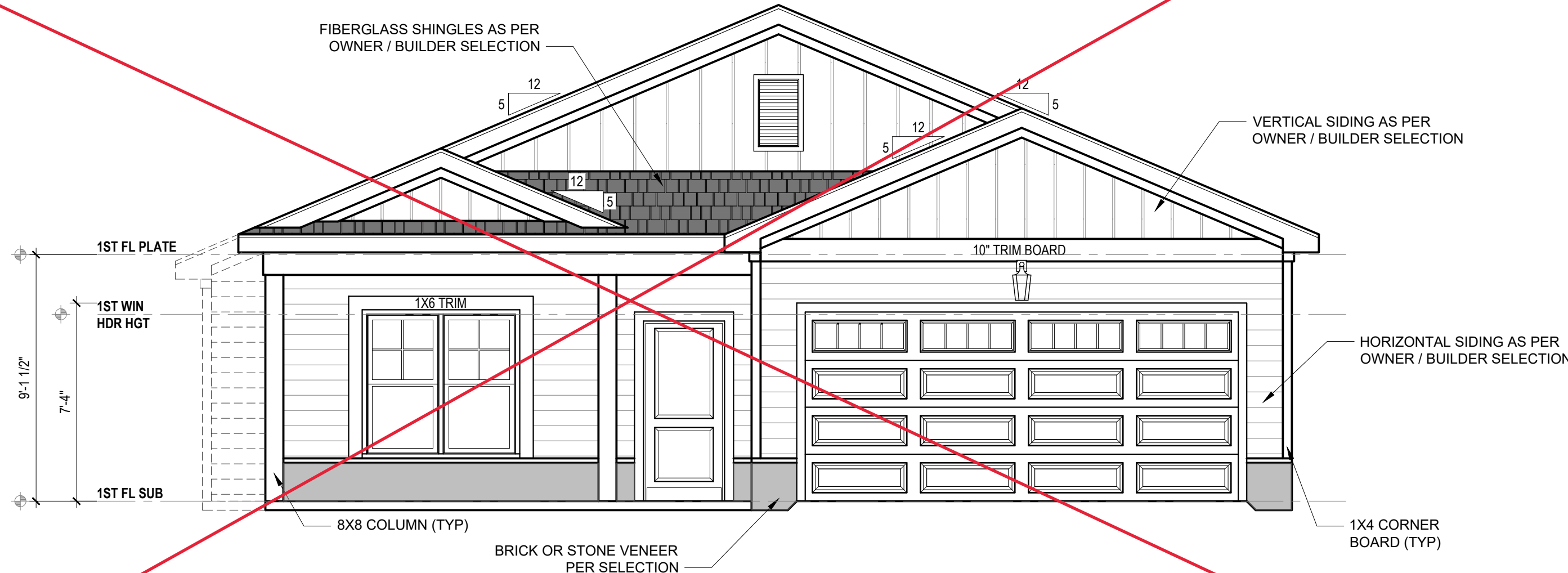


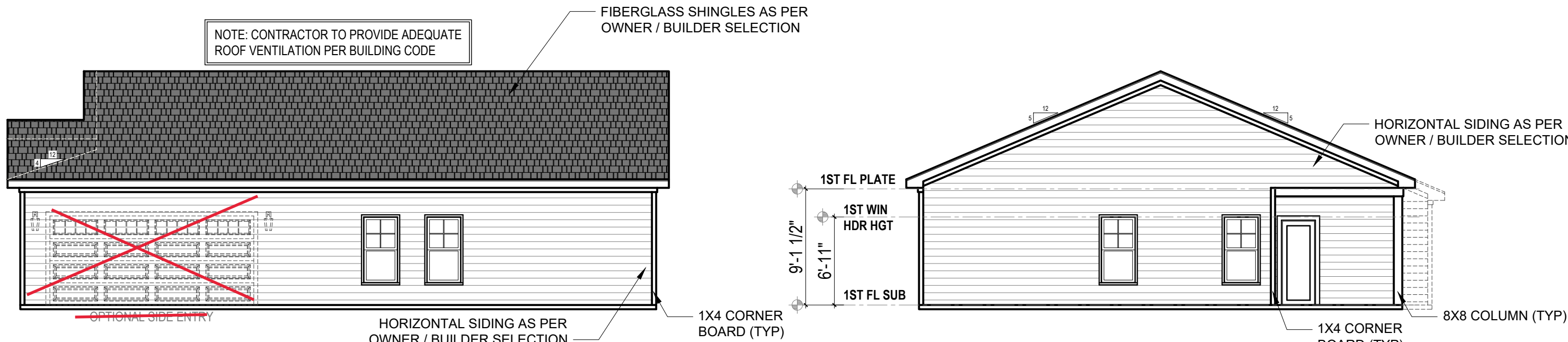
THE HAVILLAND



FRONT ELEVATION C
1/4" = 1'-0"



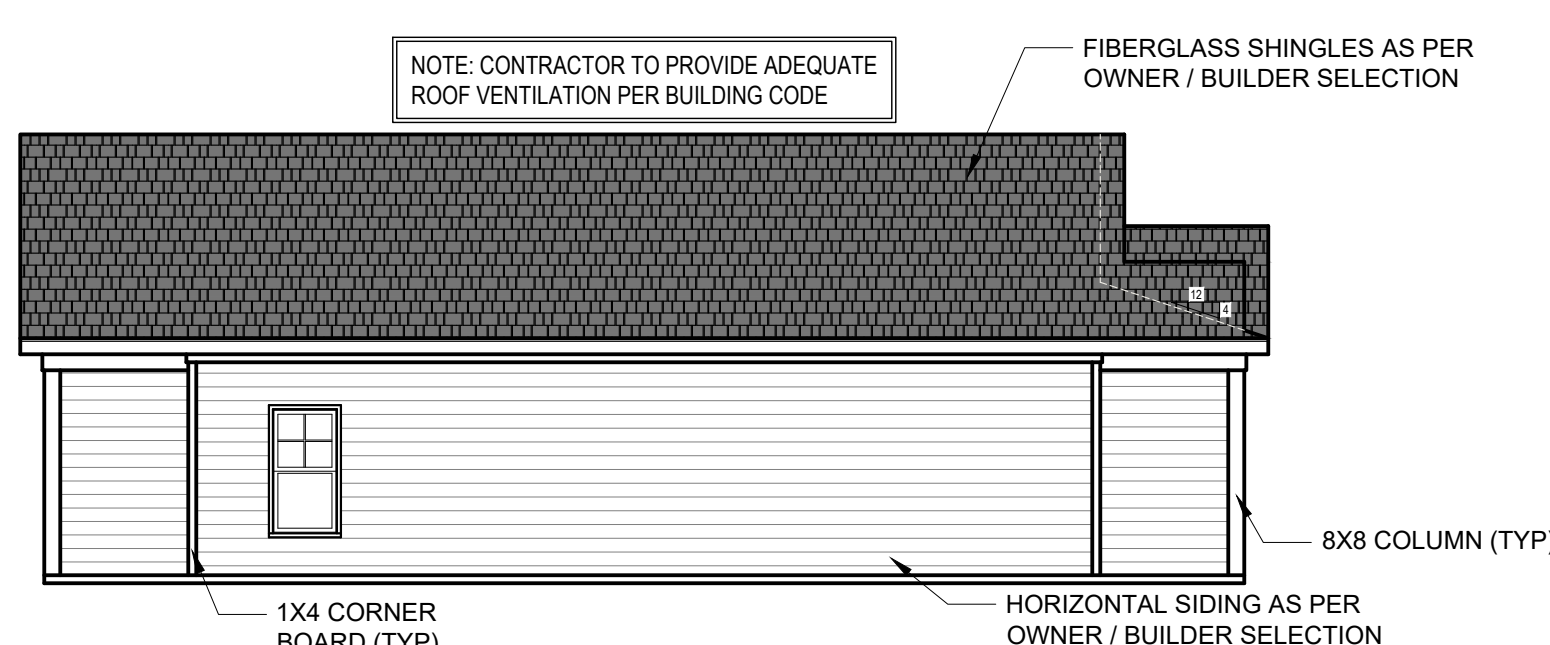
**FRONT ELEVATION C
W/ OPTIONAL VENEER**
1/4" = 1'-0"



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



REAR ELEVATION C
1/8" = 1'-0"



LEFT ELEVATION C
1/8" = 1'-0"

**2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS**

1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
5. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
6. Communication is imperfect and every contingency cannot be anticipated.
7. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
8. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
9. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
10. Written dimensions on these plans always have precedence over scaled dimensions.
11. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

HNL-000-046

PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"

WEBSITE
www.
drbhomedesign
.com

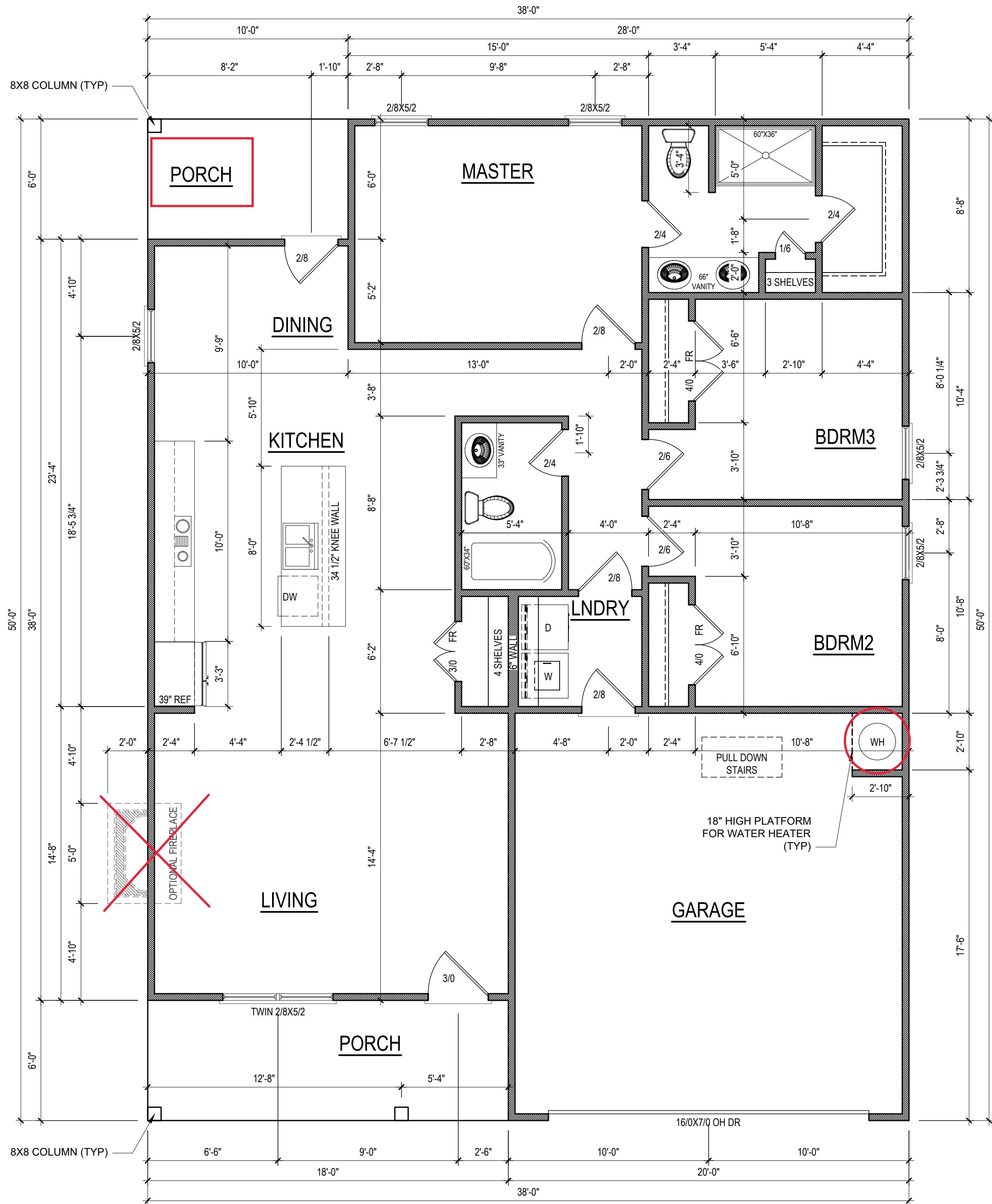
PROJECT NAME
THE
HAVILLAND

drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME
A&G Residential
916 Arsenal Ave. Suite B.
Fayetteville, NC 28305
jenn@agresidentialnc.com
(910) 237-7944

SHEET NAME
ELEVATIONS
SHEET #

- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
- Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
- Written dimensions on these plans always have precedence over scaled dimensions.
- It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
- DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.



FIRST FLOOR PLAN
1/4" = 1'-0" CEILING HGT. = 9'-0"

NOTE: VERIFY WINDOW SILL HEIGHT CLEARANCE ABOVE TUBS AND COUNTERTOPS TO ALLOW FOR TRIM AND/OR BACKSPLASH

2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS

HEATED SQUARE FOOTAGE	
First Floor	1330
TOTAL HEATED	
1330	
UNHTD SQUARE FOOTAGE	
Garage	402
Front Porch	108
Rear Porch	60
TOTAL UNHEATED	
570	
TOTAL SQ FT	
1900	

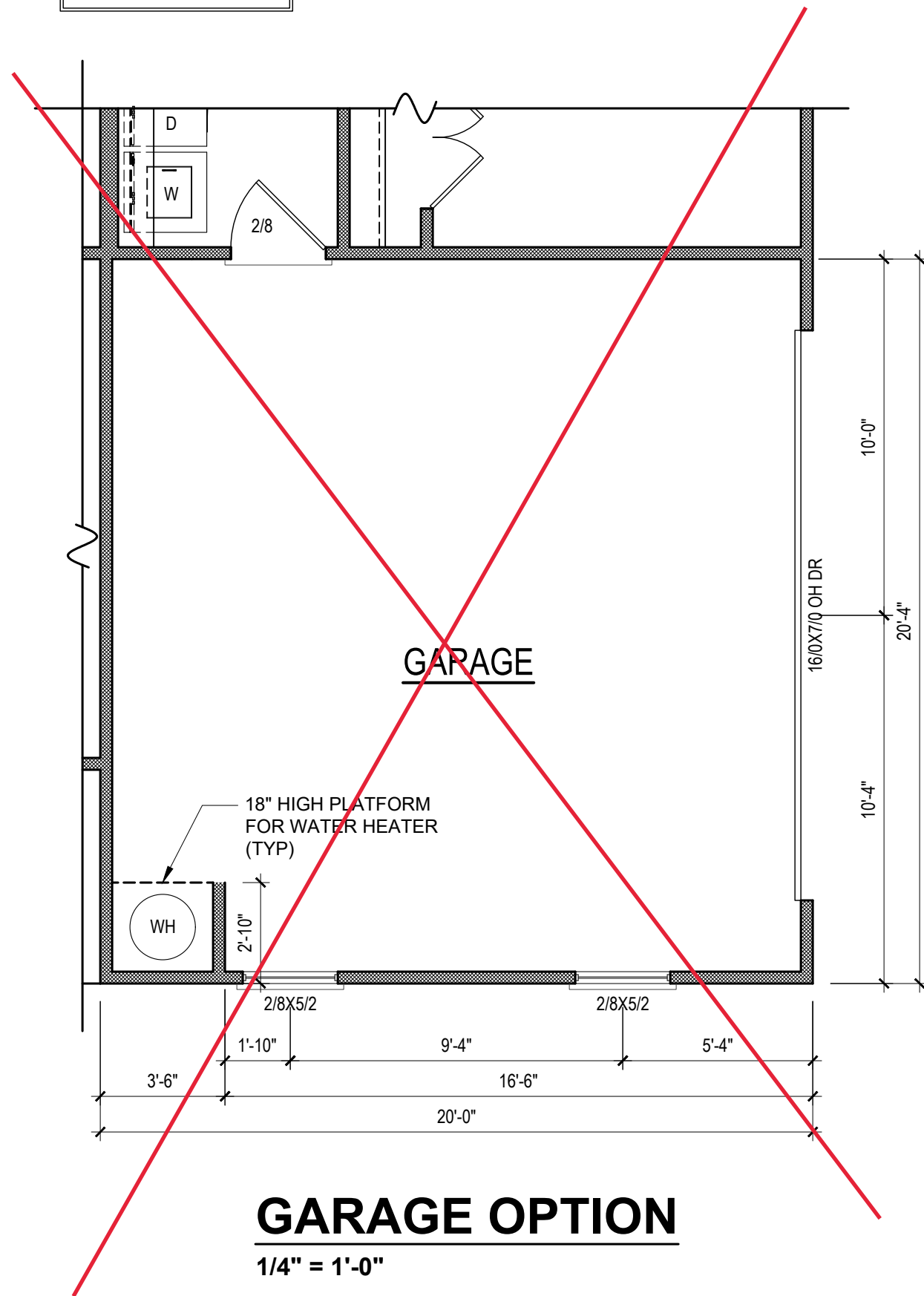
NOTE:
SEE ELEVATIONS FOR
WINDOW HDR HGTS

NOTE:
ALL DOORS ARE 6'-8"
TALL UNO

NOTE:
ALL EXTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL INTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL DIMENSIONS ARE
FRAME TO FRAME



GARAGE OPTION
1/4" = 1'-0"

PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"

WEBSITE
www.
drbhomedesign
.com

PROJECT NAME
THE
HAVILLAND

drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME
A&G Residential
916 Arsenal Ave. Suite B.
Fayetteville, NC 28305
jenn@agresidentialnc.com
(910) 237-7944

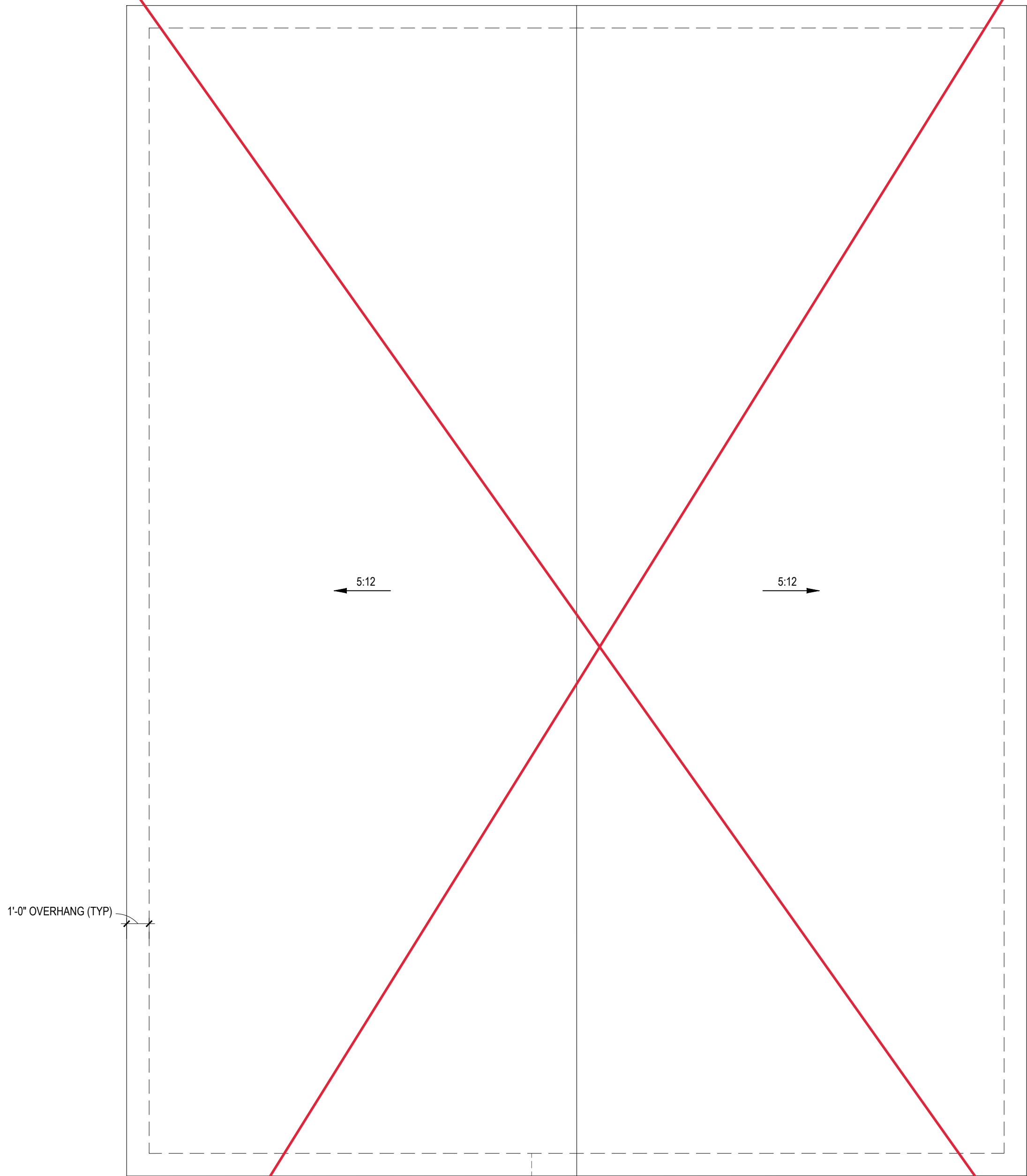
SHEET NAME
1ST_FLOOR

SHEET #

8

of 10

2x4 WALLS; 2X4 GARAGE WALLS & 2X6
PLUMBING WALLS AS NEEDED. 9'
CEILINGS

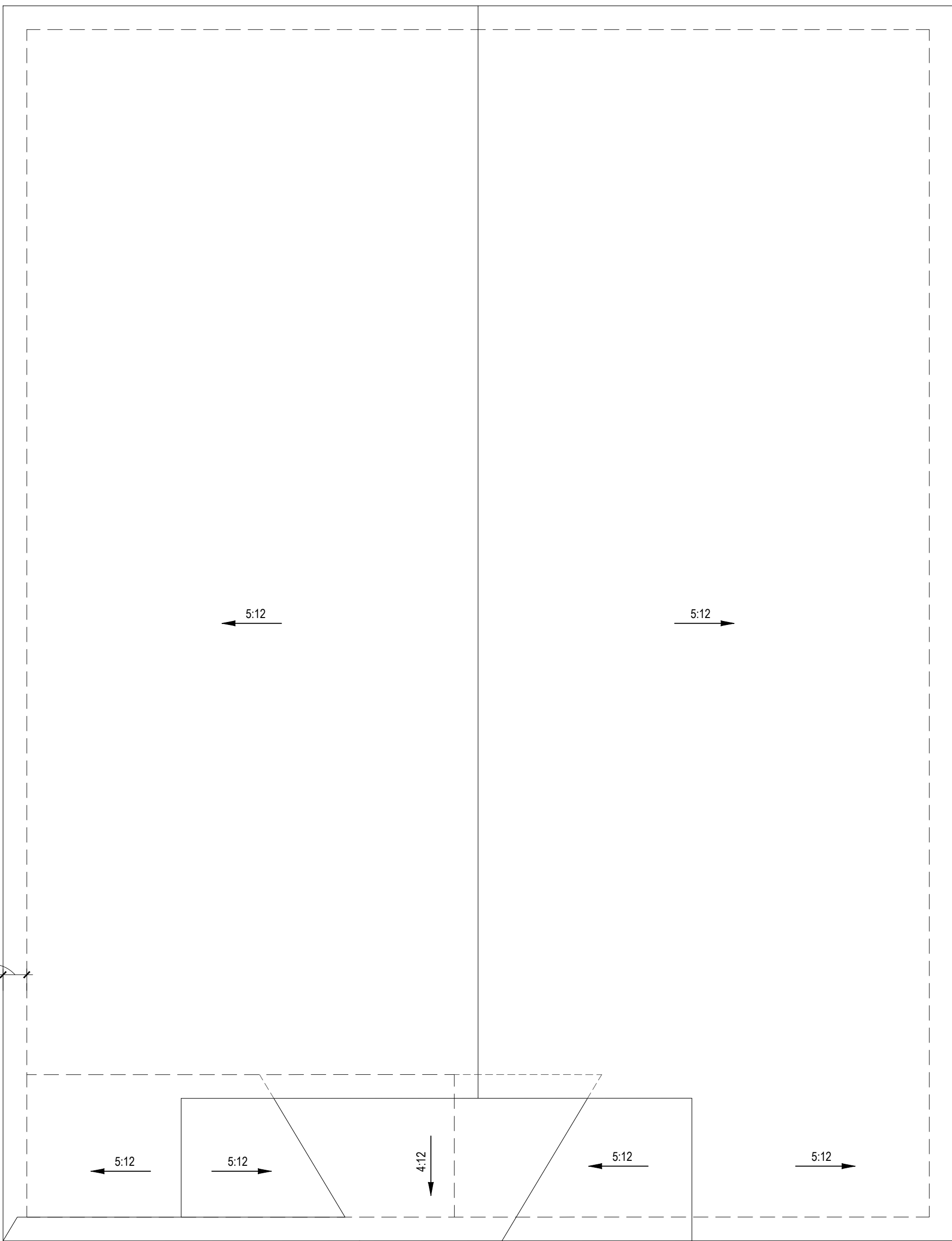


NOTE: SEE STRUCTURAL PLANS FOR
ATTIC VENTILATION CALCULATIONS

NOTE: ANY ROOF PITCH 4:12 OR LESS SHALL BE
PROPERLY WATERPROOFED PER BLDG. CODE

ROOF PLAN - ELEVS A,B
1/4" = 1'-0"

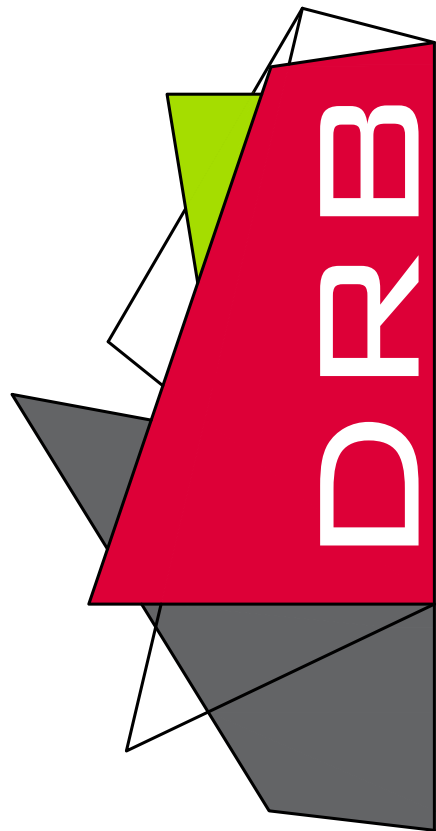
1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
5. Communication is imperfect and every contingency cannot be anticipated.
6. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
7. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
8. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
9. Written dimensions on these plans always have precedence over scaled dimensions.
10. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
11. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.
- 12.



NOTE: SEE STRUCTURAL PLANS FOR
ATTIC VENTILATION CALCULATIONS

NOTE: ANY ROOF PITCH 4:12 OR LESS SHALL BE
PROPERLY WATERPROOFED PER BLDG. CODE

ROOF PLAN - ELEVS C,D
1/4" = 1'-0"



PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"

WEBSITE
www.
drbhomedesign
.com

PROJECT NAME
THE
HAVILLAND

drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

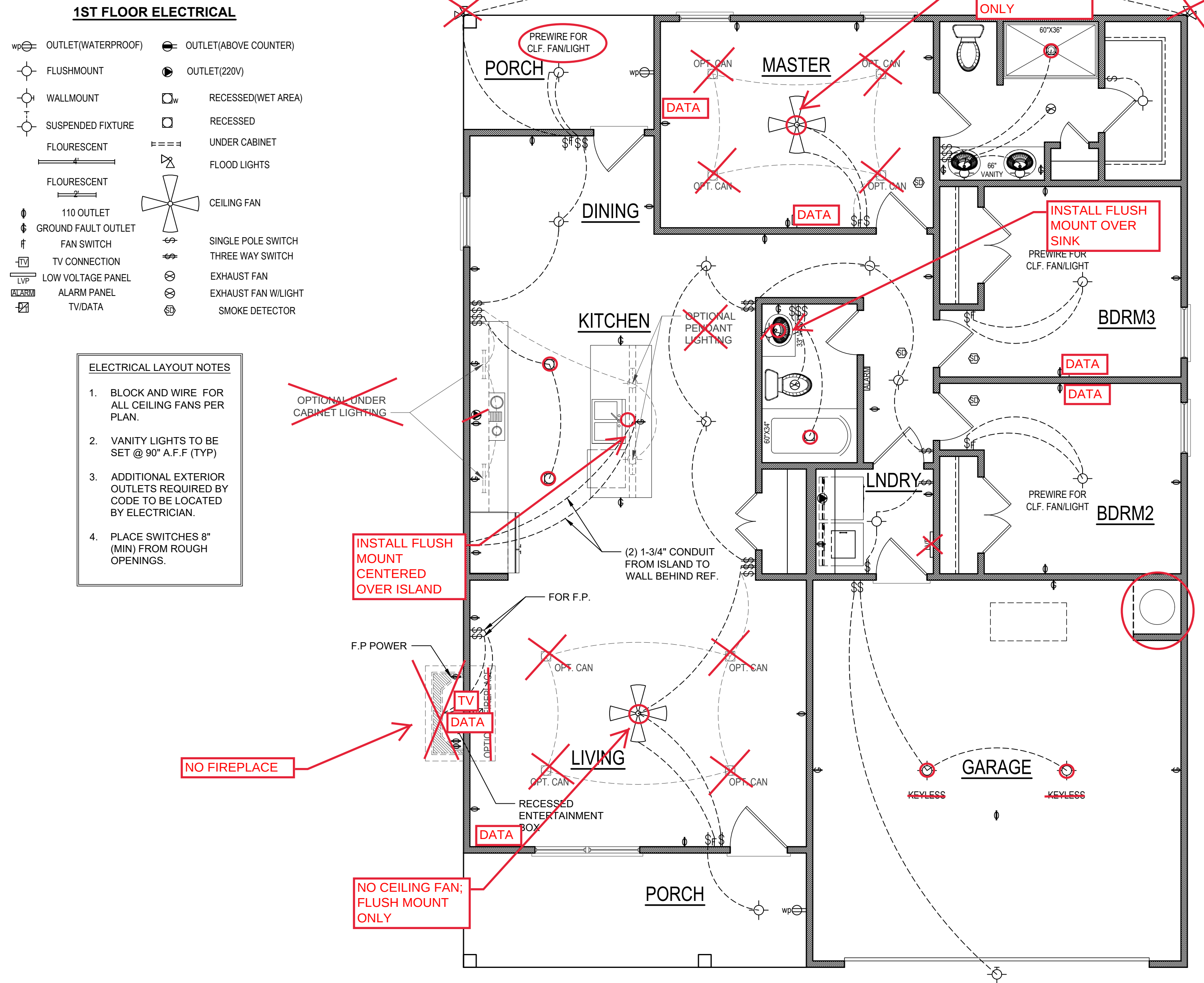
CLIENT NAME
A&G Residential
916 Arsenal Ave. Suite B.
Fayetteville, NC 28305
jenn@agresidentialinc.com
(910) 237-7944

SHEET NAME
ROOF

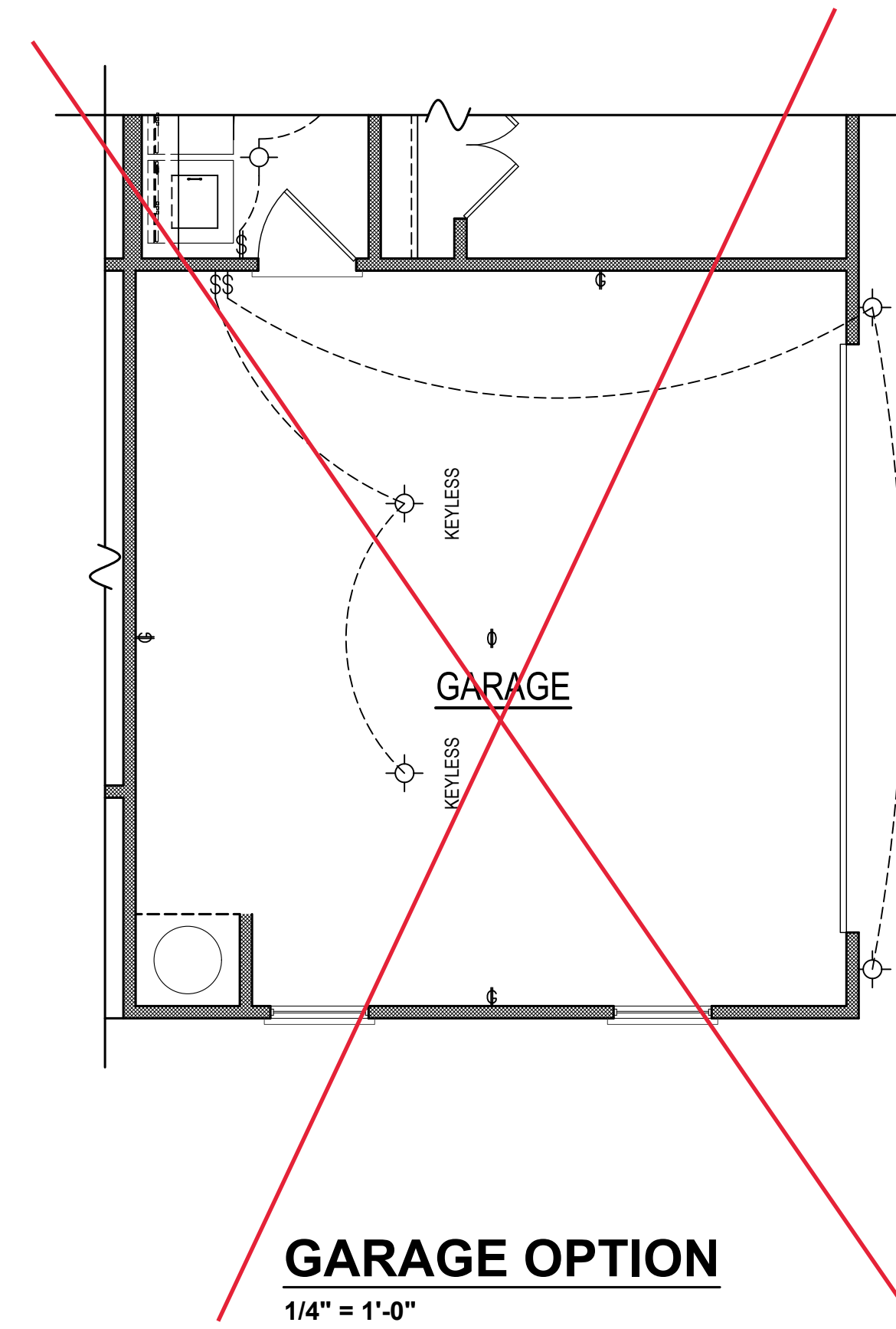
SHEET #

9

of 10



FIRST FLOOR PLAN



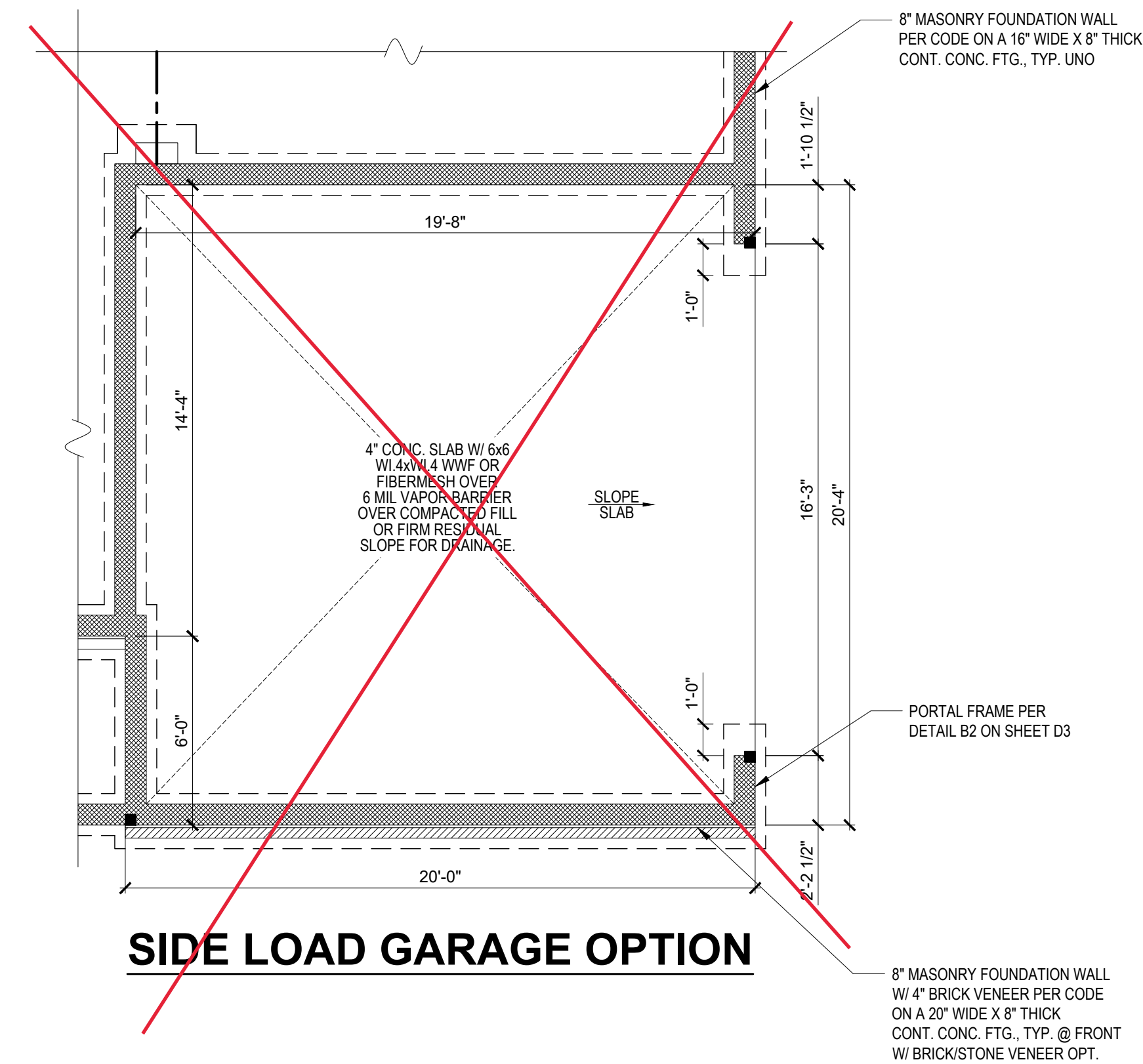
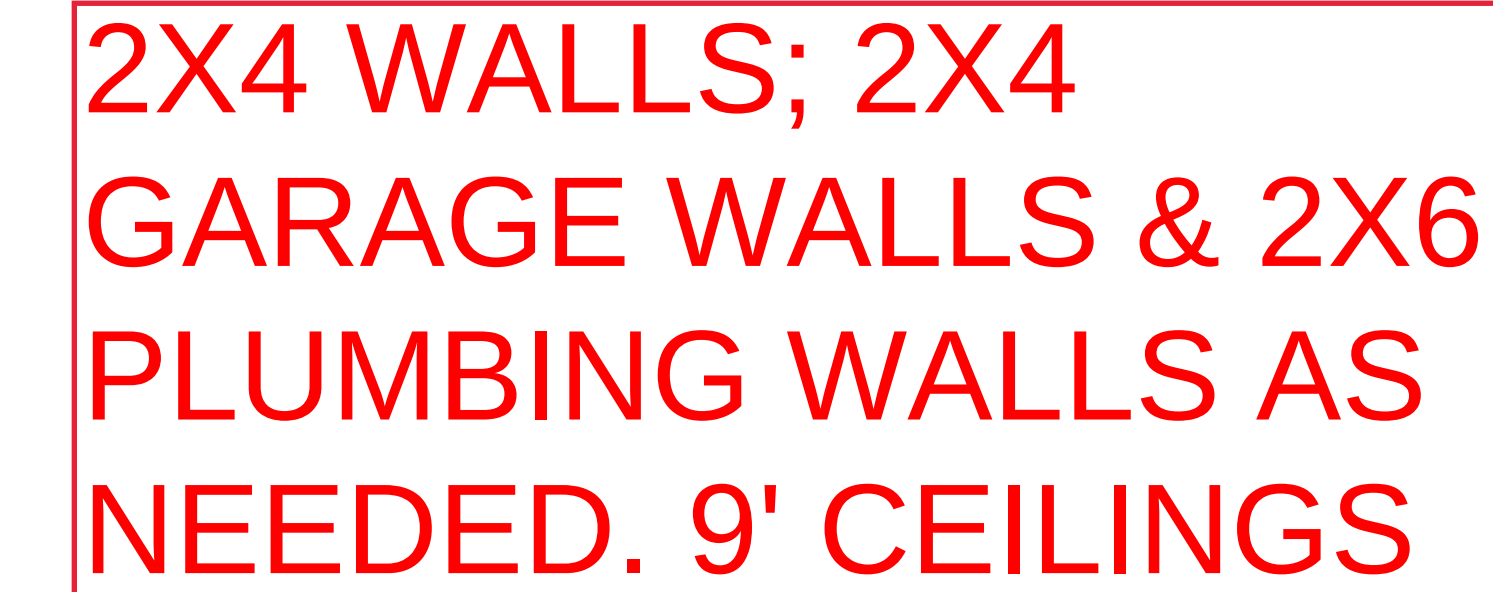
GARAGE OPTION

2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS

1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest regulations of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
5. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
6. Communication is imperative and every contingency cannot be anticipated.
7. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
8. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
9. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
10. All dimensions on these plans and drawings have precedence over scaled dimensions.
11. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	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	BASED ON SEISMIC ZONES A, B & C			

- 1 ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS
- 2 OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN
- 3 ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- 4 ALL IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS
- 5 AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYPICAL
- 6 ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS
- 7 AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 8 ALL LUMBER SHALL BE SYP #2 (UNO)
- 9 ALL IS THE CONTRACTOR TO RESPOND TO EACH SINGLE MEMBER AND
- 10 Fb = 2000 PSI (E = 1.9M PSI) (OR GREATER)
- 11 (I.E. LIVE MICROLAM)
- 12 ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI) (OR GREATER)
- 13 ALL LSL LUMBER IS TO BE 1.8E (Fb = 2400 PSI) (OR GREATER)
- 14 FOR DEAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 W/
- 15 1/2" JACK STUD (U.N.O.) AND K-2 STUDS PER TABLE R602.7.5
- 16 AND TOGETHER W/ (2) 10d NAILS @ 8" O.C., PROVIDED THAT THE TOP OF
- 17 THE WINDOW HEIGHT IS 6", MINIMUM BOTTOM OF THE WINDOW HEIGHT
- 18 IS 1'-6", OTHERWISE REFER TO TABLES R602.1(1) AND R602.7(2).
- 19 ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER
- 20 TO TABLE R602.7(1) AND K-2 STUDS PER TABLE R602.7.5
- 21 FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS
- 22 (UNO)
- 23 REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION
- 24 OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 25 ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
- 26 Fy = 50 KSI MIN. (UNO)
- 27 ALL EXTERIOR LUMBER TO BE #2 SYP PPT
- 28 ALL CONCRETE, f_c = 3000 PSI MIN.
- 29 PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 30 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE
- 31 THAN 1'-2" FROM THE CORNER. THERE SHALL BE MINIMUM (2) BOLTS
- 32 PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C.
- 33 FOR BASEMENTS. ANCHOR BOLTS SHALL EXTEND 7'-0" INTO CONCRETE OR
- 34 MASONRY.
- 35 PSL COLLUMS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- 36 PROVIDE A MINIMUM OF 500K LIFT & LATERAL CONNECTION AT TOP
- 37 AND BOTTOM OF PORCH COLLUMS. (U.N.O.)
- 38 PROVIDE CONTINUOUS SHEATHING PER SECTION 802.1.3 OF THE 2018
- 39 NCRC
- 40 MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS
- 41 LEAST HORIZONTAL DIMENSION.
- 42 UNLESS THE PIER IS 500R SHALL BE CONTINUOUSLY
- 43 ANCHORED TO THE FOUNDATION.
- 44 METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



*** CRAWL SPACE VENTILATION CALCULATION**

TYNDALL
ENGINEERING & DESIGN, P.A.

1 813 778-3030 • 1 813 778-9448
2860 Shipwash Drive • Garner, NC 27529
www.tyndallinghearing.com

A&G RESIDENTIAL
916 ARSENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305

THE HAVILLAND

FOUNDATION PLAN CRAWL SPACE

Project #:
DRB2301-0091_C

Date:
02/01/2024

Engineered By:
JA

DWG. Checked By:
PAT

Scale:
SEE PLAN

REVISIONS		
No.	Date:	Remarks
1		
2		
3		
4		

S1C

DESIGN LOADS

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	5	10	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 CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- ALL LUMBER SHALL BE SYP #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. I-LEVEL MICROLAM)
ALL LSL LUMBER IS TO BE 1.55E ($F_b = 2325$ PSI) (OR GREATER)
ALL PSL LUMBER IS TO BE 1.8E ($F_b = 2,400$ PSI) (OR GREATER)
ALL LOAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 w/ (1) 2x4 JACK STUD (U.N.O.) AND KING STUDS PER TABLE R602.7.5, AND TOGETHER w/ (2) 10d NAILS @ 8" O.C., PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-6", 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 (U.N.O.) 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
- 1/2"Ø 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
- PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- 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.

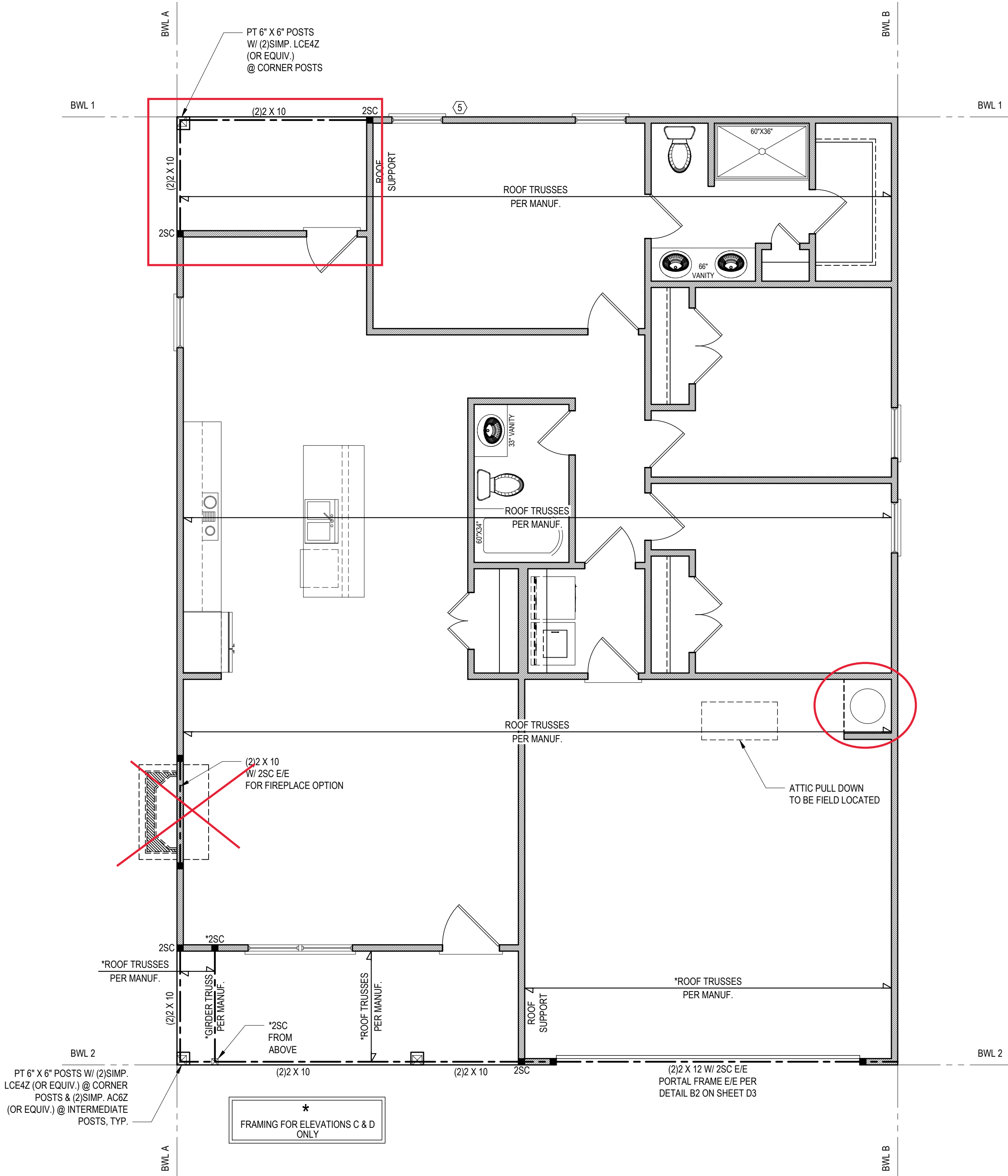
① REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)

② 1/2" 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 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 6" 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 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

④ SHEATH INTERIOR & 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(4). IN LIEU OF A CORNER RETURN, EITHER A MIN. 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.

⑤ MINIMUM 800# HOLD-DOWN DEVICE



FIRST FLOOR PLAN

1/4" = 1'-0" CEILING HGT. = 9'-0"

2X4 WALLS; 2X4
GARAGE WALLS & 2X6
PLUMBING WALLS AS
NEEDED. 9' CEILINGS

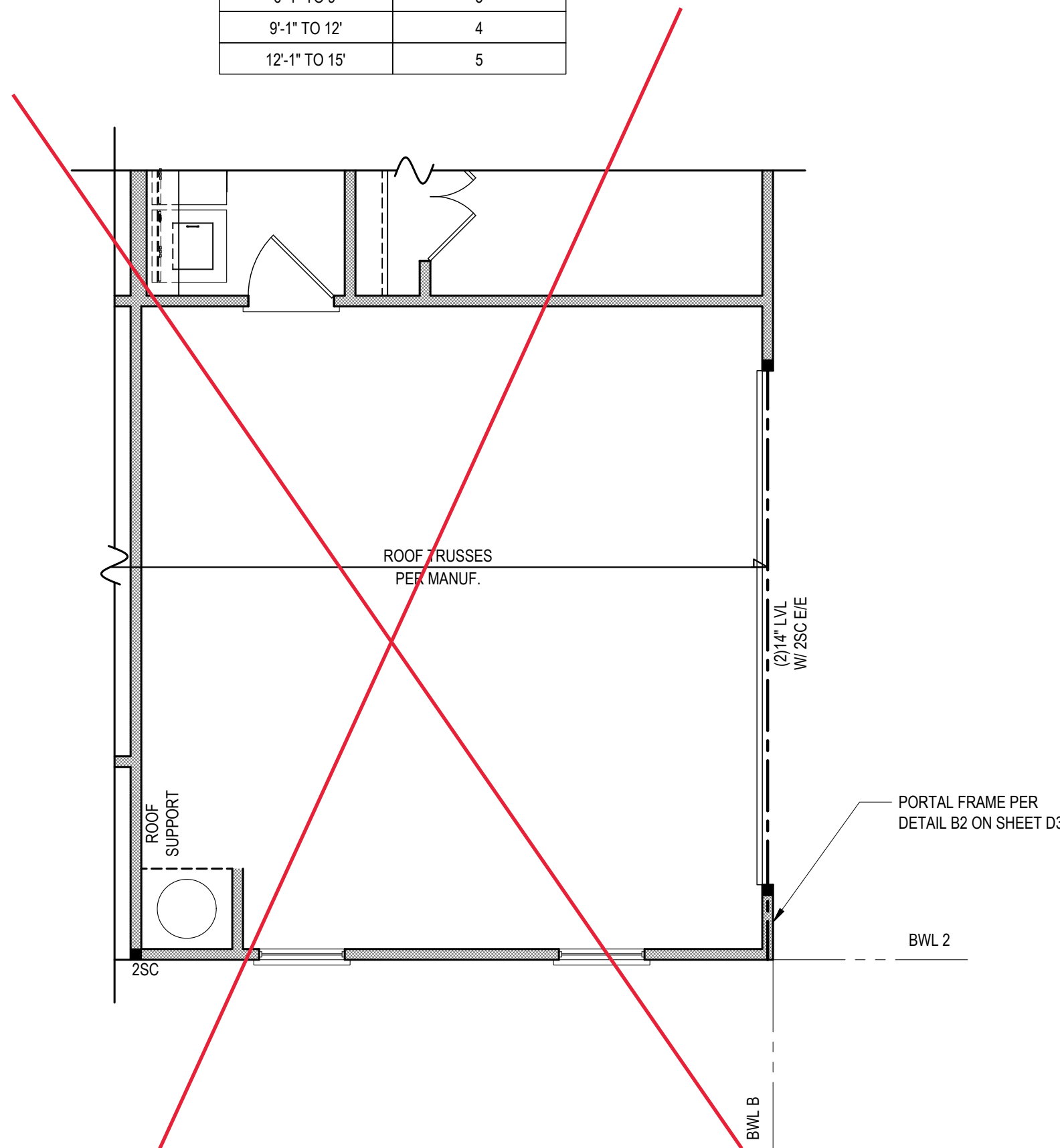
BRACING PANEL LENGTHS REQUIRED:

BWL A = 4.4 FT
BWL B = 4.4 FT
BWL 1 = 5.7 FT
BWL 2 = 5.7 FT

BRACING PANEL LENGTHS PROVIDED:

BWL A = 29.3 FT CS-WSP
BWL B = 44.7 FT CS-WSP
BWL 1 = 28.2 FT CS-WSP
BWL 2 = 14.5 FT CS-WSP

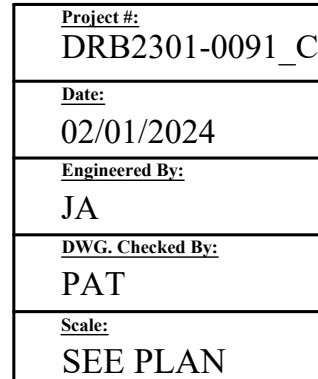
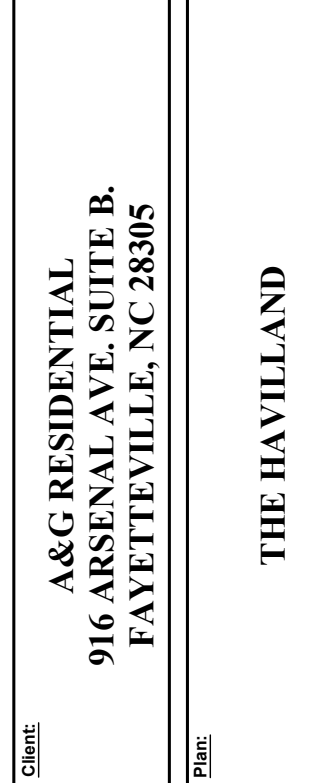
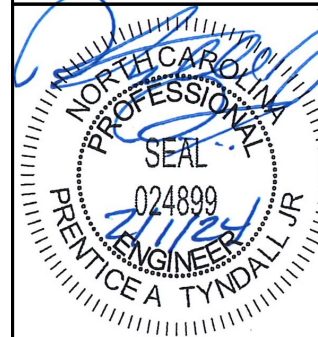
HEADER SPAN (FT)	MIN. # OF FULL HEIGHT STUDS (KING) 2 X 4 STUDS
UP TO 3'	1
3'-1" TO 6'	2
6'-1" TO 9'	3
9'-1" TO 12'	4
12'-1" TO 15'	5



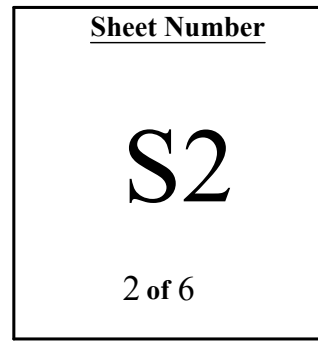
GARAGE OPTION

1/4" = 1'-0"

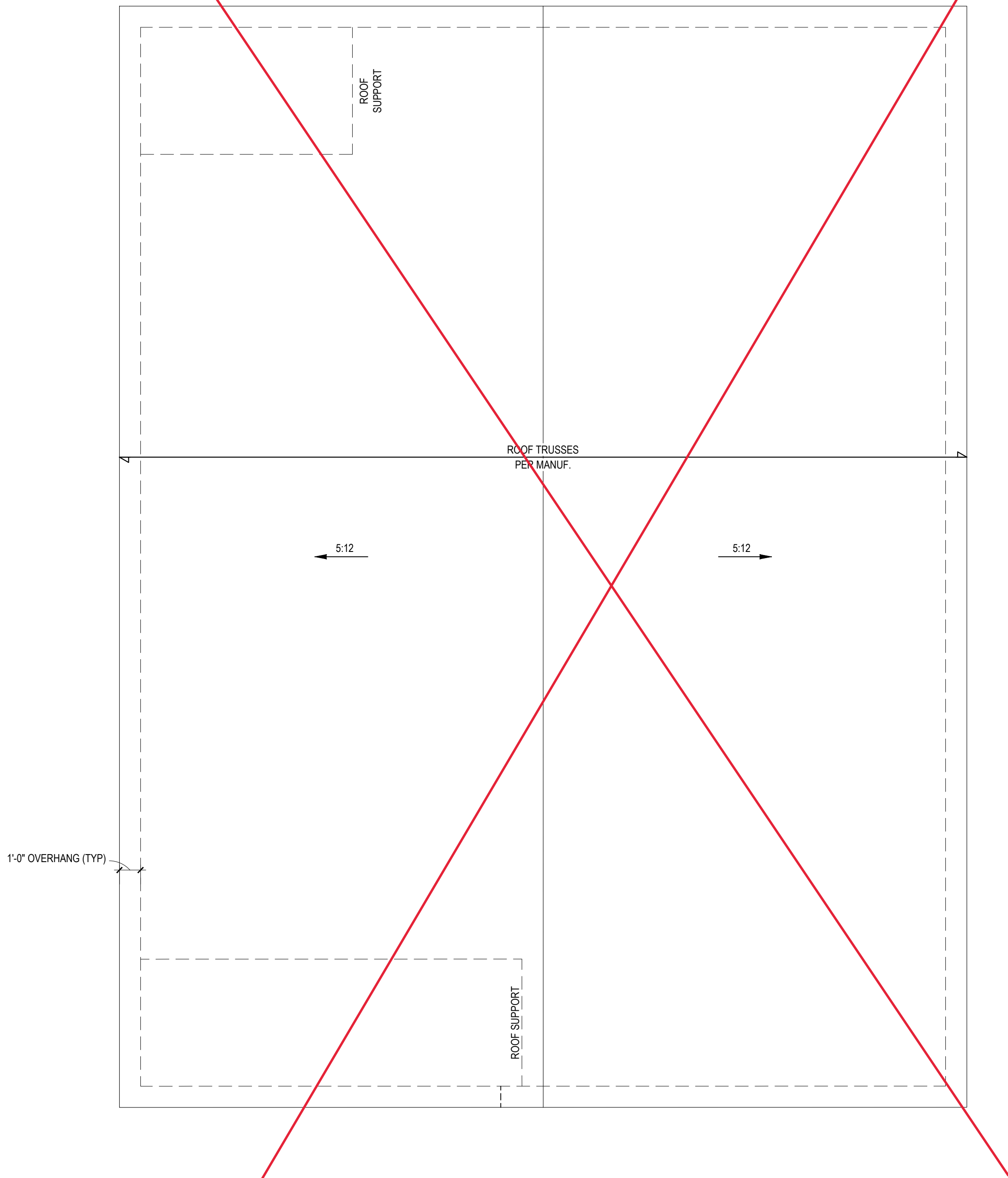
*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. 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.



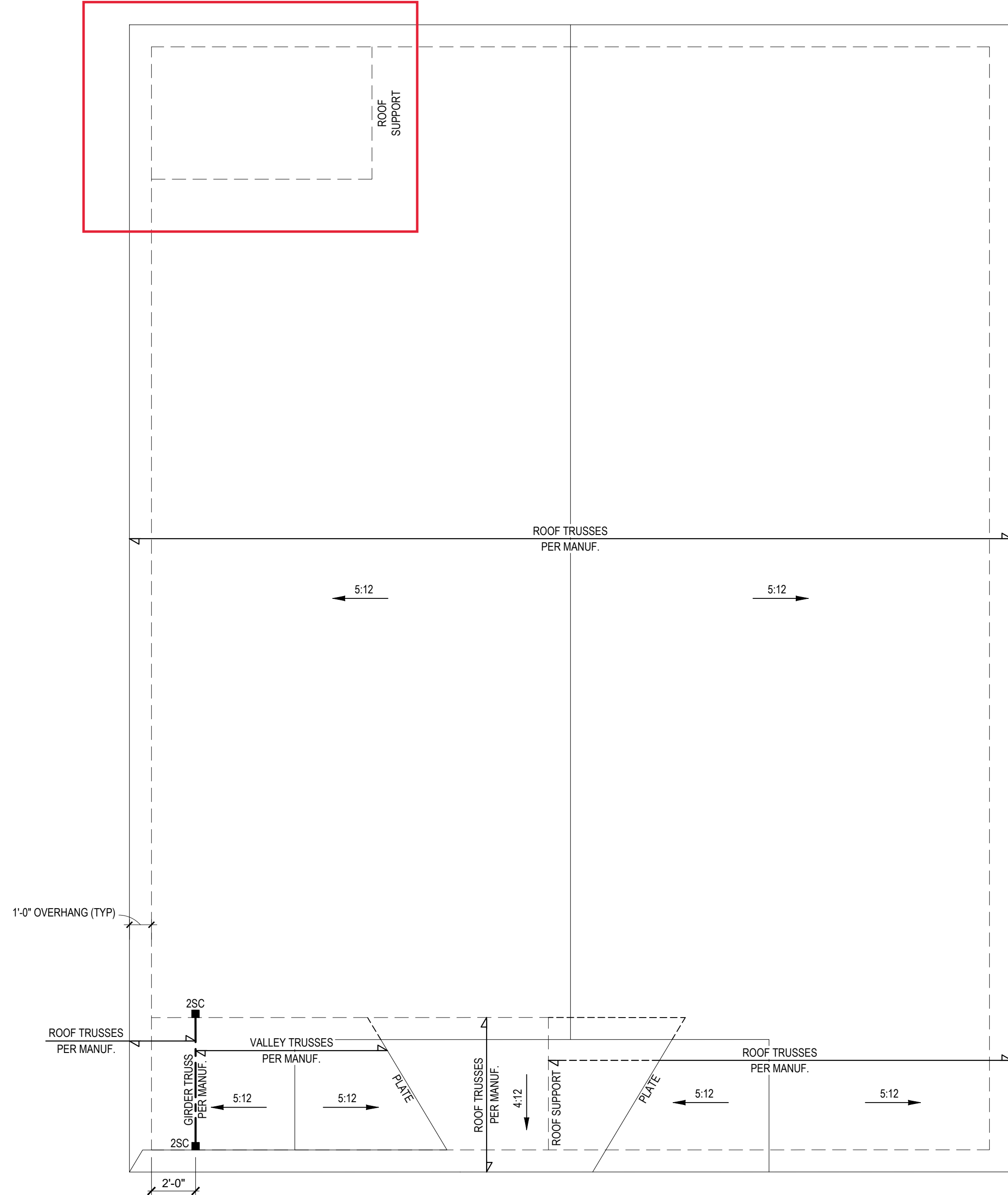
REVISIONS		
No.	Date:	Remarks
1		
2		
3		
4		



2X4 WALLS; 2X4
GARAGE WALLS & 2X6
PLUMBING WALLS AS
NEEDED. 9' CEILINGS



ROOF PLAN - ELEVS A,B



ROOF PLAN - ELEVS C, D
1/4" = 1'-0"

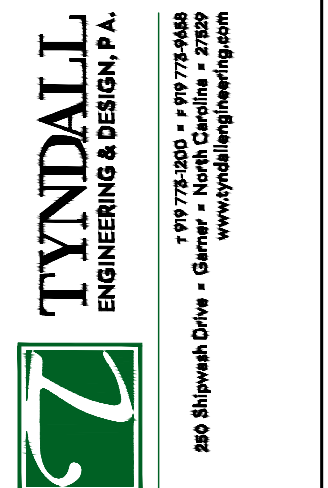
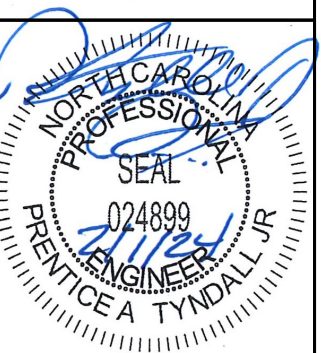
1) CALCULATION BASED ON VENTILATORS USED AT LEAST 3'-0" ABOVE THE COMICE VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY EAVE VENTS.

2) CATHEDRAL CEILINGS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

NO SCALE  ATTIC VENTILATION CALCULATION

NO SCALE

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 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.



**A&G RESIDENTIAL
916 ARSENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305**

THE HAVILLAND

ROOF PLAN
ELEVATIONS A, B, C, D

Project #: DRB2301-0091 C

Date:
02/01/2024

Engineered By:

DWG. Checked By:

PAI
Scale:

SEE PLAN

REVISIONS		
No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

S3

3 of 6

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.

	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	10	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		

- 1) MAXIMUM HEIGHT OF DECK SUPPORT POSTS AS FOLLOWS:

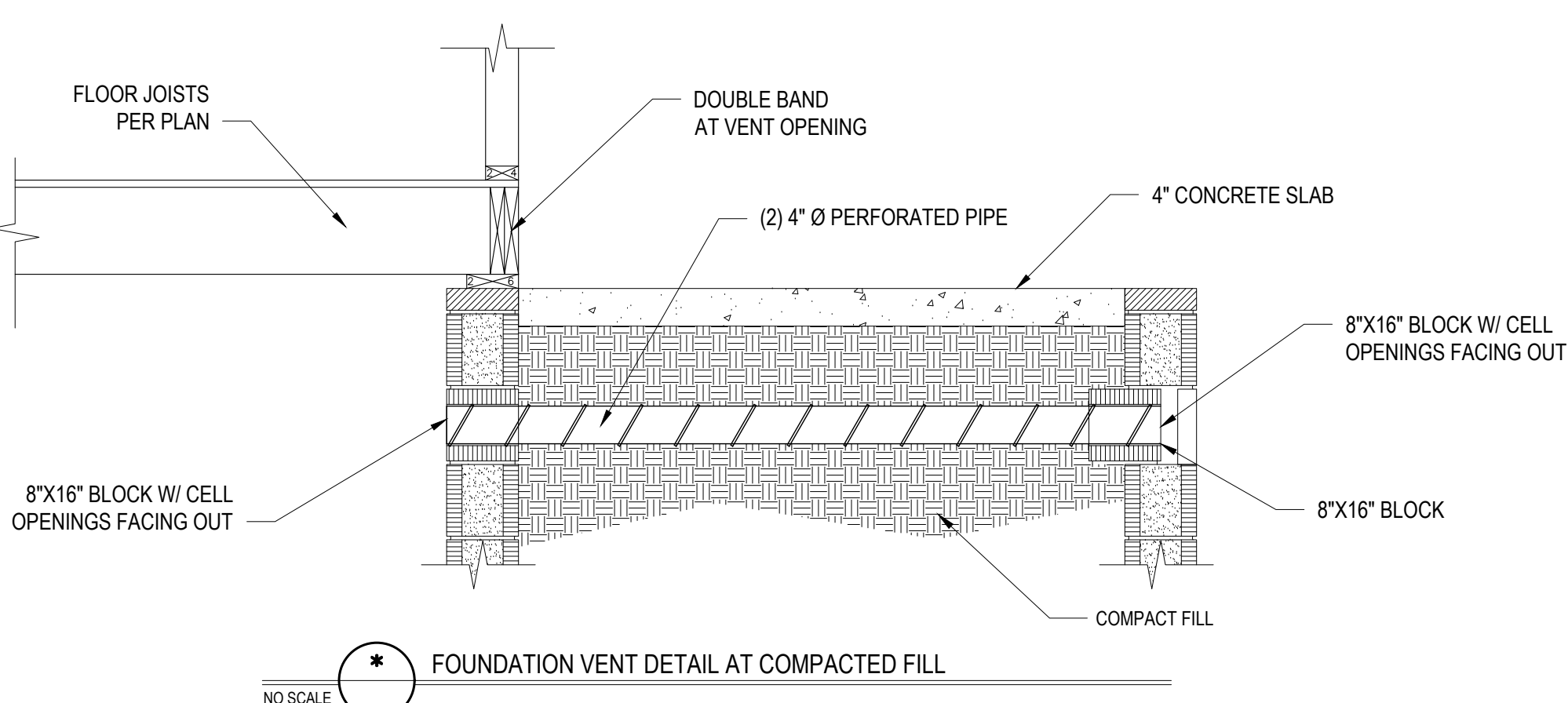
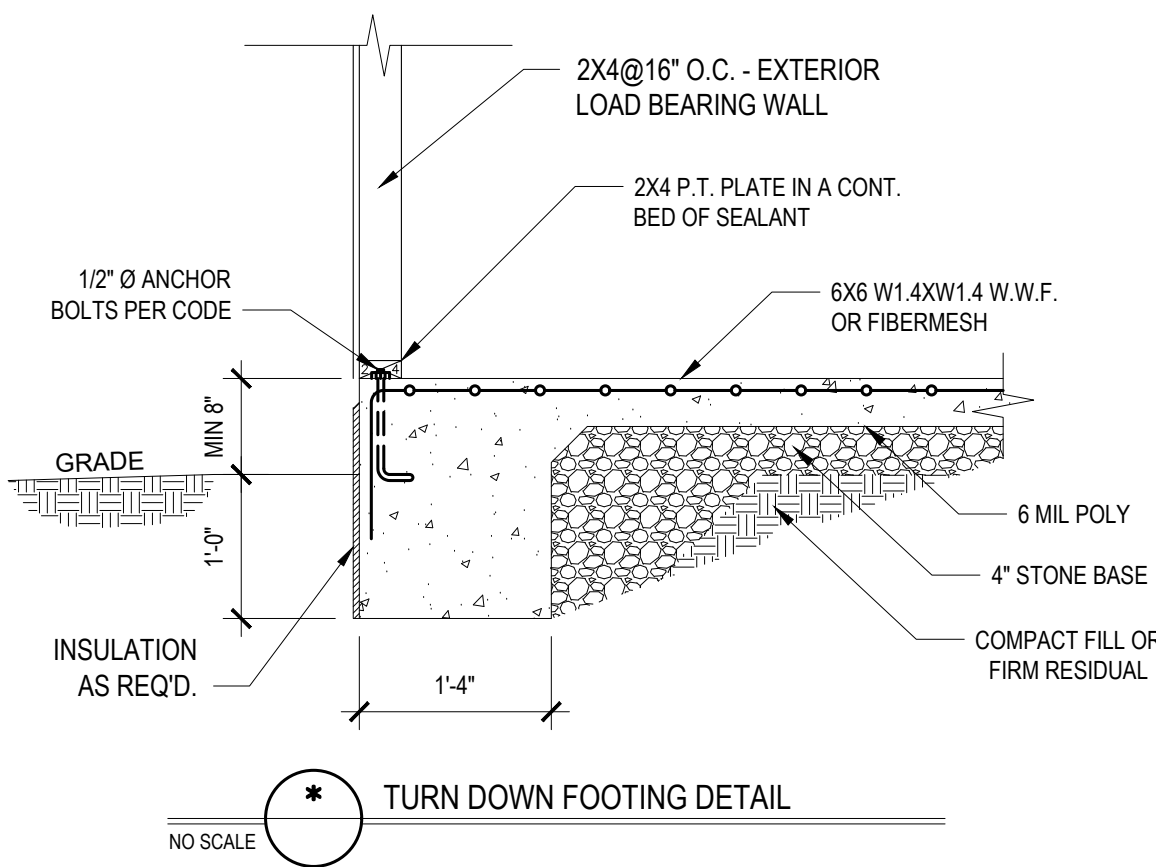
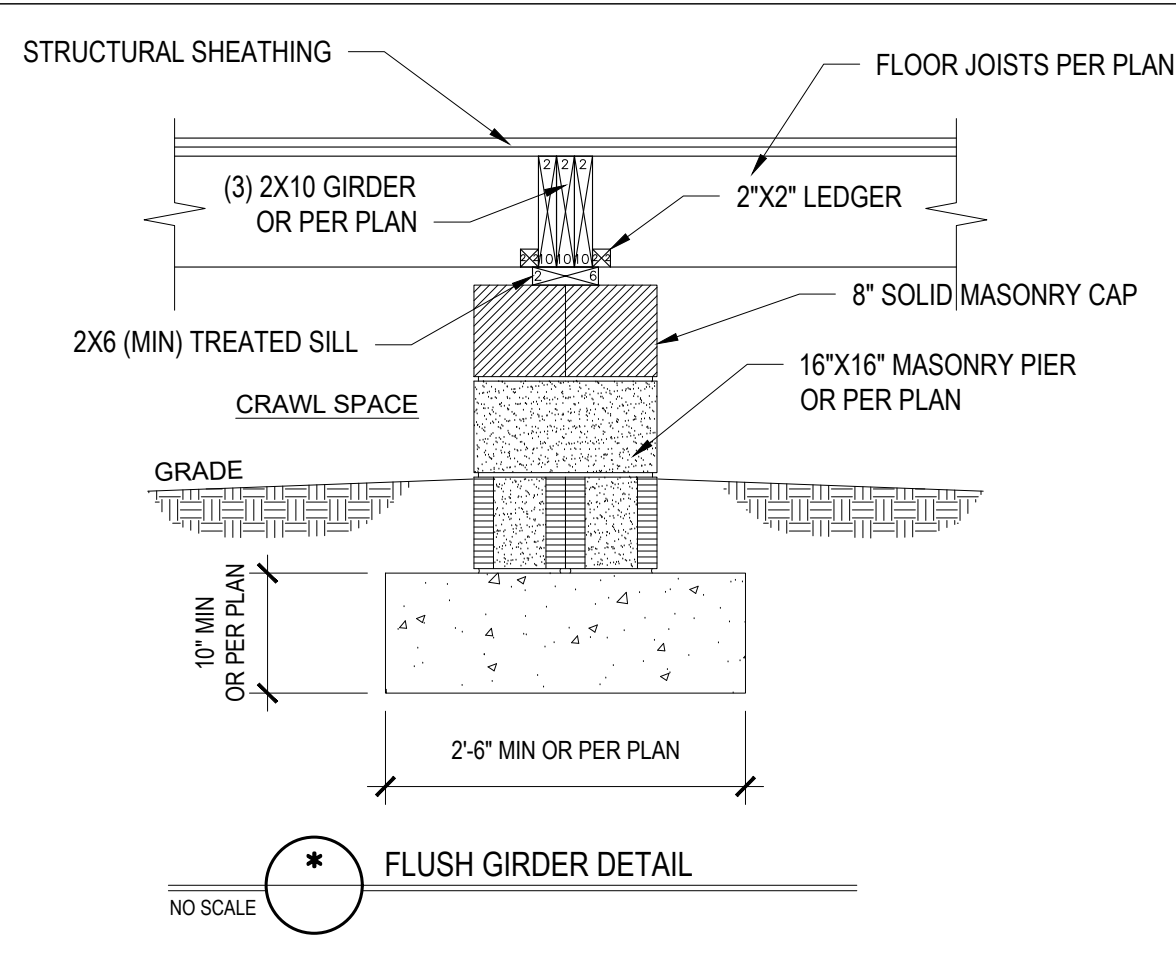
POST SIZE	MAX. POST HEIGHT**
4 x 4	8'-0"
6 x 6	20'-0"
***	OVER 20'-0"

- 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.
- 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 DEGREES AND 60 DEGREES. WOOD KNEE BRACES SHALL BE BOLTED TO THE POST AND GIRDER WITH ONE 5/8" HOT DIP GALVANIZED BOLT AT EACH END OF THE BRACE.
- 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"

-

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



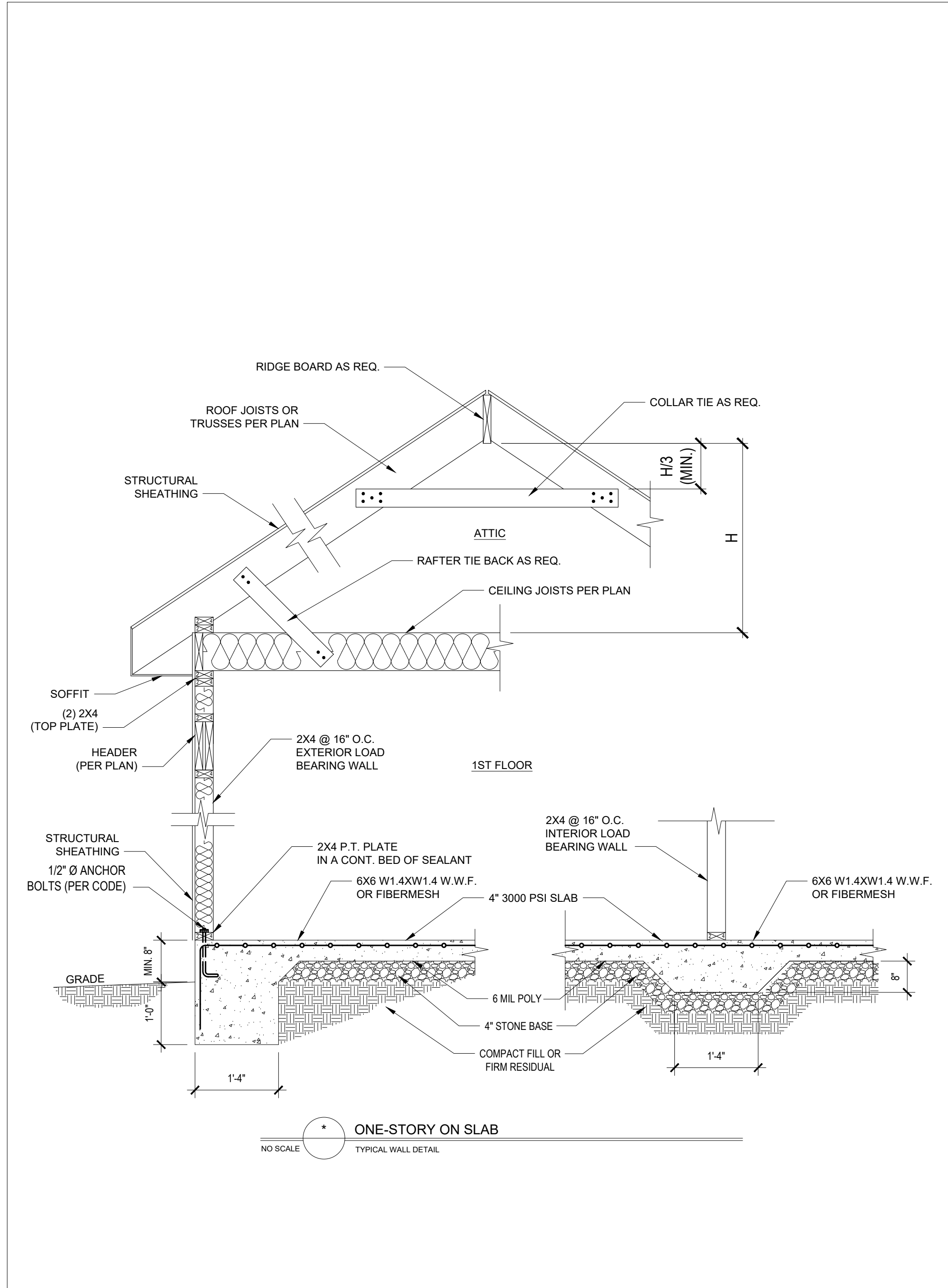
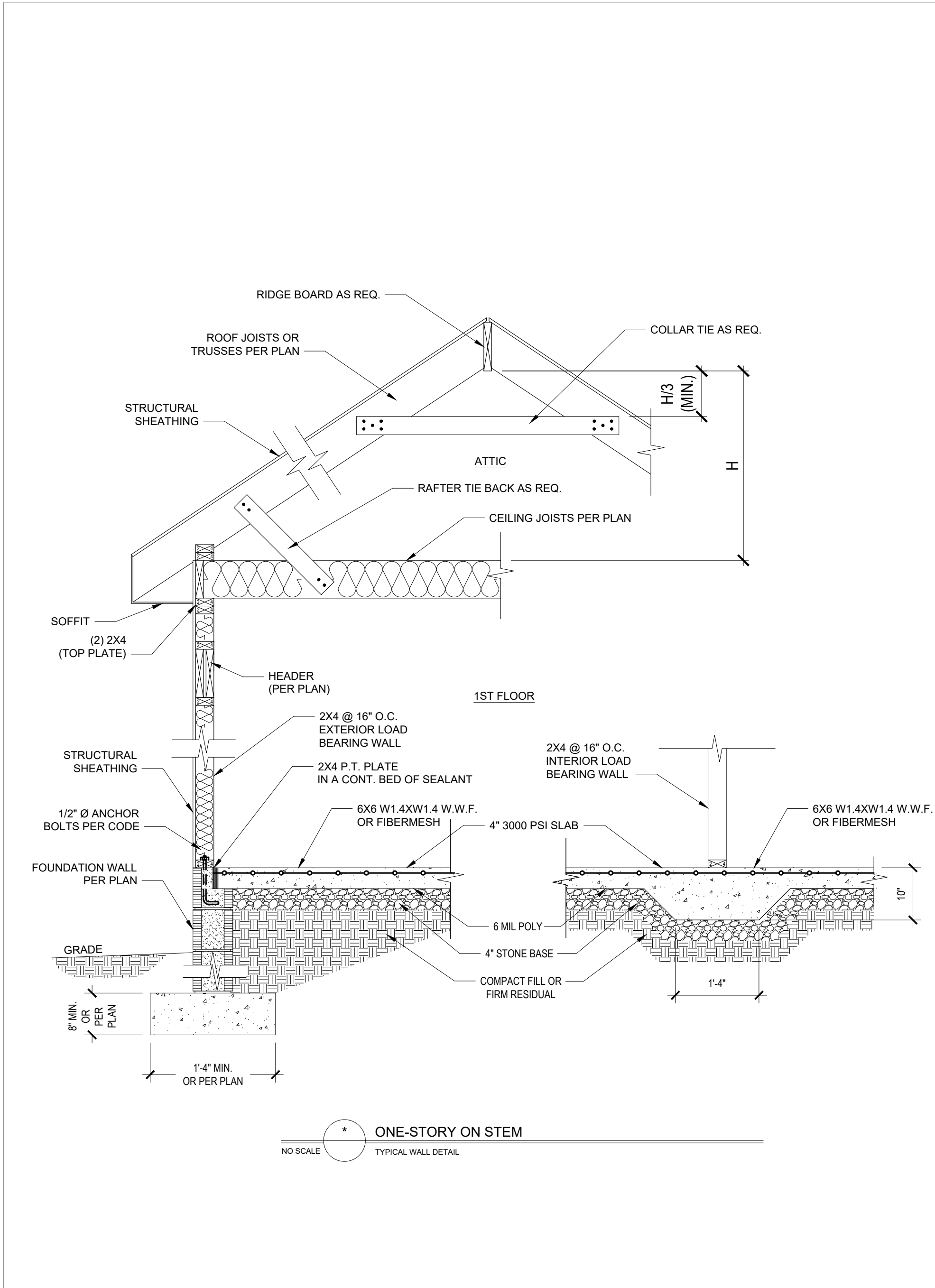
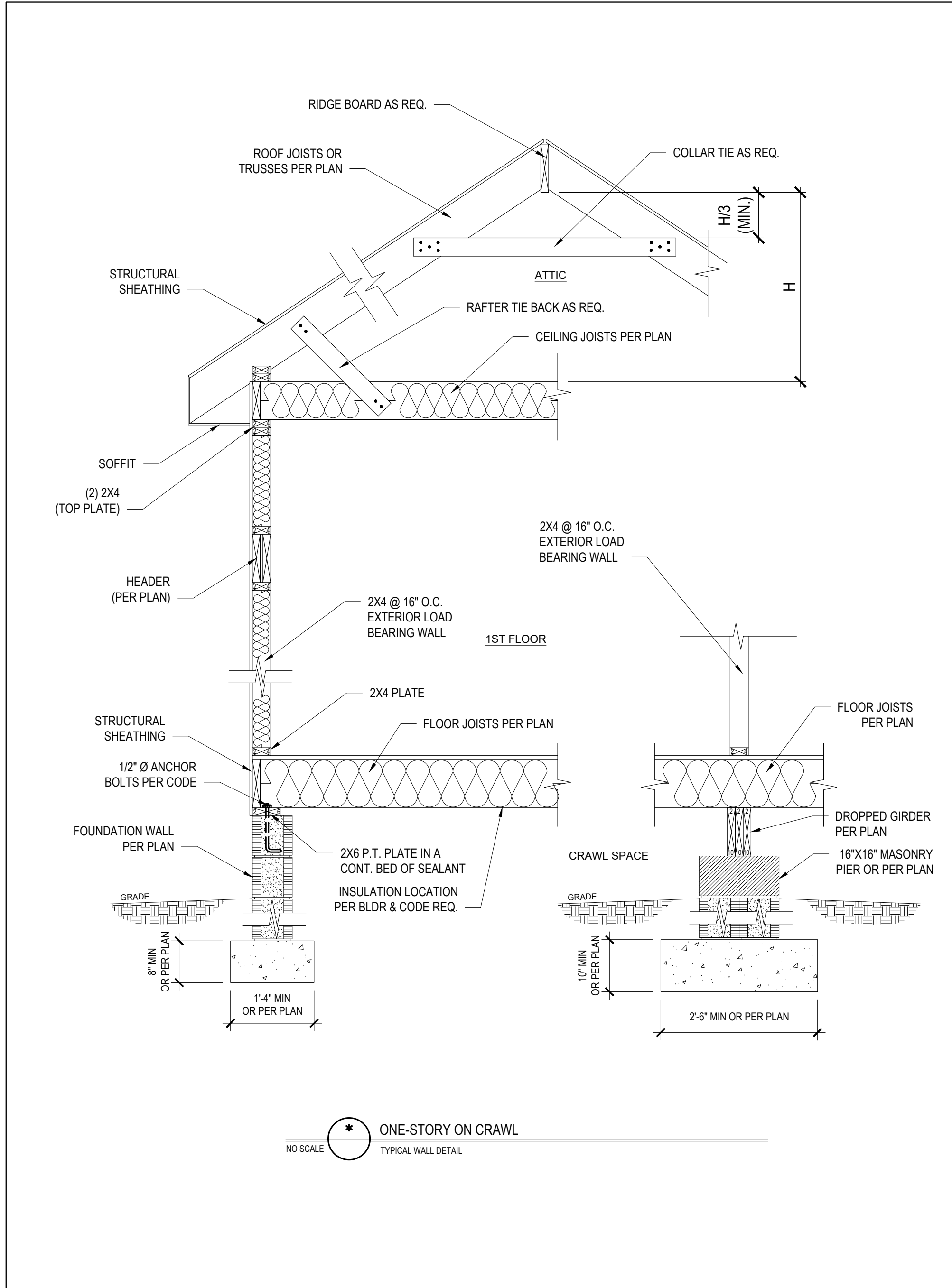
CLIMATE ZONES	PENESTRATION U-FACTOR ^{b,j}	SKYLIGHT U-FACTOR ^b	GLAZED PENESTRATION SHGC ^{b,k}	CEILING R-VALUE ^m	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT WALL R-VALUE ^{c,d}	SLAB R-VALUE AND DEPTH ^d	CRAWL SPACE R-VALUE ^c
3	0.35	0.55	0.30	38 or 30 cont	15 or 13 + 2.5 ^h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

NO SCALE

8. 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.

- THE INSULATION+FACTOR COLUMN EXCLUDED SLOYS/NOTS. THE SOLAR HEAT COEFFICIENT
(SHGC) COLUMN APPLIES TO ALL GRAZED FINISHATIONS.
- c. "10% MEANS R-3 CONTINUOUS INSULATING SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-9 IS CAUITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR DRAIN SPACE AND FOR KNUCKLE SLABS. INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 24 INCH ABOVE WHICHEVER IS LESS. FOR FLOORING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALLS OR 24 INCH ABOVE WHICHEVER IS LESS. R-9 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR RELATED SLABS.
- d. DELETED
- e. BASEMENT WALL INSULATION IS NOT REQUIRED IN NEARWALL LOCATIONS AS DEFINED BY FIGURE N1101.2 AND TABLE N1101.7.
- f. OR INSULATION SUFFICIENT TO FLIP THE FRAMING GAIRY. R-19 MINIMUM.
- h. THE FIRST VALUE IS CAVITY INSULATION. THE SECOND VALUE IS CONTINUOUS INSULATION. "10%-15" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. "15"-R-15 MEANS R-15 CAVITY INSULATION. "15" IS R-15 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 AT LEAST R-7. "13"-15" MEANS R-13 CAVITY INSULATION PLUS R-2 INSULATED SHEATHING.
- i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS SURFACE.
- j. IN ADDITION TO THE EXEMPTION IN SECTION N1103.3.3, A MAXIMUM OF TWO GLAZED FINISHATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN .35 SHALL BE PERMITTED TO USE INSULATION FOR MINIMA CODE COMPLIANCE WITHOUT PENALTY.
- k. IN ADDITION TO THE EXEMPTION IN SECTION N1103.3.3, A MAXIMUM OF TWO GLAZED-FINISHMENT PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN .75 SHALL BE PERMITTED TO BE SUBSTITUTED FOR COMMAST FINISHMENT PRODUCT ASSEMBLIES WITHOUT PENALTY.
- l. IN ADDITION TO THE EXEMPTION IN SECTION N1103.3.3, A MAXIMUM OF TWO GLAZED-FINISHMENT PRODUCT ASSEMBLIES HAVING AN INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVE. OTHERWISE SUCH INSULATION IS REQUIRED WHERE Adequate CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION Baffle OR WITHIN 1 INCH OF THE ATIC ROOF DECK.
- m. INSULATION SHALL BE PROVIDED FOR ROOF EDGE WHERE THE SPACE IS LIMITED BETWEEN THE PITCH OF THE ROOF. THERE THE INSULATION MUST FLIP THE SPACE UP TO THE RAFTER.
- n. R-19 FIBERGLASS BATTING COMPRESSED AND INSTALLED IN A NOMINAL 2x6 FRAMING Cavity IS DEEMED TO COMPLY. FIBERGLASS BATTINS RATED R-19 OR HIGHER COMPOSED AND INSTALLED TO COMPLY.
- o. BASEMENT WALL MEETS THE MINIMUM WALL SPECIFIC HEAT TREATMENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE BASIS FOR REQUIRING.

FILENAME: Z:\MURKIN OFFICE\008_2023\06B2301-0091_A.G. RESIDENTIAL_HAVILAND\008_2023_01-0091_C.EDWG SWED.B1: A11 LAST PLOT DATE: 1/2024 1:19 PM



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

TYNDALL
ENGINEERING & DESIGN, P.A.
190 Shipyard Drive • Garner, North Carolina • 27830
919.775.2301 • 919.775.4444
www.tyndallengineering.com

TYNDALL
ENGINEERING & DESIGN, P.A.
190 Shipyard Drive • Garner, North Carolina • 27830
919.775.2301 • 919.775.4444
www.tyndallengineering.com

TYNDALL
ENGINEERING & DESIGN, P.A.
190 Shipyard Drive • Garner, North Carolina • 27830
919.775.2301 • 919.775.4444
www.tyndallengineering.com

CLIENT:
A&G RESIDENTIAL
916 ARSENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305

PROJECT:
THE HAVILAND

STANDARD DETAILS

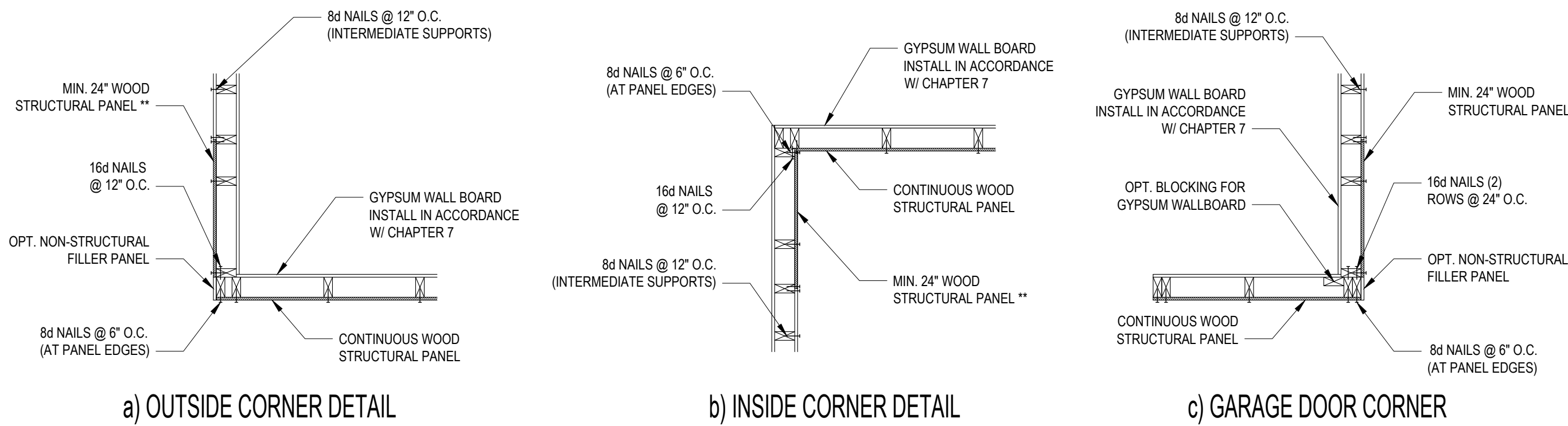
Project #: DRB2301-0091_C
Date: 02/01/2024
Engineered By: JA
DWG. Checked By: PAT
Scale: SEE PLAN

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

D2

5 of 6



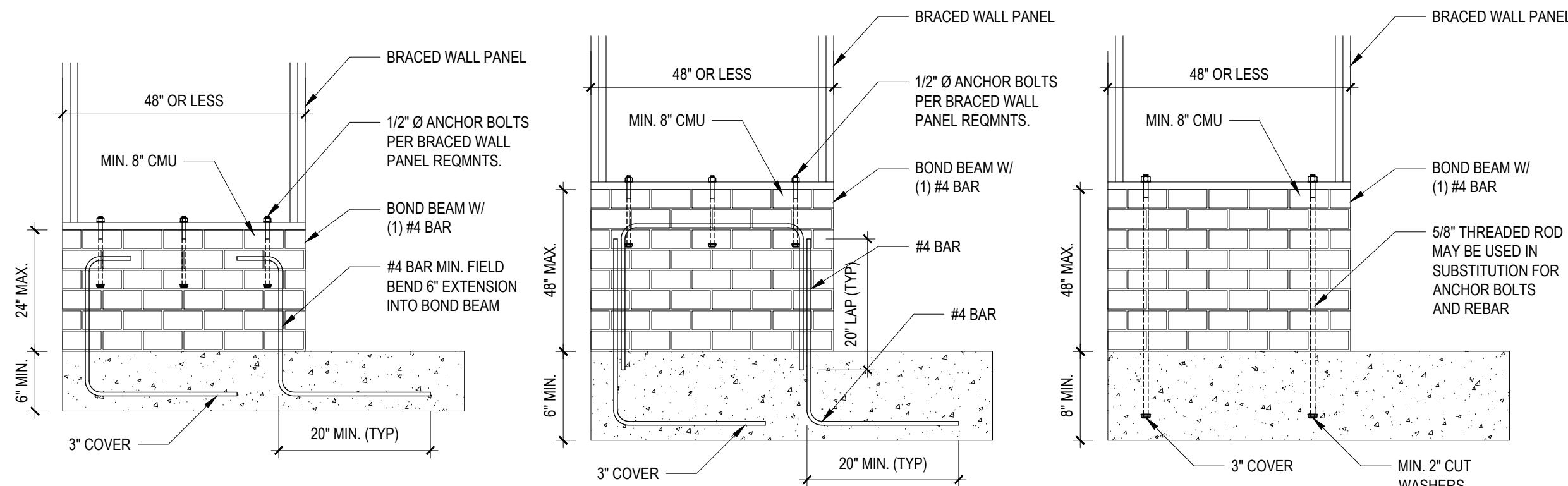
B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

STRUCTURAL SHEATHING NOTES

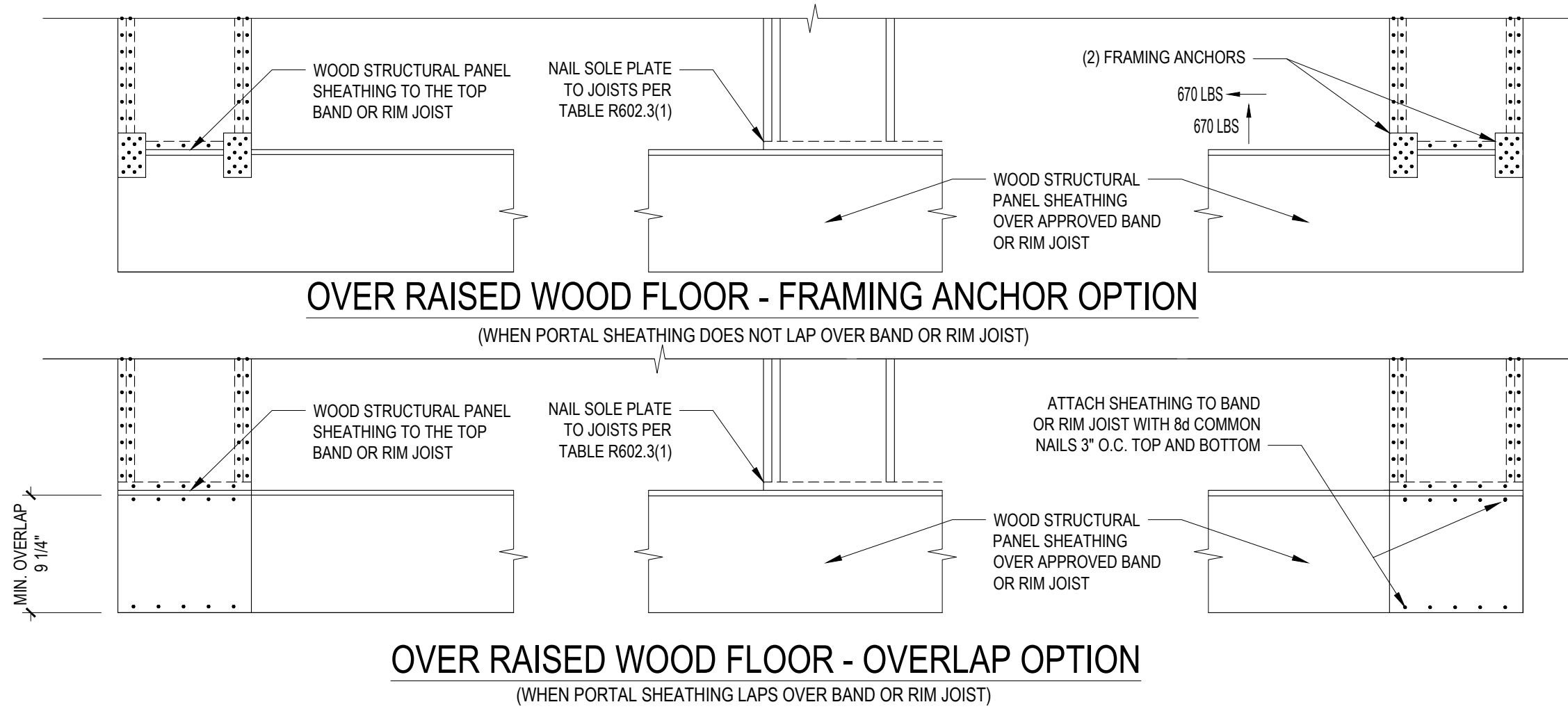
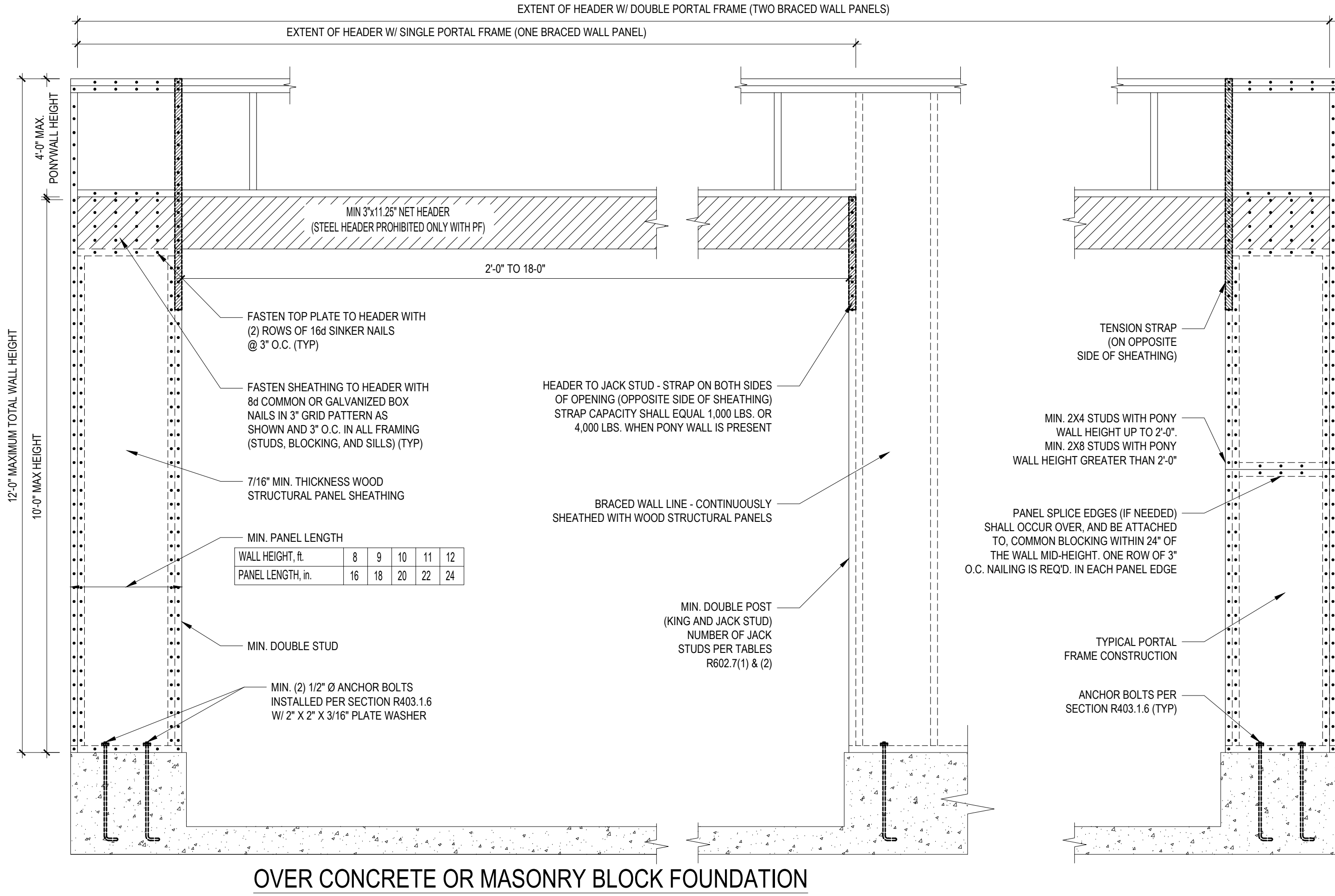
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.4 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- 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).
- 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).
- 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE W/ 6d COMMON NAILS SPACED AT 6" 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 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 R602.10.3.4. 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

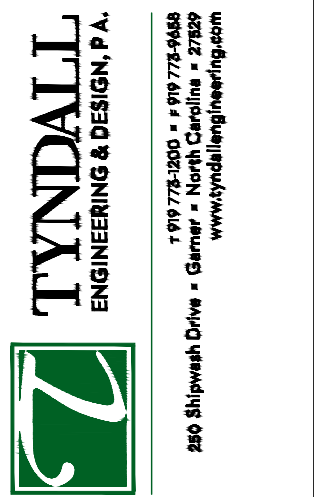
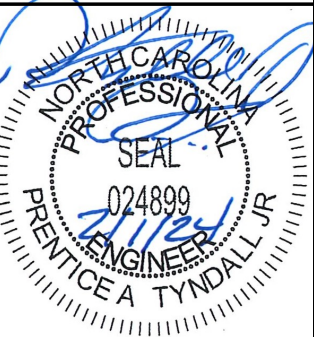


B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS
FIGURE R602.10.4.3 OF THE 2018 NCRC
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



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: **A&G RESIDENTIAL**
916 ARENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305

Project: **THE HAVILLAND**

**SHEATHING
DETAILS**

Project #: **DRB2301-0091_C**
Date: **02/01/2024**
Engineered By: **JA**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks
1		
2		
3		
4		

Sheet Number

D3

6 of 6