

# TAYLOR RESIDENCE

PROJECT #  
DRB2001-0049  
DATE  
01/04/2021  
DRAWN/DESIGNED BY  
DRB  
CHECKED BY  
DRB  
SCALE  
1/4"=1'-0"

WEBSITE  
drbhomedesign.com

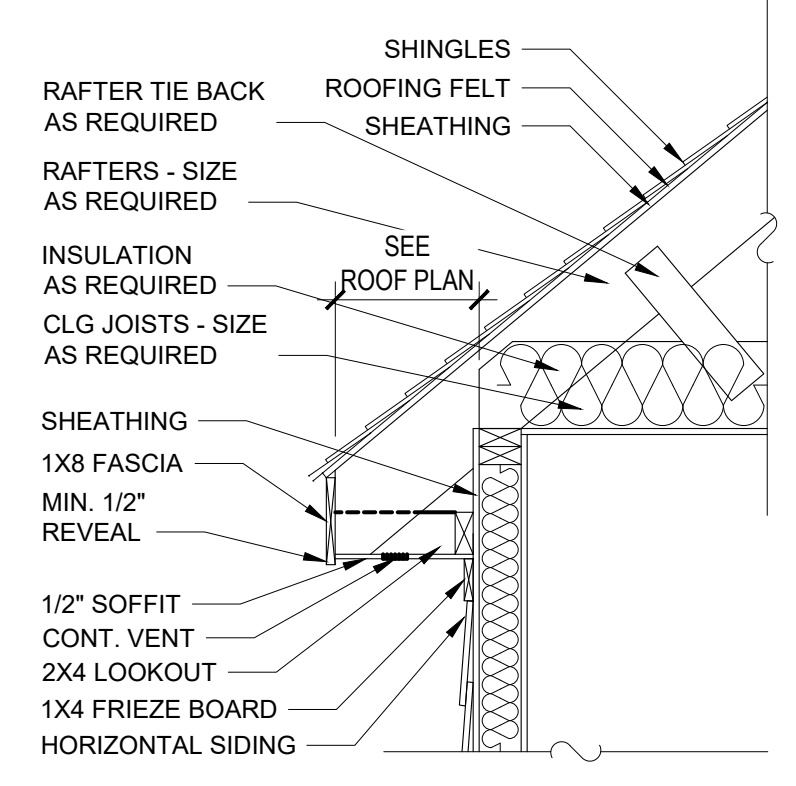
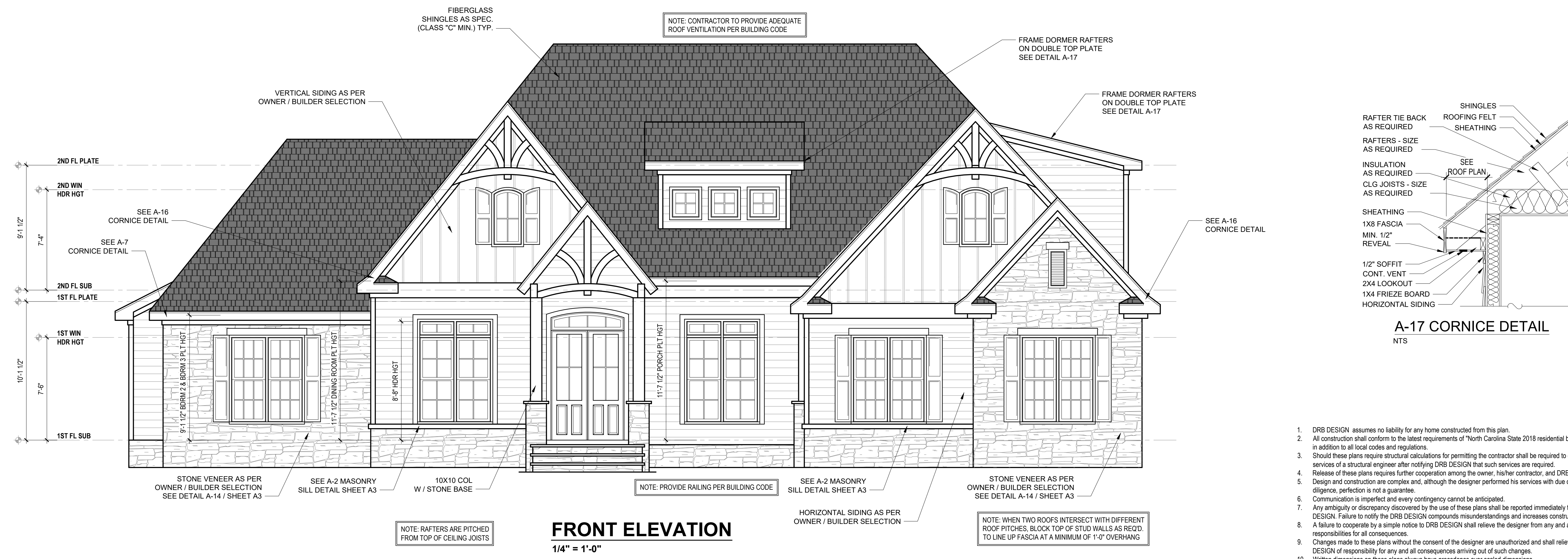
PRODUCT NAME  
PERSONAL RESIDENCE

DESIGN  
reidbyrd@drbhomedesign.com 919.631-5979  
250 Shipwash Dr Suite 105 Garner, NC 27529

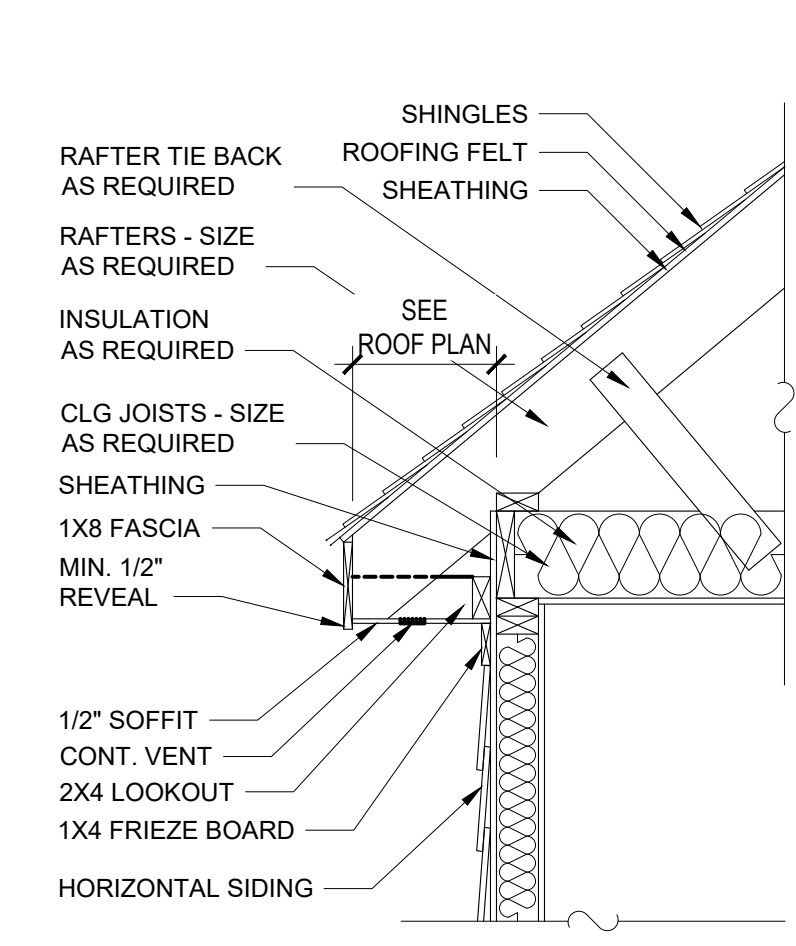
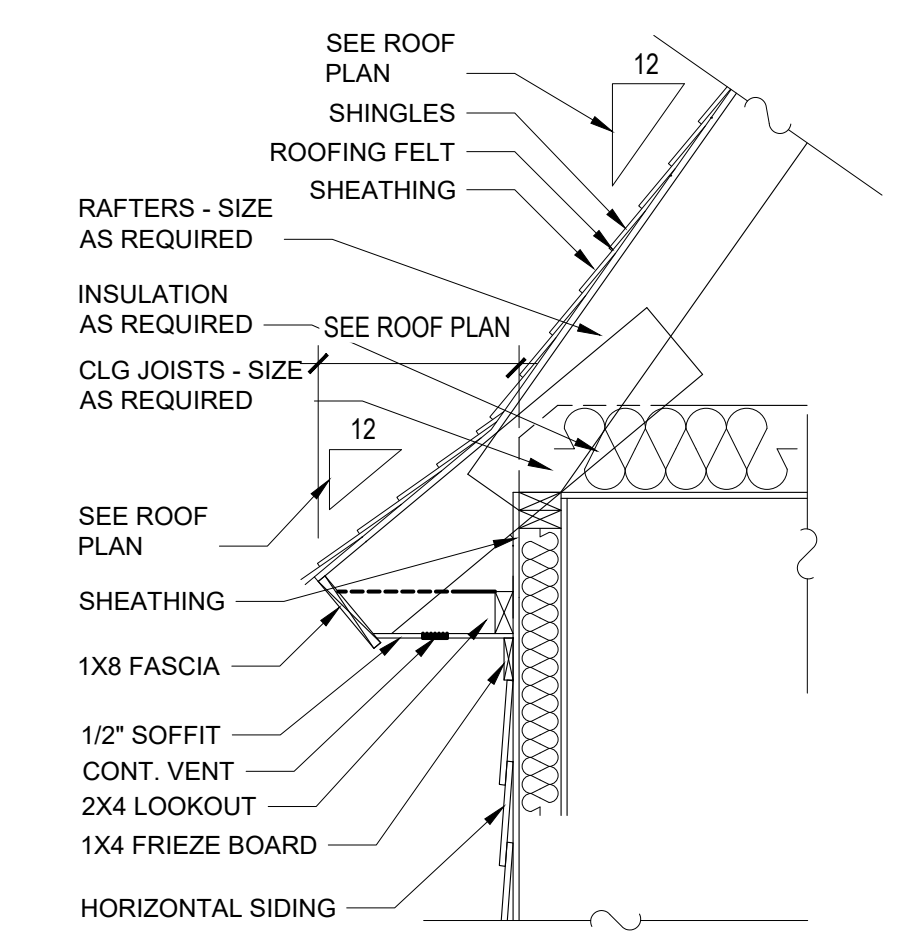
CUSTOMER NAME  
Sandra Taylor  
P.O. Box 1803  
Lillington, NC 27546  
staylorrealty@yahoo.com  
910-890-4147

SHEET NAME  
ELEVATIONS  
SHEET #

A1 of 6



- 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 from 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 contractor's 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.



Z:\DRB\_2020\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_SANDRA\_TAYLOR.dwg, 1/6/2021 1:48:55 PM

# TAYLOR RESIDENCE

PROJECT# DRB2001-0049  
 DATE 01/04/2021  
 DRAWN/DESIGNED BY DRB  
 CHECKED BY DRB  
 SCALE 1/4"=1'-0"

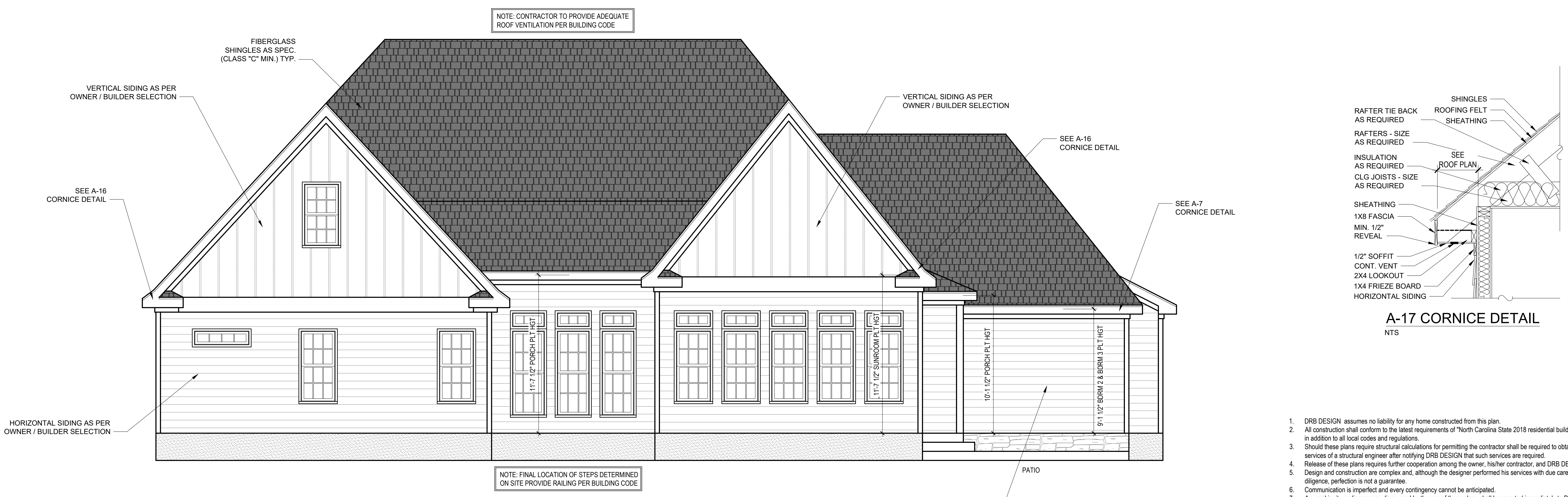
URL: [drbhomedesign.com](http://drbhomedesign.com)

PROJECT NAME: PERSONAL RESIDENCE

DESIGN: DRB  
 reidbyrd@drbhomedesign.com 919.631.5979  
 250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME: Sandra Taylor  
 P.O. Box 1803  
 Lillington, NC 27546  
 staylorrealty@yahoo.com 910-890-4147

SHEET NAME: ELEVATIONS  
 SHEET # A2 of 6

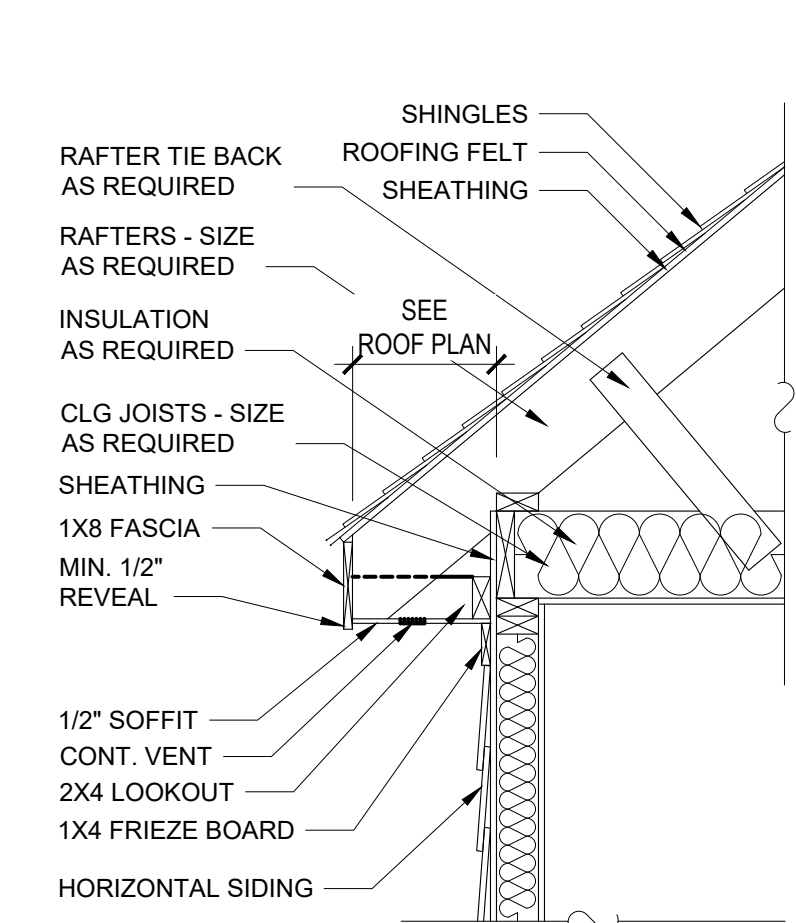


**REAR ELEVATION**  
 1/4" = 1'-0"

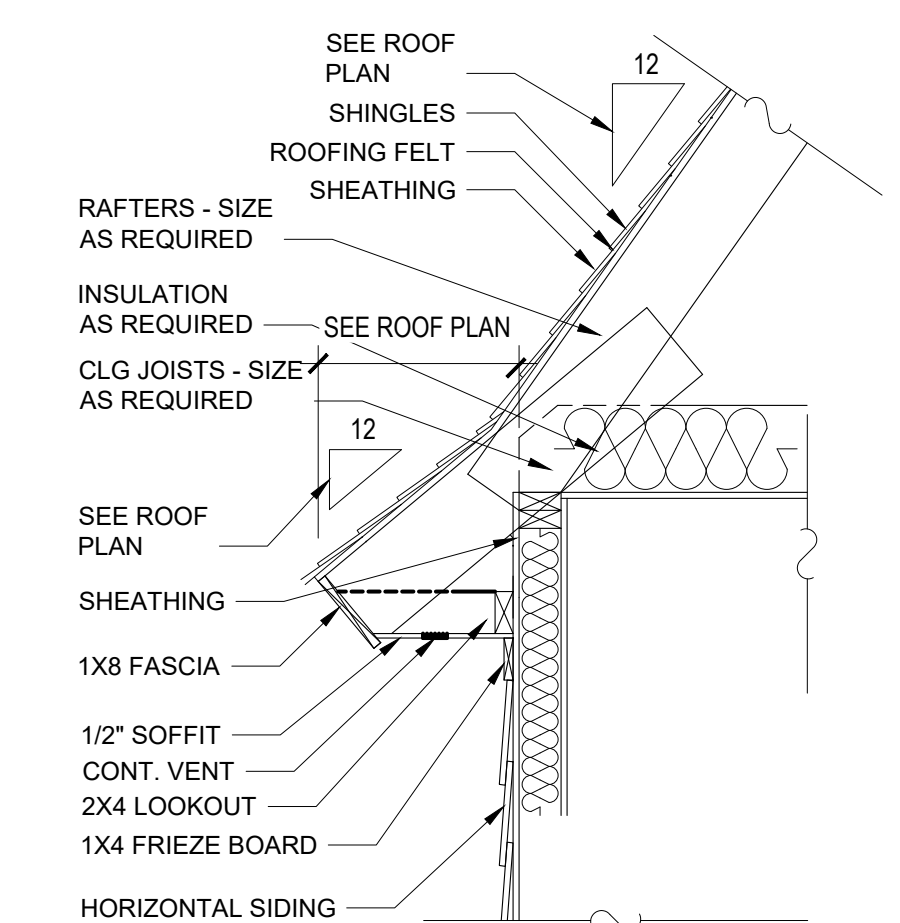
- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting 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 contractor's 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.



**LEFT ELEVATION**  
 1/4" = 1'-0"



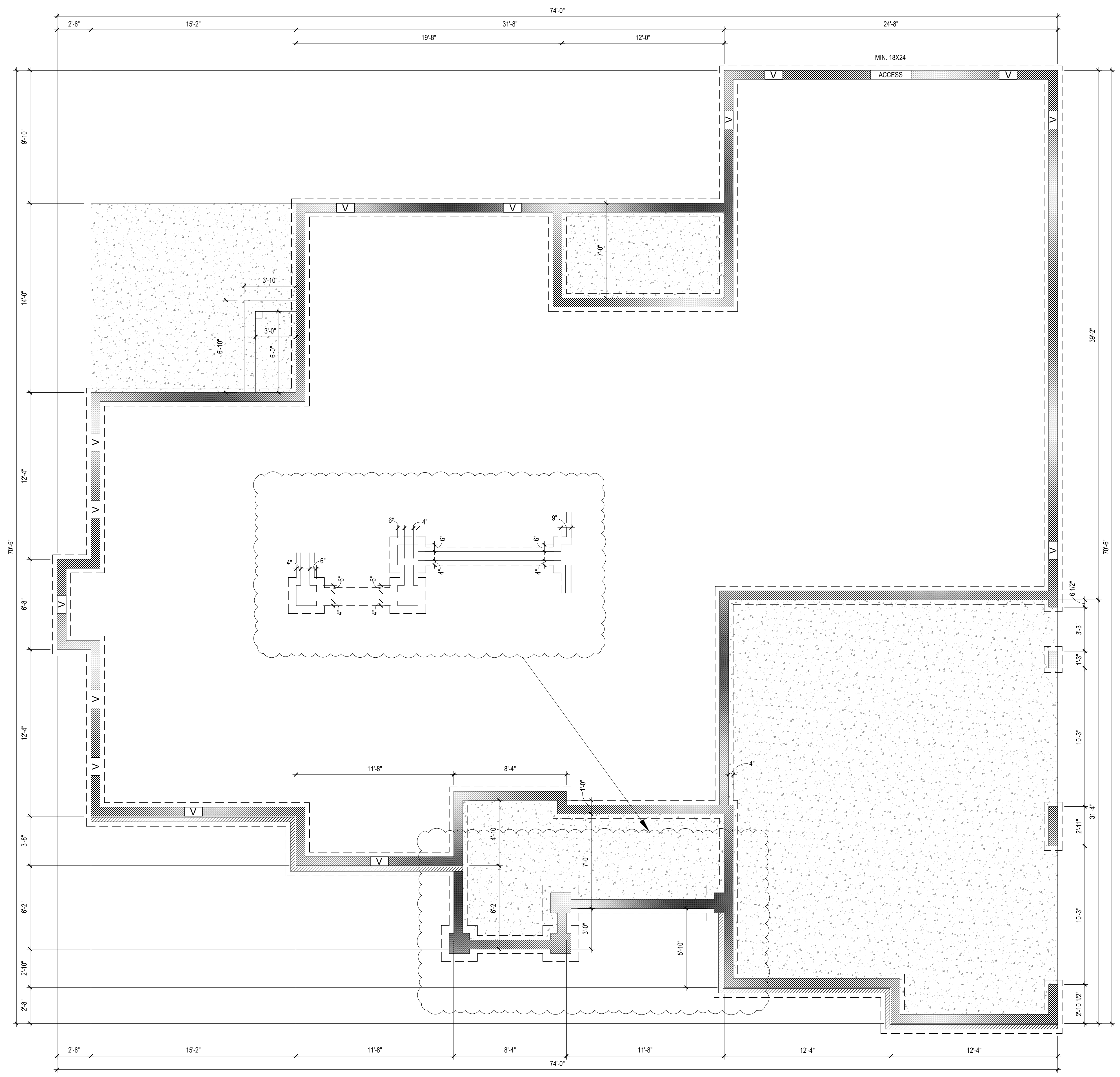
**A-7 CORNICE DETAIL**  
 NTS



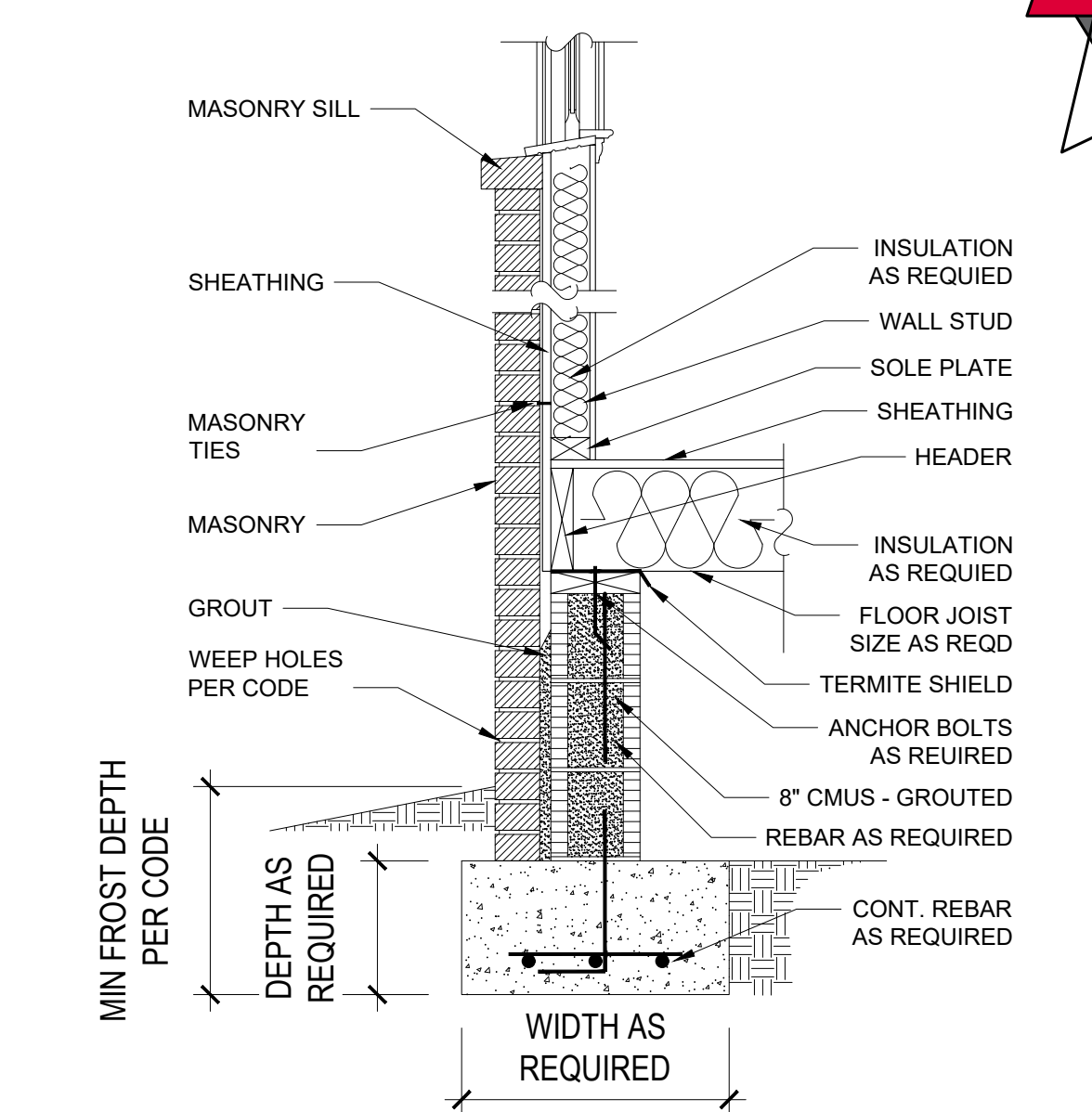
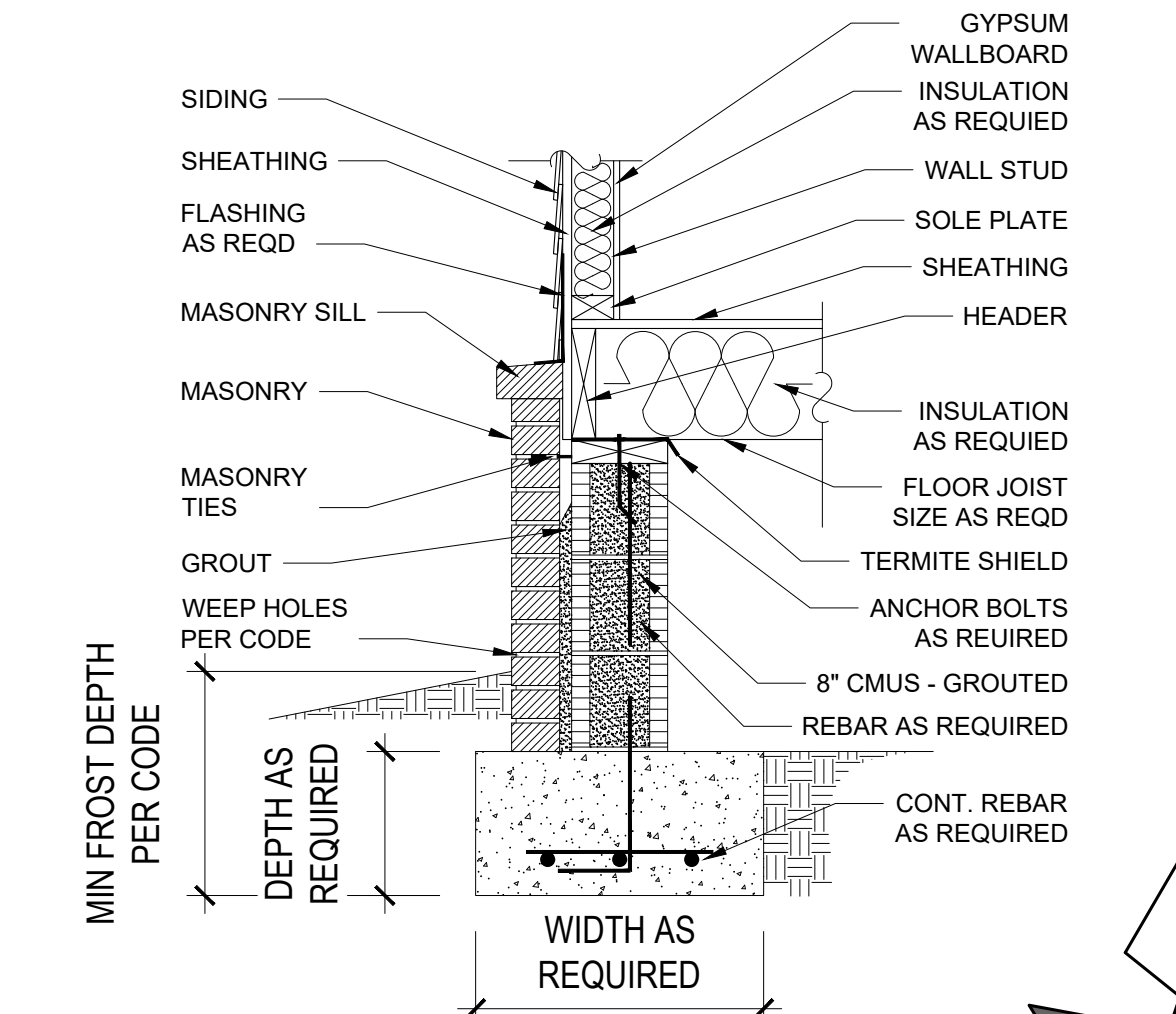
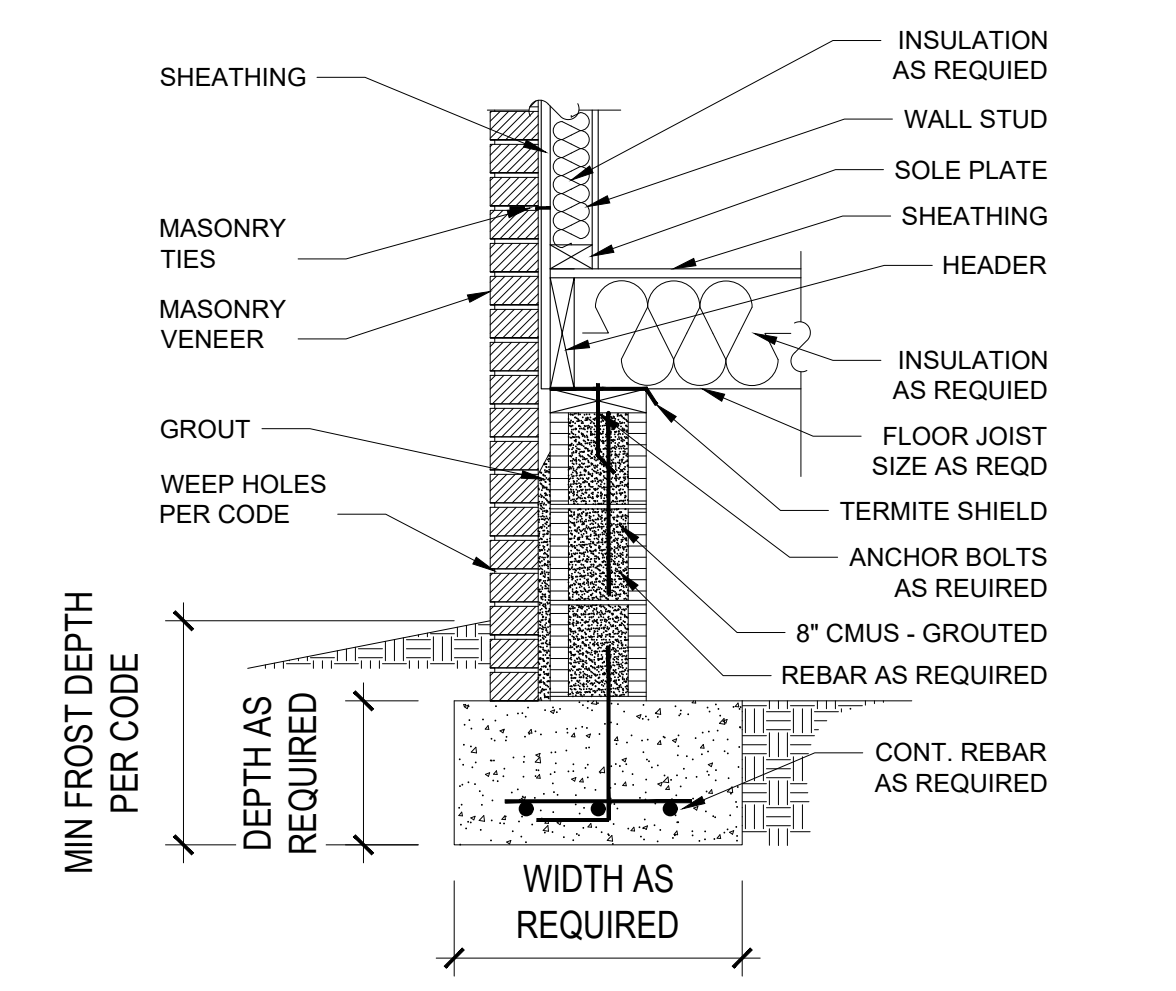
**A-16 CORNICE DETAIL - BELL ROOF**  
 NTS

Z:\DRB\_2020\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_SANDRA\_TAYLOR.dwg, 1/6/2021 1:48:56 PM

Z:\DRB\_2020\DRB2001-0049\_FILES\DRB2001-0049\_SANDRA\_TAYLOR.dwg, 1/6/2021 1:48:58 PM



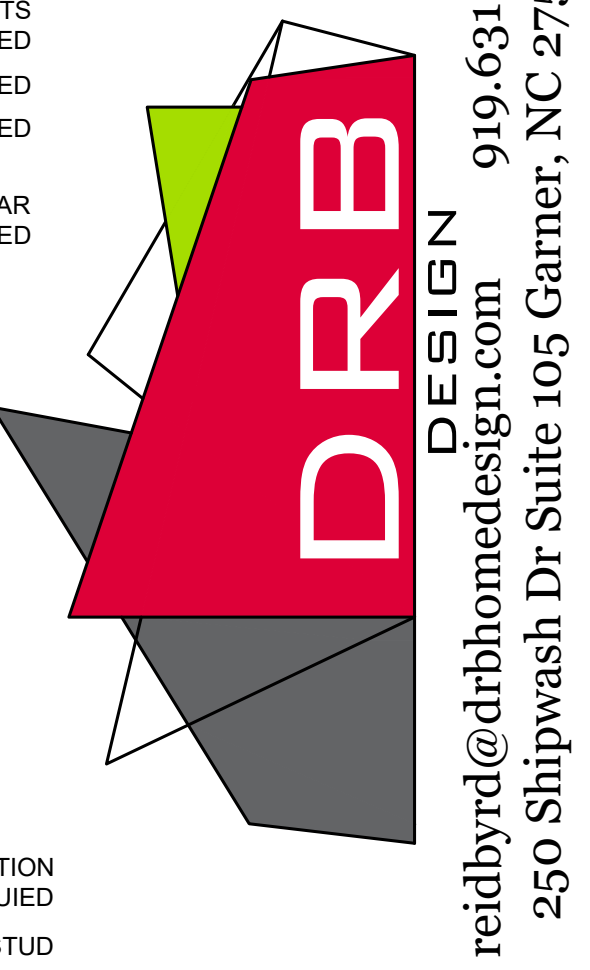
**FOUNDATION PLAN**  
1/4" = 1'-0"



- 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 contractor's 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.

PROJECT# DRB2001-0049  
DATE 01/04/2021  
DRAWN/DESIGNED BY DRB  
CHECKED BY DRB  
SCALE 1/4"=1'-0"

PROJECT NAME  
PERSONAL RESIDENCE  
www.drbbhomedesign.com



CLIENT NAME  
Sandra Taylor  
P.O. Box 1803  
Lillington, NC 27546  
staylorrealty@yahoo.com 910-890-4147

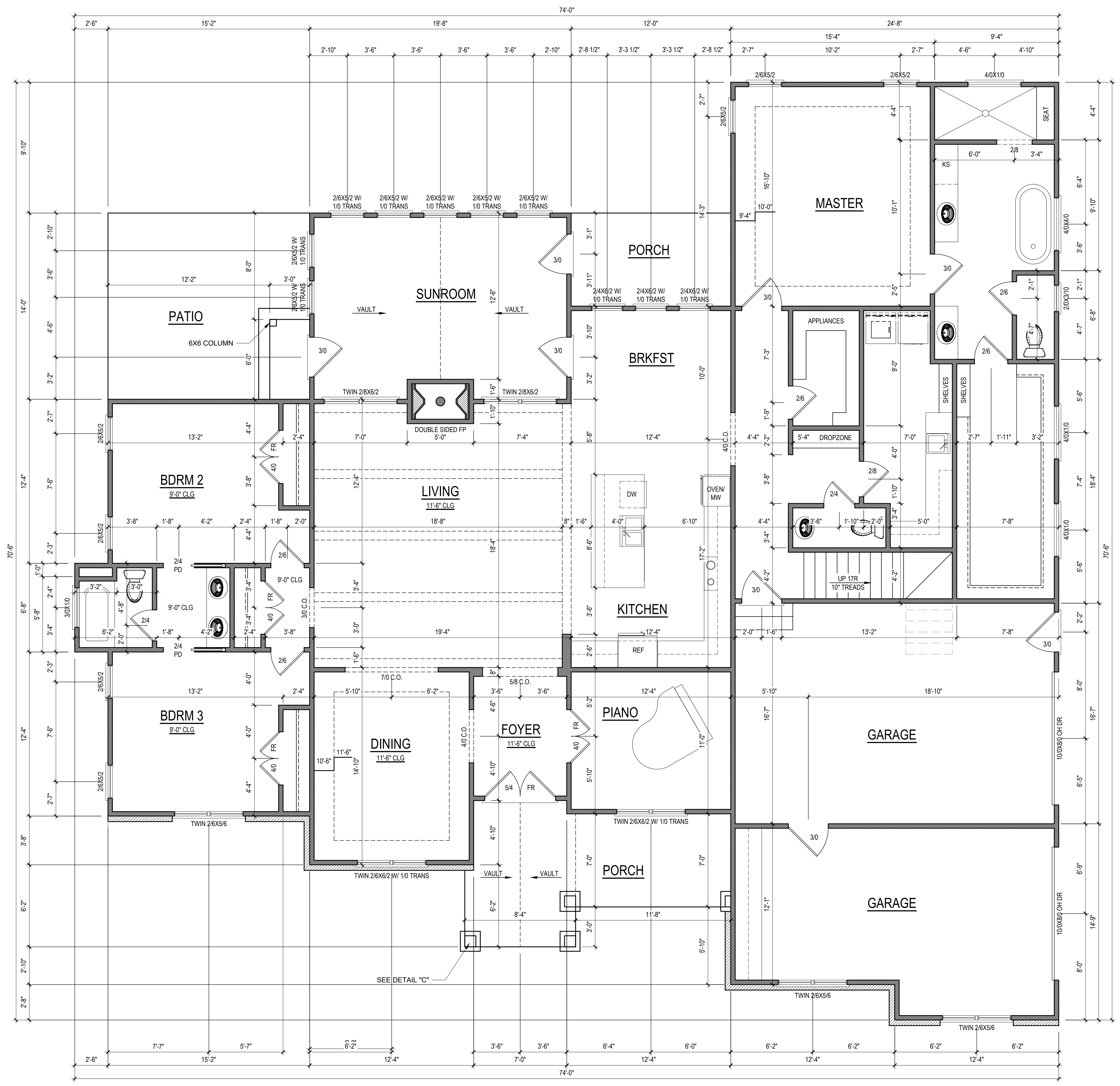
SHEET NAME  
**FOUNDATION**  
SHEET #  
**A3**  
of 6

NOTE:  
ALL EXTERIOR WALLS  
ARE NOMINAL 4" UNO

NOTE:  
ALL INTERIOR WALLS  
ARE NOMINAL 4" UNO

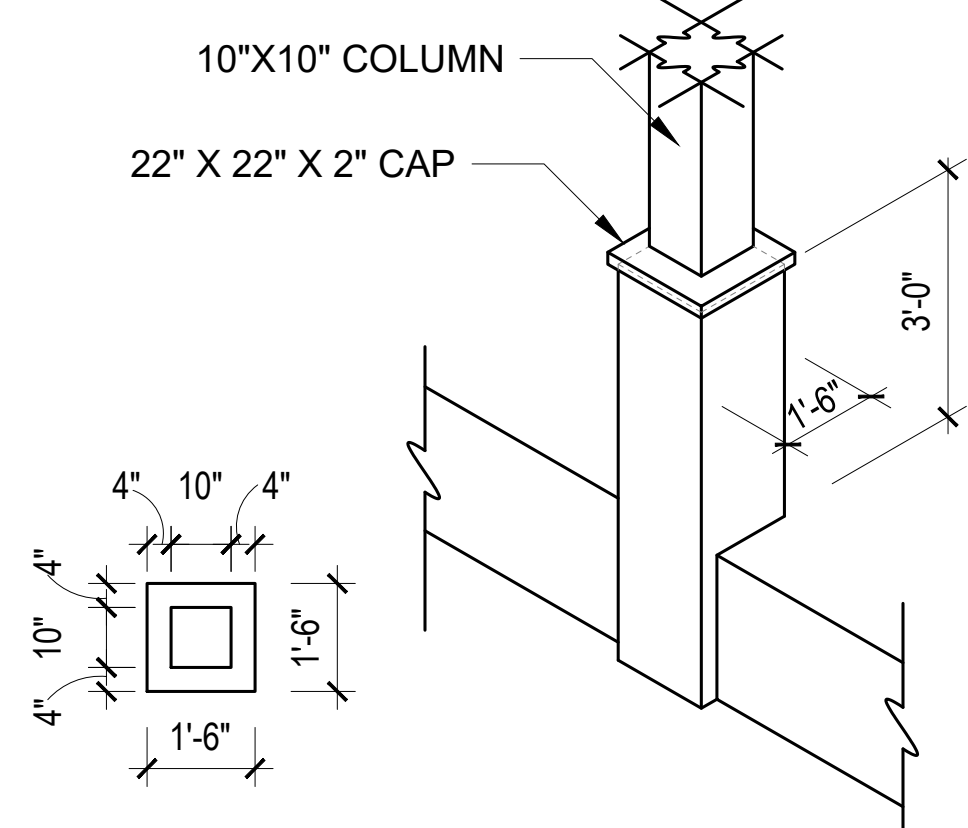
NOTE:  
ALL ANGLED WALLS  
ARE 45° UNO

NOTE:  
ALL DIMENSIONS ARE  
FRAME TO FRAME



**FIRST FLOOR PLAN**  
1/4" = 1'-0" CEILING HGT. = 10'-0"

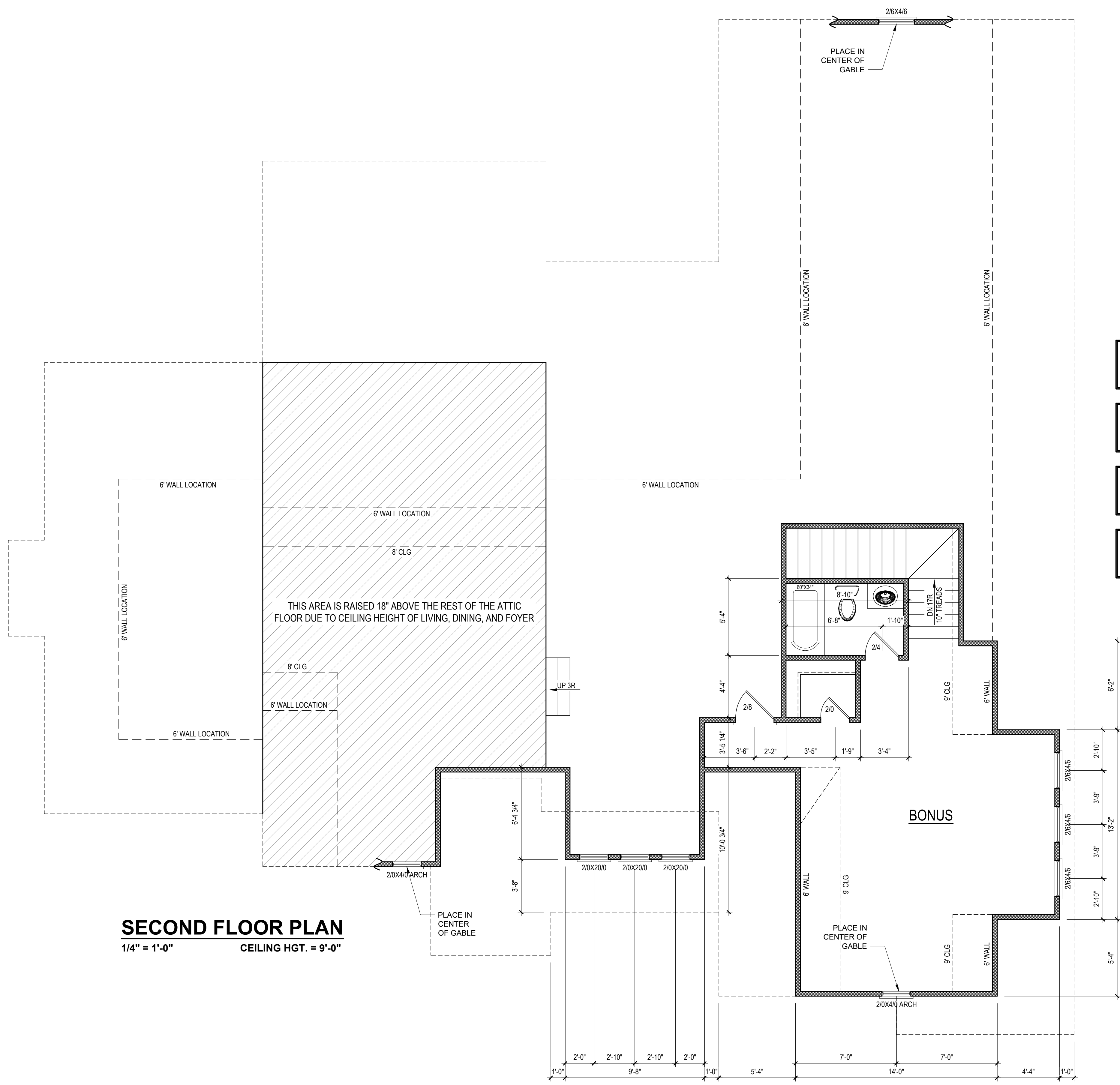
HEATED/HABITABLE SQUARE FOOTAGE	
First Floor	2850
Second Floor	471
<b>TOTAL HEATED</b>	<b>3321</b>
UNHTD SQUARE FOOTAGE	
Garage	735
Front Porch	169
Rear Porch	84
Patio	212
<b>TOTAL UNHEATED</b>	<b>1200</b>
<b>TOTAL SQ FT</b>	<b>4521</b>



**DETAIL "C"**  
NTS

- 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 contractor's 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.

Z:\DRB\_2020\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_SANDRA\_TAYLOR.dwg, 1/6/2021 1:49:01 PM



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

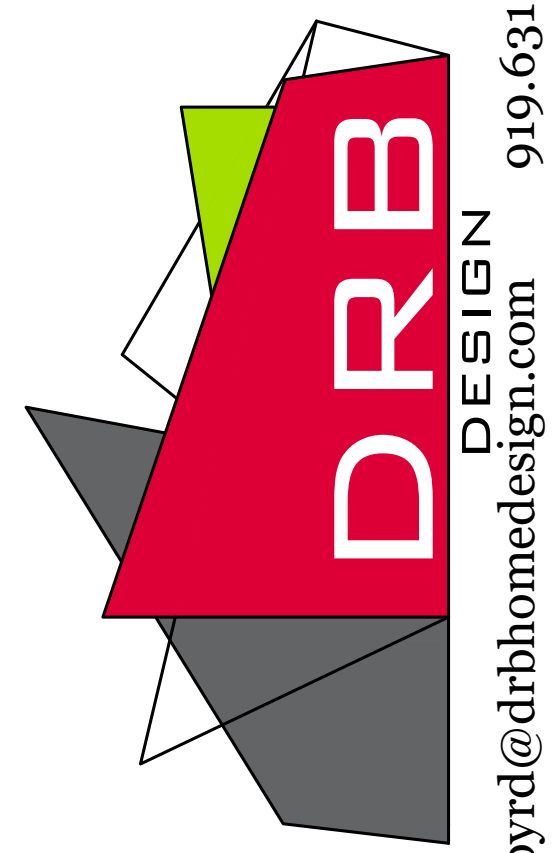
- NOTE:  
ALL EXTERIOR WALLS  
ARE NOMINAL 4" UNO
- NOTE:  
ALL INTERIOR WALLS  
ARE NOMINAL 4" UNO
- NOTE:  
ALL ANGLED WALLS  
ARE 45° UNO
- NOTE:  
ALL DIMENSIONS ARE  
FRAME TO FRAME

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 contractor's 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.

PROJECT #  
DRB2001-0049  
DATE  
01/04/2021  
DRAWN/DESIGNED BY  
DRB  
CHECKED BY  
DRB  
SCALE  
1/4" = 1'-0"

WEBSITE  
drbhomedesign.com

PROJECT NAME  
PERSONAL  
RESIDENCE

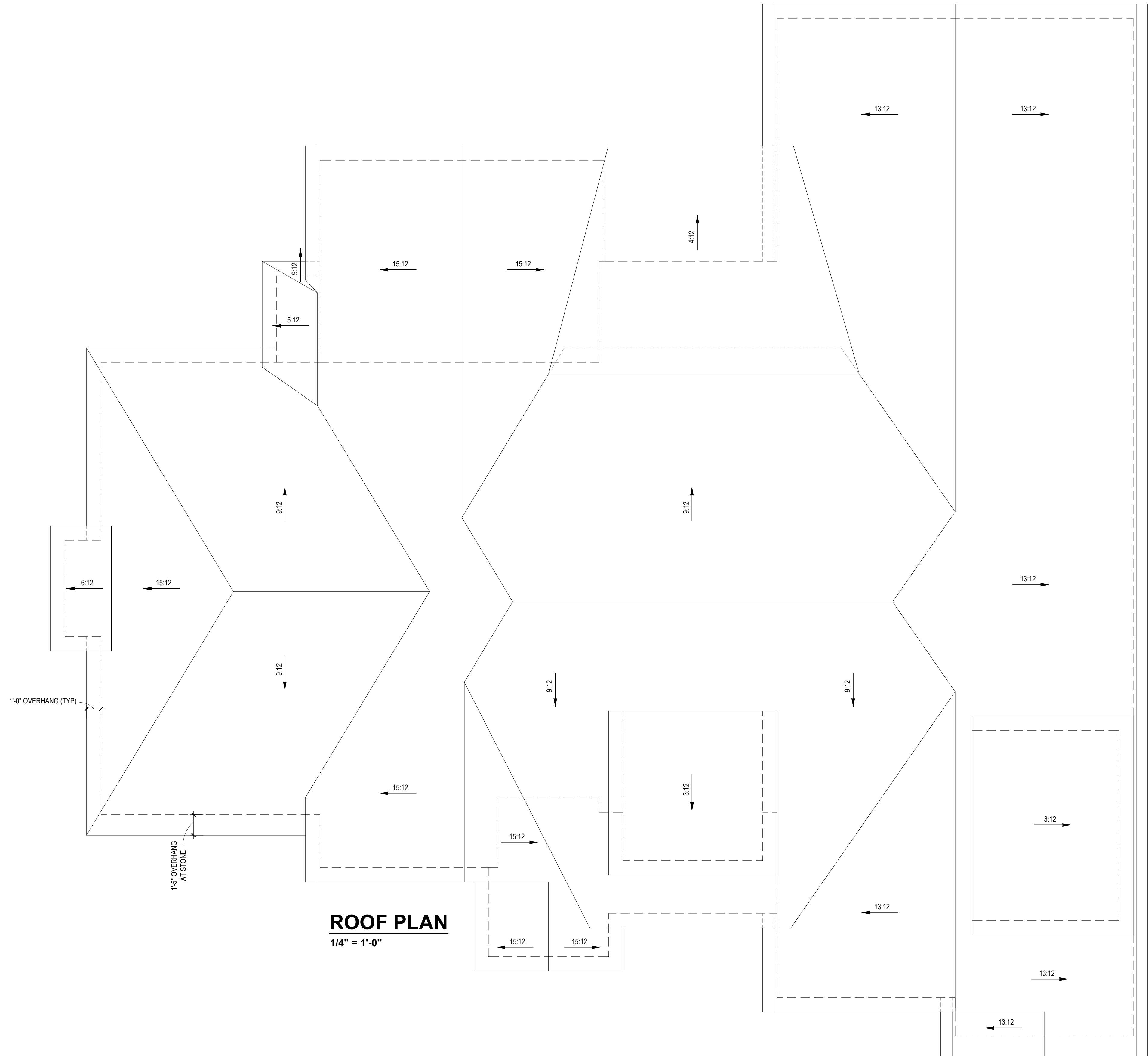


reidbyrd@drbhomedesign.com 919.631-5979  
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME  
Sandra Taylor  
P.O. Box 1803  
Lillington, NC 27546  
staylorrealty@yahoo.com  
910-890-4147

SHEET NAME  
2ND FLOOR  
SHEET #  
A5  
of 6

Z:\DRB\_2020\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_SANDRA\_TAYLOR.dwg, 1/6/2021 1:49:02 PM



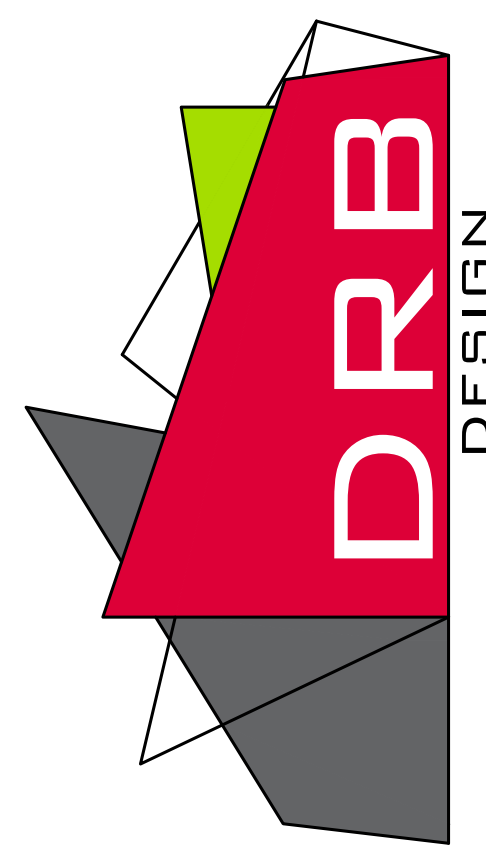
**ROOF PLAN**  
1/4" = 1'-0"

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 contractor's 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.

PROJECT #  
DRB2001-0049  
DATE  
01/04/2021  
DRAWN/DESIGNED BY  
DRB  
CHECKED BY  
DRB  
SCALE  
1/4"=1'-0"

WEBSITE  
drbhomedesign.com

PROJECT NAME  
PERSONAL RESIDENCE



reidbyrd@drbhomedesign.com 919.631-5979  
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME  
Sandra Taylor  
P.O. Box 1803  
Lillington, NC 27546  
staylorrealty@yahoo.com  
910-890-4147

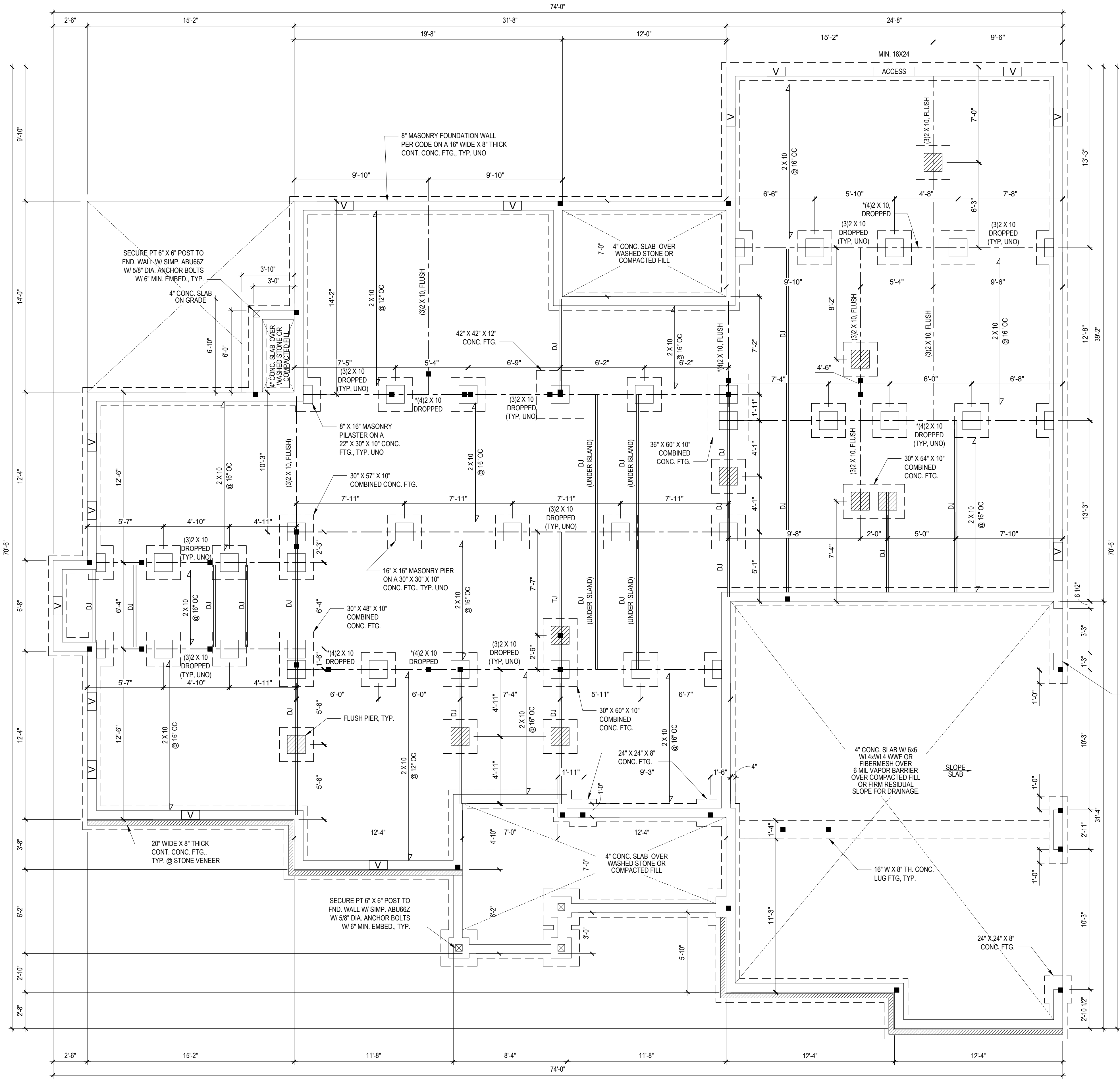
SHEET NAME  
ROOF  
SHEET #  
A6  
of 6

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 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 SYP #2 (UNO).
- ALL LVL LUMBER TO BE 1 1/2" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2000 PSI, E = 1.9M PSI (I.E. I-LEVEL MICROLAM).
- ALL LVL LUMBER IS TO BE 1.5SE (Fb = 2325 PSI).
- ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-6" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10# @ 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 TABLE R502.5(1).
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R502.5(1) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (U.N.O.)
- 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 Fy = 50 KSI (MIN. U.N.O.)
- ALL EXTERIOR LUMBER TO BE #2 SYP PT
- ALL CONCRETE, E = 3000 PSI MIN.
- PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 1/2" 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 2'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
- PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 8'-0" (U.N.O.)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC. 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.

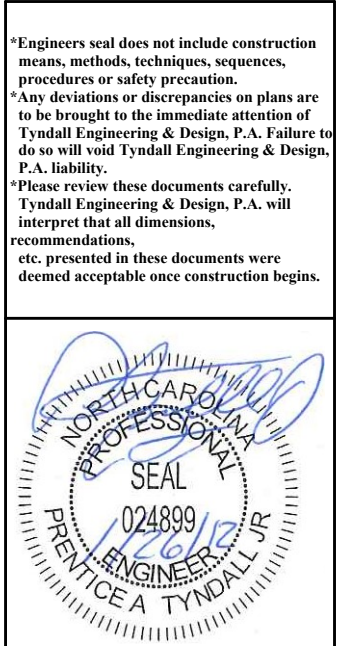


\*NOTE: SECURE 4-PLY W/ 1/2\"/>

NOTE: VENT CRAWLSPACE PER LOCAL CODES AND REQUIREMENTS

FOUNDATION PLAN

1/4" = 1'-0"



**TYNDALL**  
ENGINEERING & DESIGN, P.A.  
180 Blywood Drive • Garner, NC 27530 • 919.778.4444  
www.tyndallengineering.com

Client: **SANDRA TAYLOR**  
Project: **TAYLOR RESIDENCE**

FOUNDATION PLAN  
1ST FLOOR FRAMING

Project #:	DRB2001-0049
Date:	01/05/21
Drawn/Design By:	IJE
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number  
**S1**  
1 of 7

FILENAME: Z:\PDR\_2020\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_LEWS\_SKED\_B1\_PDRINCE\_TYNDALL\_LAST\_PLOT\_DWG1/25/2021\_11:17\_AM

DESIGN LOADS

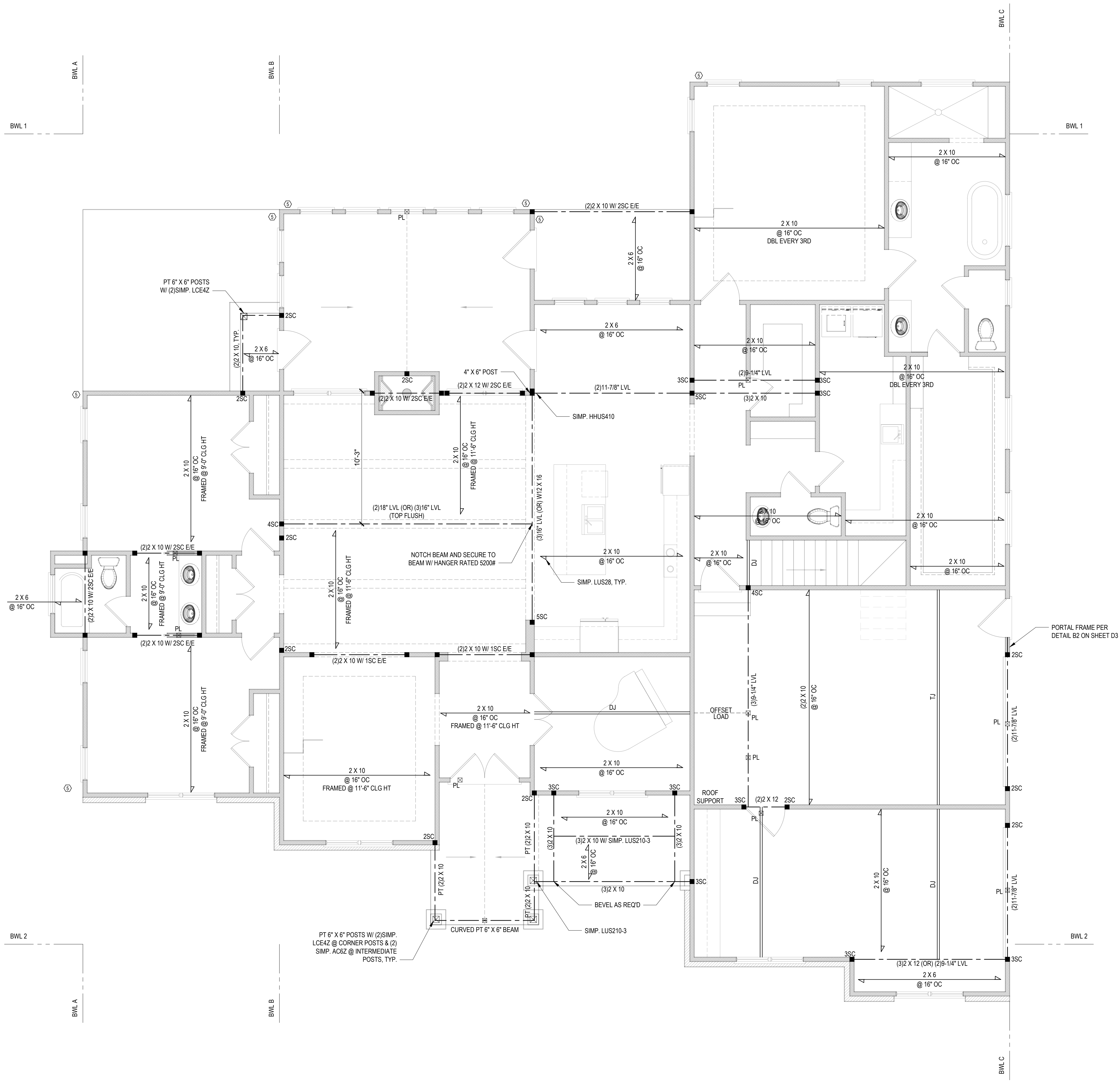
	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	L240
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no storage)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED 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 SYP #2 (UNO)
- ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND F<sub>b</sub> = 2600 PSI, E = 1.9M PSI (I.E. LEVEL MICRO IAM)
- ALL LVL LUMBER TO BE 1.55E (F<sub>b</sub> = 2375 PSI)
- ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-6" SHOULD BE A (2) 2x10 W/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER W/ (2) 10x @ 9" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-8", OTHERWISE REFER TO TABLE R502.5(1)
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (I.N.O.) REFER TO TABLE R502.5(1) 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<sub>y</sub> = 50 KSI MIN. (UNO)
- ALL EXTERIOR LUMBER TO BE #2 SYP PT
- ALL CONCRETE, FC = 3000 PSI MIN.
- PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 1/2" 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. (I.N.O.)
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC. 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

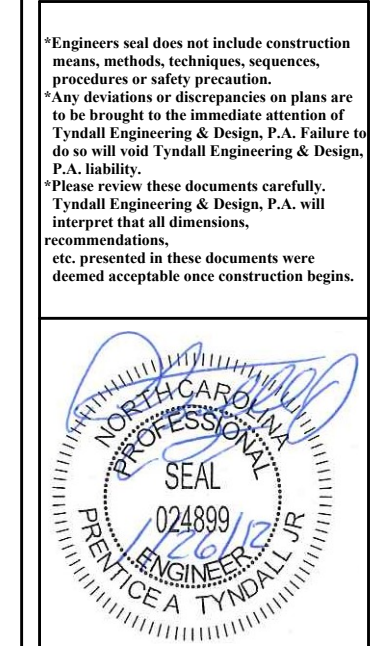
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE OB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)
- 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING). SECURE W/ 5x 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 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 FINISHINGS 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:
  - 2x ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
  - 3x ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT
  - 4x FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
- SHEATH INTERIOR & EXTERIOR
- FOR CS-WSP METHOD, A MINIMUM 2x1" 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. 4" 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 = 2.4 FT  
 BWL B = 12.1 FT  
 BWL C = 9.7 FT  
 BWL 1 = 10.2 FT  
 BWL 2 = 10.2 FT

BRACING PANEL LENGTHS PROVIDED:  
 BWL A = 10.0 FT CS-WSP  
 BWL B = 17.3 FT CS-WSP / GB  
 BWL C = 34.3 FT CS-WSP / PF  
 BWL 1 = 29.5 FT CS-WSP  
 BWL 2 = 38.7 FT CS-WSP

**FIRST FLOOR PLAN**  
 1/4" = 1'-0"



**TYNDALL**  
 ENGINEERING & DESIGN, P.A.  
 100 Blythe Dr. • Cary, NC 27513 • 919.778.4444  
 www.tyndallengineering.com

Client: **SANDRA TAYLOR**  
 Project: **TAYLOR RESIDENCE**

**1ST FLOOR HEADER  
 2ND FLOOR FRAMING**

Project #: **DRB2001-0049**  
 Date: **01/05/21**  
 Drawn/Design By: **IJE**  
 DWG. Checked By: **PAT**  
 Scale: **SEE PLAN**

No.	Date	Remarks

FILENAME: Z:\P\2020\062001\062001-0049\_SANDRA\_TAYLOR\CAD\_FILES\062001-0049\_L1\_FLOOR\_FRAME.DWG; BY: PERDINCE TYNDALL; LAST PLOT DATE: 01/29/2021 11:18 AM



DESIGN LOADS

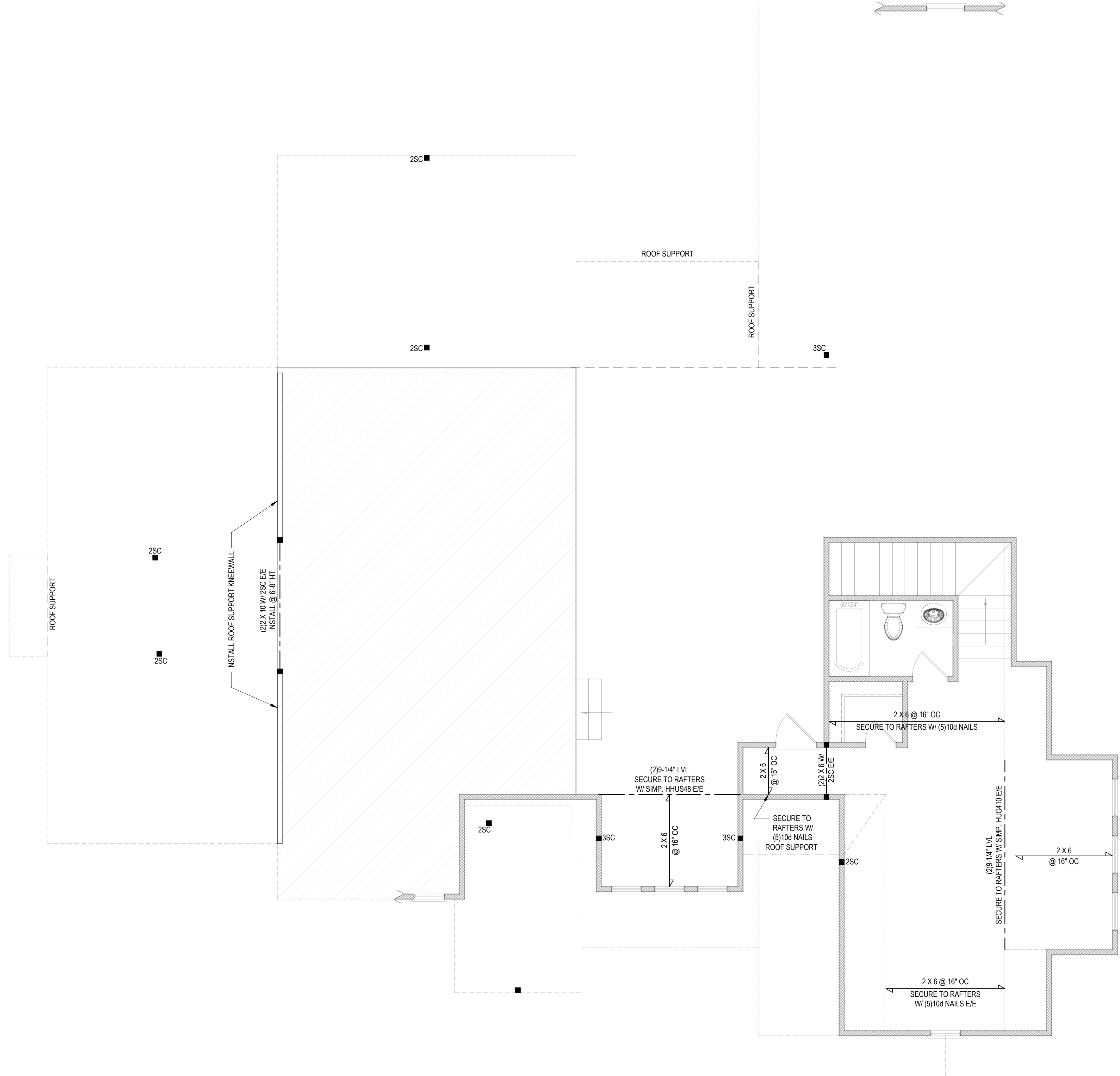
	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no storage)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 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 CONTRACTORS 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 SYP #2 (UNO).  
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2800 PSI, E = 1.9M PSI (I.E. LEVEL MICROLAM).  
ALL LVL LUMBER IS TO BE 1.5E (Fb = 2325 PSI).
- ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-0" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10# @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-0". MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLE R502.5(1).
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R502.5(1) 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 Fy = 50 KSI MIN. (UNO).
- ALL EXTERIOR LUMBER TO BE #2 SYP PT.
- ALL CONCRETE, 6 = 3000 PSI MIN.  
PRESUMPTIVE BEARING CAPACITY = 2000 PSF.
- 12"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 2'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
- PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 8'-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 602.10.4 OF THE 2018 IRC.
- 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 NCR.
- 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 NCR.
- 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).
- 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING). SECURE w/ CS-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/ 6# 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 6# 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(4). IN LIEU OF A CORNER RETURN, EITHER A MIN. 4x4 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



SECOND FLOOR PLAN

1/4" = 1'-0"

\*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.  
Any deviation or discrepancy 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.



**TYNDALL**  
ENGINEERING & DESIGN, P.A.  
180 Blinnwood Drive • Garner, NC 27530 • 919.775.4444  
www.tyndallengineering.com

Client: SANDRA TAYLOR  
Project: TAYLOR RESIDENCE

2ND FLOOR HEADER  
2ND FLR. CLG. FRAMING

Project #:	DRB2001-0049
Date:	01/05/21
Drawn/Design By:	IJE
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number  
**S3**  
3 of 7

FILENAME: Z:\DRB\_2001\DRB2001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_2.FDW SWD BY: PRESENCE TYNDALL LAST PLOT DATE: 1/29/2021 11:15 AM

\*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.  
 Any deviation or discrepancy 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.  
 180 Blywood Drive • Dover • Florida 33427  
 Phone: 772.350.1111 • Fax: 772.350.1112  
 www.tyndallengineering.com

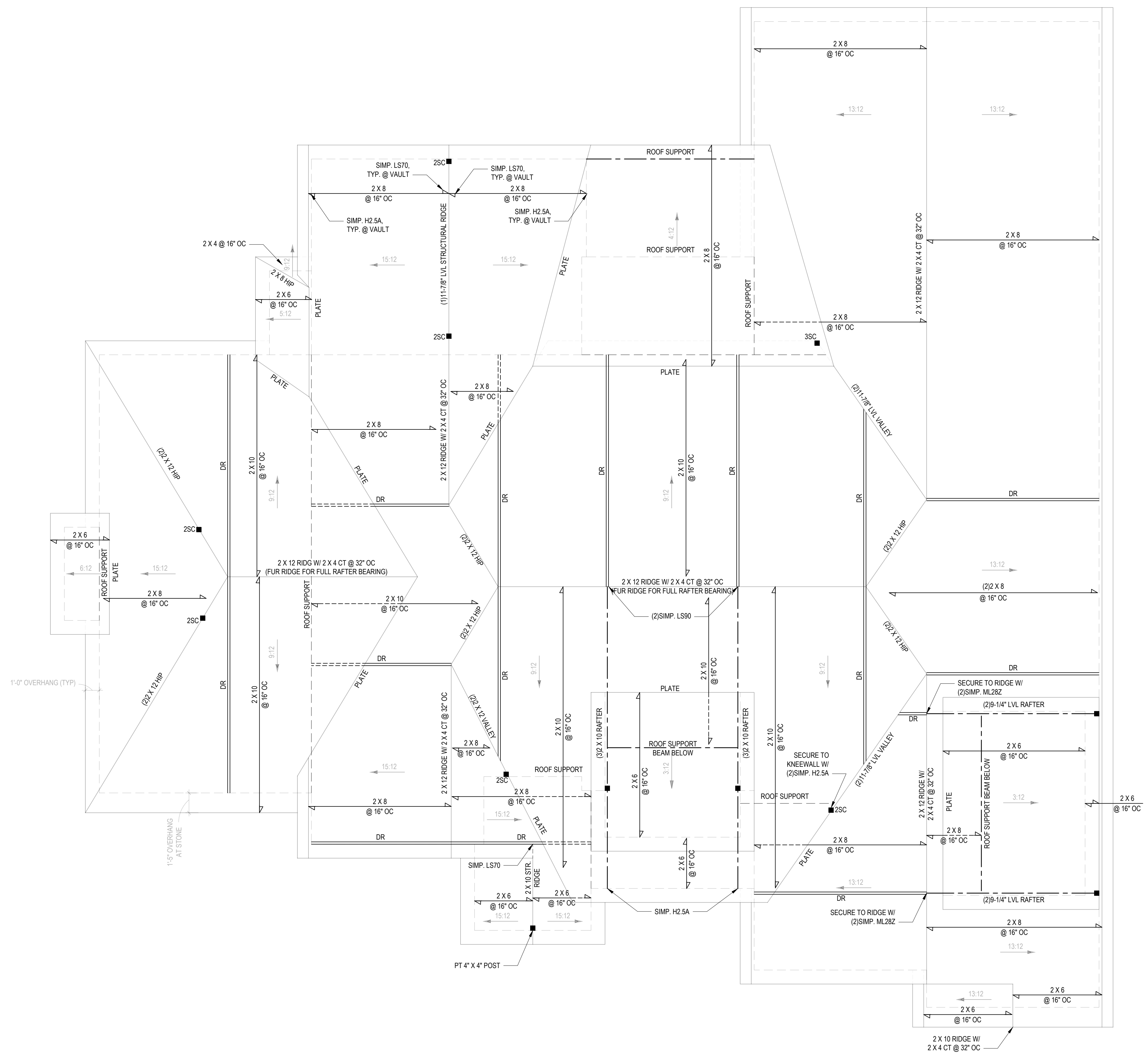
Client: **SANDRA TAYLOR**  
 Project: **TAYLOR RESIDENCE**

# ROOF PLAN

Project #: **DRB2001-0049**  
 Date: **01/05/21**  
 Drawn/Design By: **IJE**  
 DWG. Checked By: **PAT**  
 Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number  
**S4**  
 4 of 7



**ROOF PLAN**  
 1/4" = 1'-0"

FILENAME: Z:\P\2020\0201\0201\0201-0049\_SANDRA\_TAYLOR\CAD\_FILES\0201-0049\_LEWIS\_SKED\_B1\_PREFERENCE\_TYNDALL\_LAST\_PLOT\_DATE\1/29/2021\_11:15 AM

**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.

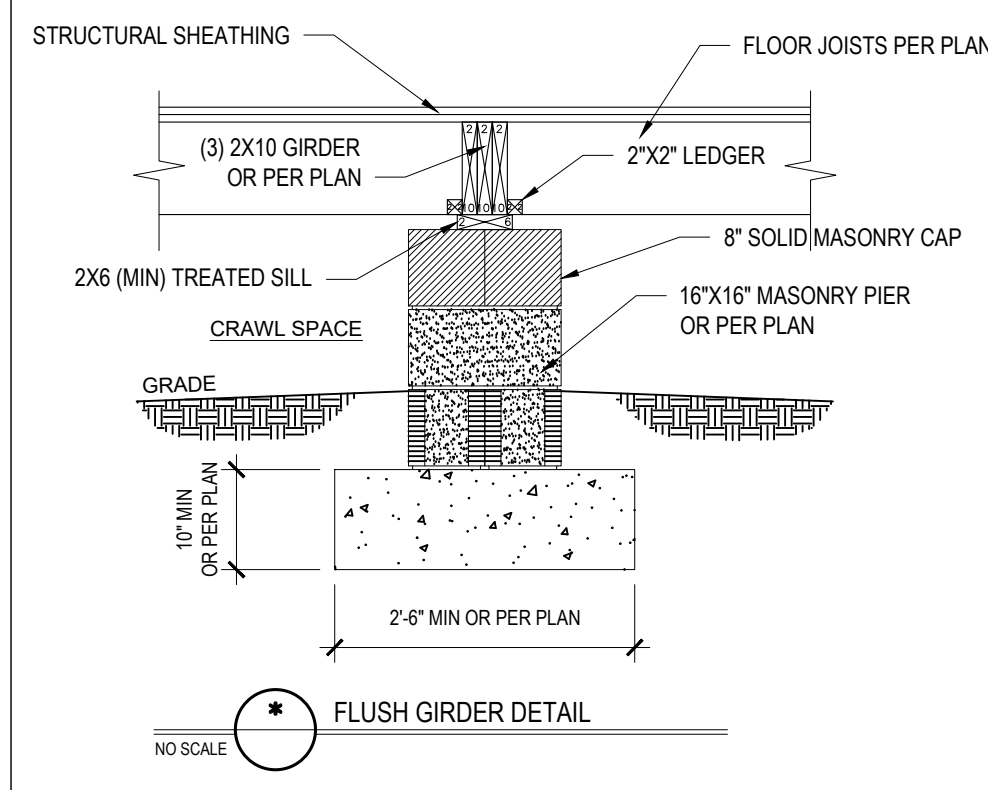
2) DESIGN LOADS:

	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 (w/ 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			

- 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.C.)
- 5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R602.3 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) (U.N.) ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL. ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2000 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 = 1.8M 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 1/2" 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" 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 VALLES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:  
39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1/12  
36.0 LBS/SQFT FOR ROOF PITCHES 1/12 TO 2/12  
18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12  
\*MEAN ROOF HEIGHT 3/4" 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 NRC.
- 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 COLUMN. (U.N.O.)
- 20) MAXIMUM MASONRY PER 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	MAX = MAXIMUM
CANT = CANTILEVER	MIN = MINIMUM
CJ = CEILING JOIST	NOM = NOMINAL
CMU = CONCRETE MASONRY UNIT	O.C. = ON CENTER
COL = COLUMN	PL = POINT LOAD
CONC = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	REIN = 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
FTG = FOOTING	TYP = TYPICAL
GALV = GALVANIZED	UNO = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	W = WIDE FLANGE BEAM
HT = HEIGHT	WLD = WELDED WIRE FABRIC
MANUF = MANUFACTURER	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"

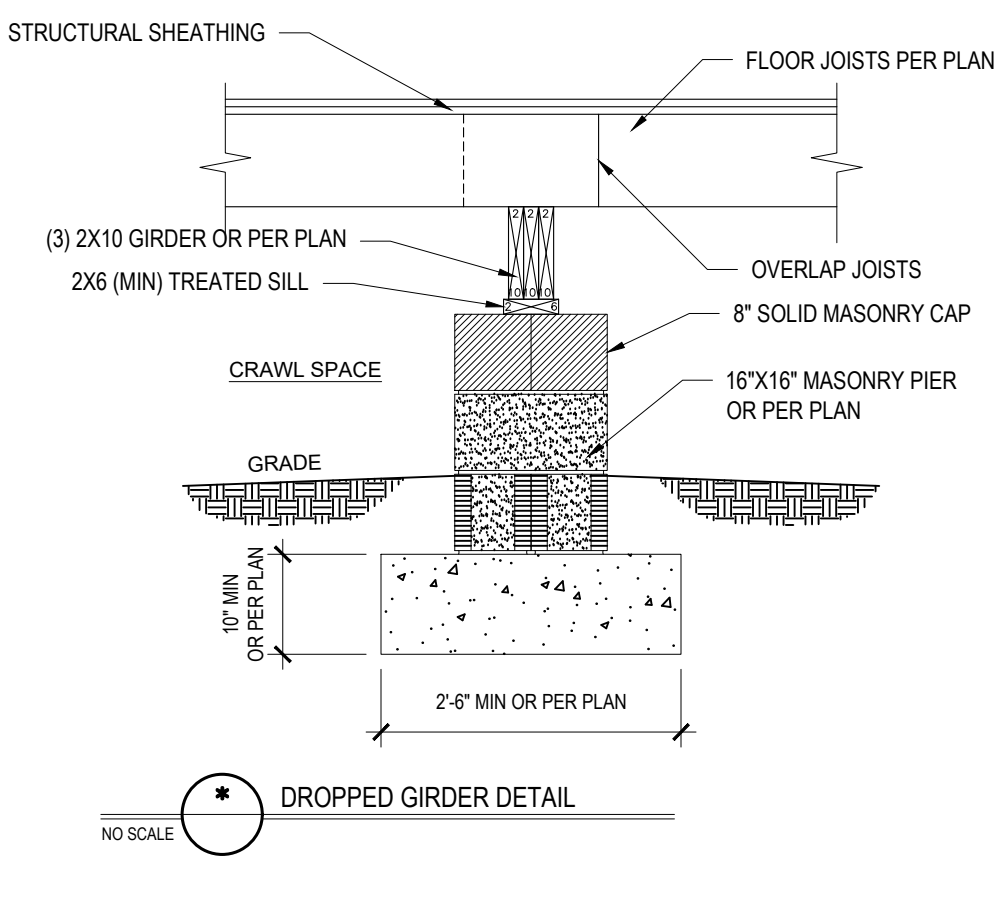
\* THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET WHICH MAY BE LOCATED AT DIFFERENT LEVELS.  
\*\* FROM TOP OF FOOTING TO BOTTOM OF GIRDER.  
\*\*\* DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER 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" 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" 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 <sup>a,1</sup>	SKYLIGHT U-FACTOR <sup>b</sup>	GLAZED FENESTRATION SHGC <sup>c,1,2</sup>	CEILING <sup>3</sup> R-VALUE	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT <sup>4,5</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE AND DEPTH	CRAWL SPACE <sup>e</sup> WALL R-VALUE
3	0.35	0.55	0.30	38 or 30 cont <sup>1</sup>	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont <sup>1</sup>	19	5/13 <sup>1</sup>	0	5/13
4	0.35	0.55	0.30	38 or 30 cont <sup>1</sup>	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont <sup>1</sup>	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30 cont <sup>1</sup>	19, or 13 + 5 <sup>h</sup> or 15 + 3 <sup>h</sup>	13/17 or 13/12.5 cont <sup>1</sup>	30 <sup>9</sup>	10/15	10	10/19

**TABLE N1102.1 CLIMATE ZONES 3-5**

NO SCALE

\* R-VALUES ARE MINIMUM 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.

<sup>1</sup> THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SOLAR-HEAT-GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.

<sup>2</sup> 100% MEANS IS CONTINUOUS INSULATION (INCLUDING ON THE INTERIOR OR EXTERIOR OF THE HOME OR IN A CAVITY) INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.

<sup>3</sup> FOR MINIMUM THICK INSULATION SHALL BE APPLIED FROM THE INSULATION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR MINIMUM 24" BELOW SPACE W/HERE THE ISLE OF INSULATION IS BUILT. INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24" ABOVE WHERE ISLES. R-4 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.

<sup>4</sup> SEE LIST 2.

<sup>5</sup> BASEMENT WALL INSULATION IS NOT REQUIRED IN WINTERHEATING LOCATIONS AS DEFINED BY FIGURE N1102.7 AND TABLE N1102.7.

<sup>6</sup> OR INSULATION EQUIVALENT TO FILL THE FRAMING CAVITY. 10" MINIMUM.

<sup>7</sup> THE FIRST VALUE IS CAVITY INSULATION. THE SECOND VALUE IS CONTINUOUS INSULATION. 90-100% MEANS R-13 CAVITY INSULATION PLUS R-4 INSULATED SHEATHING. 100% MEANS R-13 CAVITY INSULATION. PLUS R-4 INSULATED SHEATHING. 2. STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR INSULATION BRACING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. 3. STRUCTURAL SHEATHING COVERS MORE THAN 25% PRESENT OF THE EXTERIOR. SHALL BE SUBSTITUTED WITH INSULATION BRACING OF AT LEAST R-11 + 2" MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.

<sup>8</sup> FOR MASS WALLS THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.

<sup>9</sup> IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MAXIMUM 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.

<sup>10</sup> IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MAXIMUM OF FOUR GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.55 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.

<sup>11</sup> R-5 SHALL BE ADDED TO ANY OF THE SOLAR HEAT GAIN REQUIREMENT WHERE THE FULL HEIGHT OF AN INSULATED INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE LEAVES. OTHERWISE, R-5 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION OR THE TOP PLATE OF THE ROOF BRACE.

<sup>12</sup> 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 BATTLE.

<sup>13</sup> R-5 IS FOR PERPENDICULAR COMPRESSION AND NOTED IN A MINIMUM L + 1 FRAMING CAVITY IS DENIED TO COMPLY. PERPENDICULAR BATTLES SHOWN IN R-15 OR HIGHER COMPRESSED AND REINSTALLED IN 24" WALLS IS NOT ALLOWED TO COMPLY.

<sup>14</sup> BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

2664 SQ. FT. OF CRAWL SPACE / 150 = 17.76 SQ. FT. OF REQD VENTILATION WITHOUT CROSS VENTILATION  
17.76 SQ. FT. OF VENTILATION REQD / 0.45 SQ. FT. PER VENT = 40 VENTS REQD<sup>1</sup>

-OR-

2644 SQ. FT. OF CRAWL SPACE / 1500 = 1.78 SQ. FT. OF REQD VENTILATION WITH CROSS VENTILATION  
1.78 SQ. FT. OF VENTILATION REQD / 0.45 SQ. FT. PER VENT = 4 VENTS REQD<sup>1</sup>

- 1) VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON PLAN, HOWEVER VENTS SHALL BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS AND TO PREVENT DEAD AIR POCKETS.
- 2) THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1000 OF THE CRAWL SPACE GROUND AREA WHERE THE REQUIRED OPENINGS ARE PLACED IN ORDER TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE. THE INSTALLATION OF OPERABLE LOADERS SHALL NOT BE PROHIBITED. ONE FOUNDATION VENT SHALL BE WITHIN 10' OF EACH CORNER OF THE FOUNDATION. FOUNDATION BARRIER ENTRY WHEN THE CRAWL SPACE IS BUILT ON A SLOPED SITE, THE SPILL FOUNDATION SHALL NOT BE CONSTRUCTED WITH VENTS. VENT DAMPERS SHALL BE PROVIDED WHEN THE BOTTOM OF THE FOUNDATION VENT OPENING IS LESS THAN 6 INCHES ABOVE THE FINISHED EXTERIOR GRADE.
- WALL VENTED CRAWL SPACES REQUIRE FULL COVERAGE GROUND VAPOR RETARDERS.

**CRAWL SPACE VENTILATION CALCULATION**

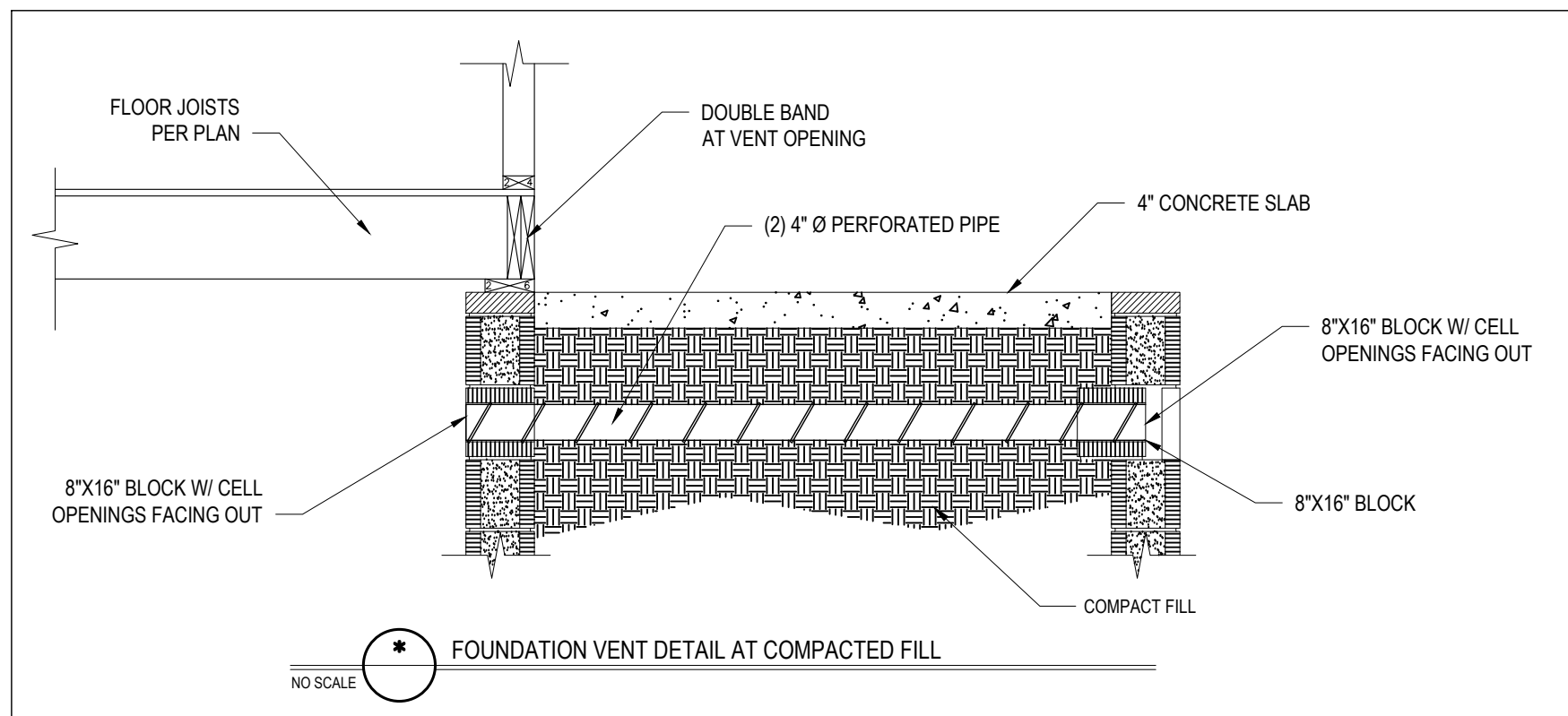
NO SCALE

- SQ. FT. OF ATTIC / 300 = - SQ. FT. INLETS/OUTLETS REQUIRED

- 1) CALCULATION BASED ON VENTILATORS USED AT LEAST 3" ABOVE THE COMB VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY COMB VENTS.
- 2) DAMPERS OR BARRIERS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

**ATTIC VENTILATION CALCULATION**

NO SCALE



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

**TYNDALL ENGINEERING & DESIGN P.A.**  
1107 W. 10th St., Suite 100  
Raleigh, NC 27601  
919.775.4400  
www.tyndallengineering.com

280 Blythe Ave. • Cary • North Carolina • 27509

CLIENT: **SANDRA TAYLOR**

PROJECT: **TAYLOR RESIDENCE**

**STANDARD DETAILS**

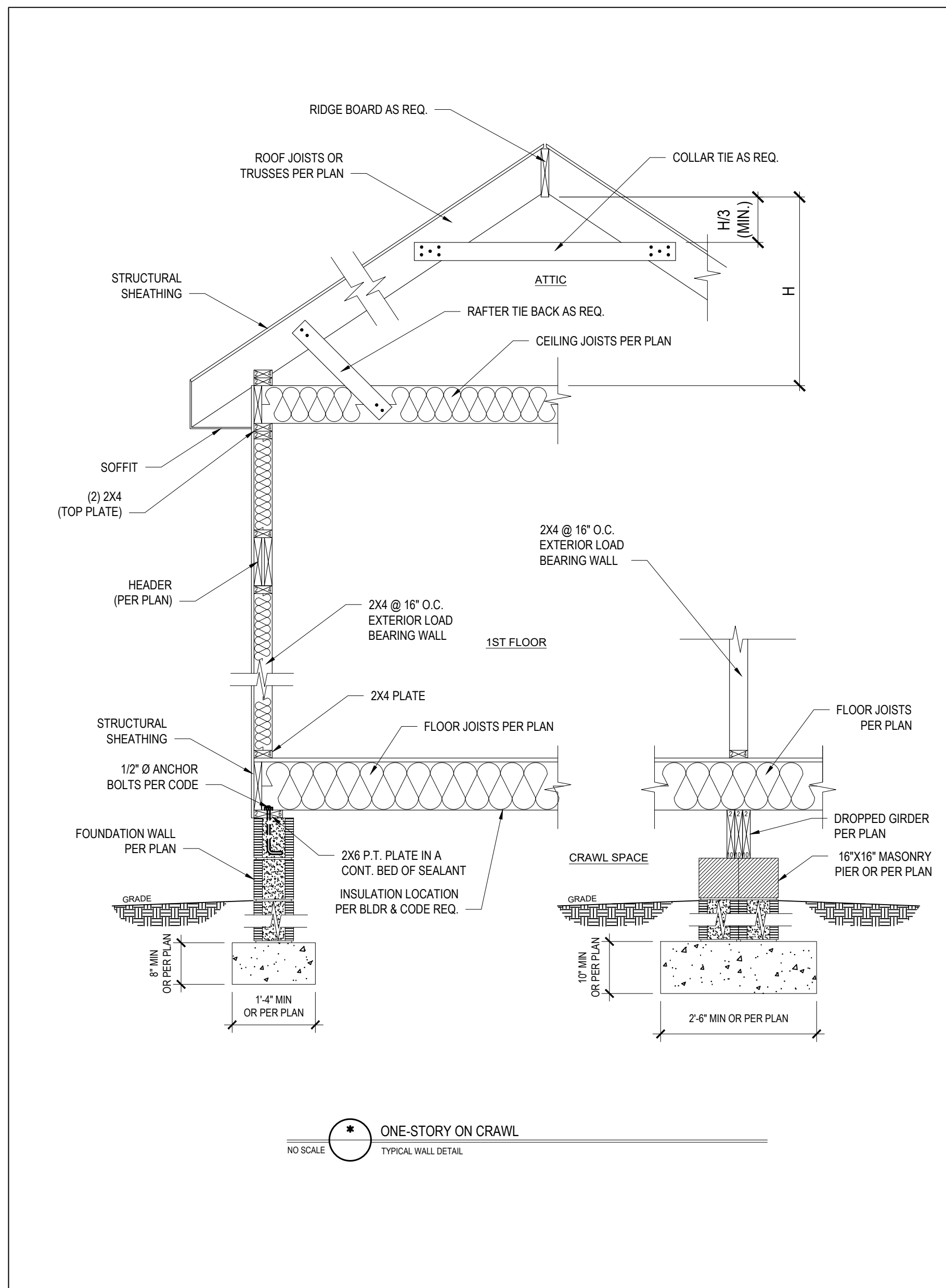
Project #: **DRB2001-0049**  
Date: **01/05/21**  
Drawn/Design By: **LJE**  
DWG. Checked By: **PAT**  
Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

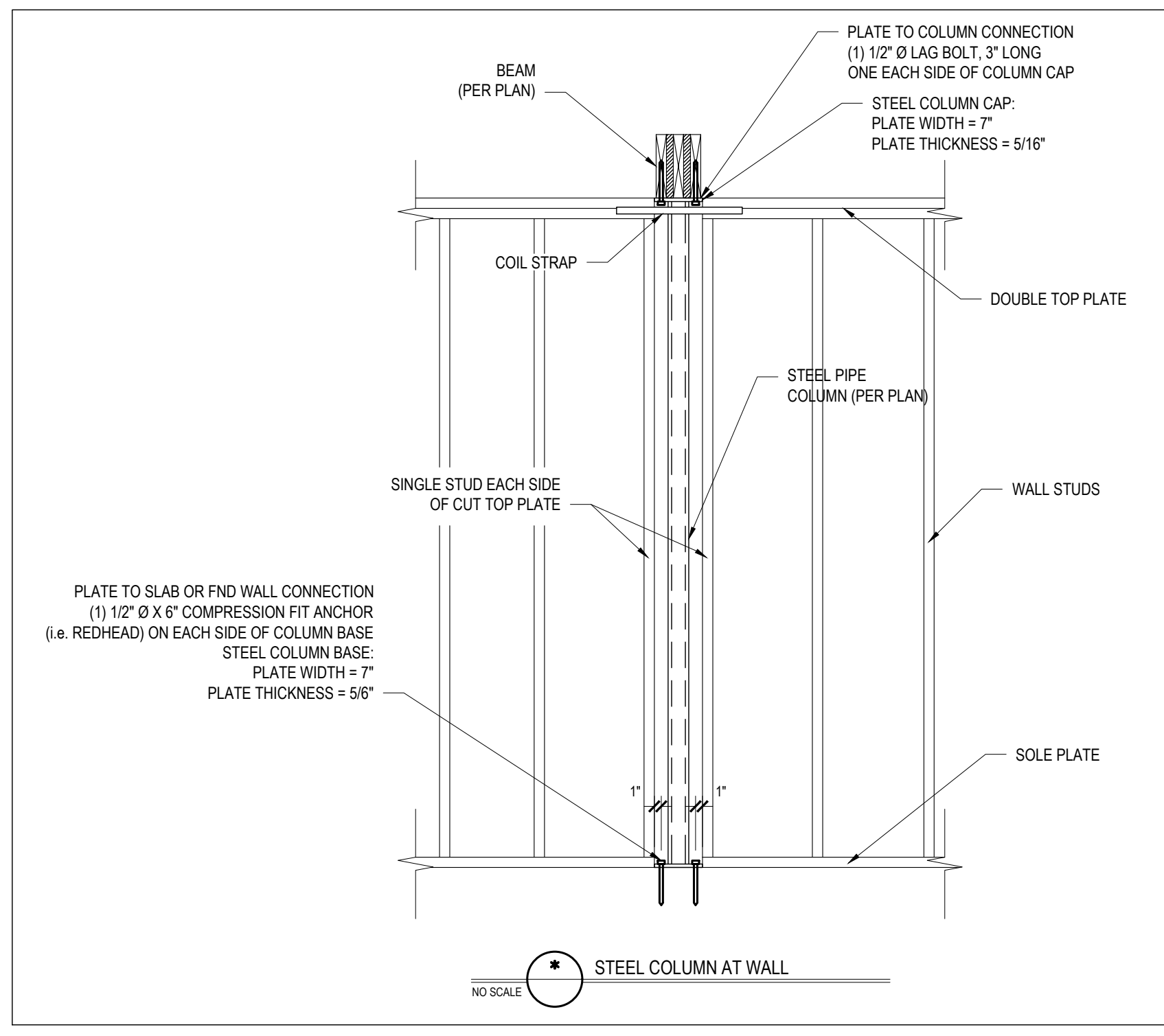
Sheet Number

**D1**

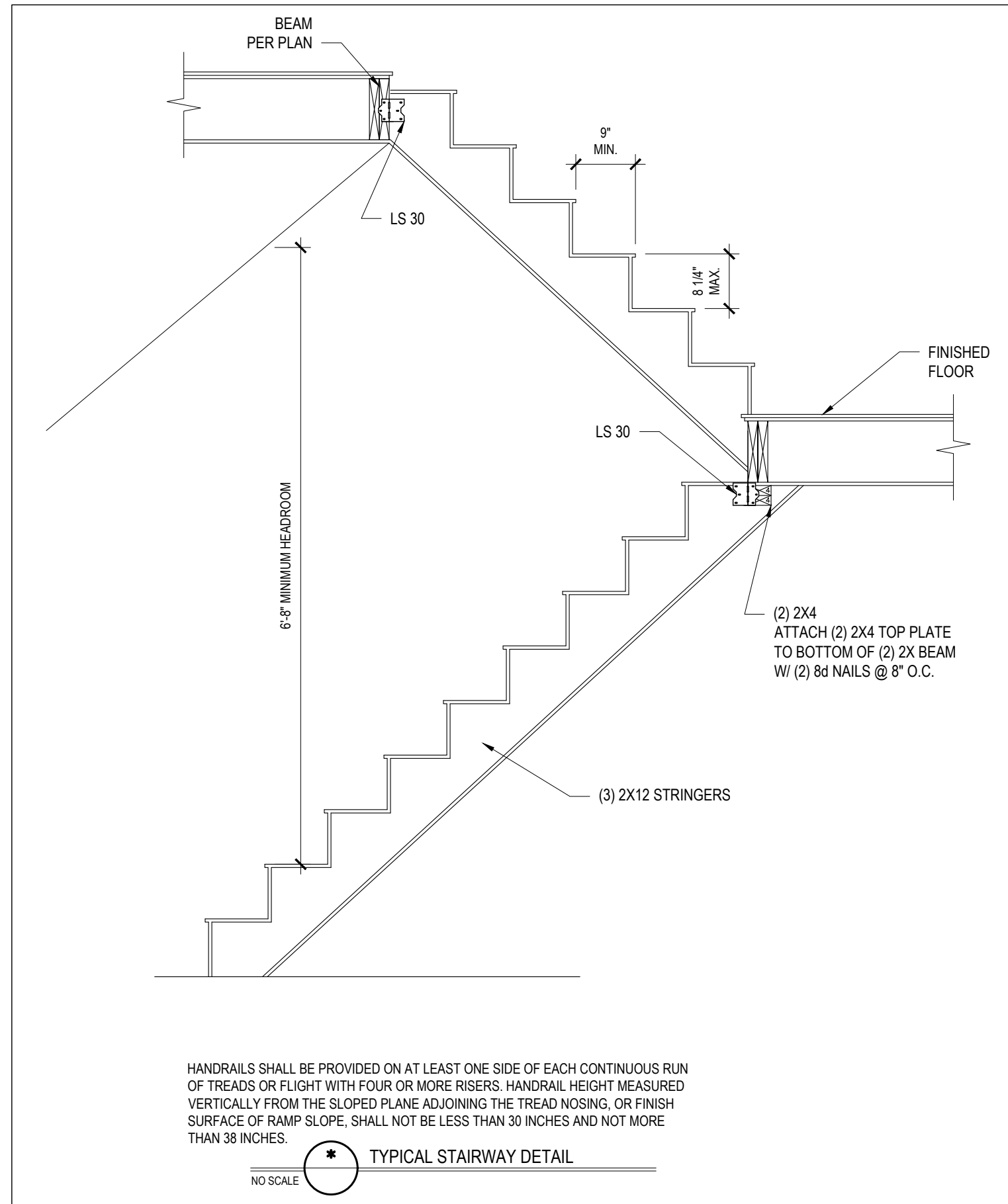
5 of 7



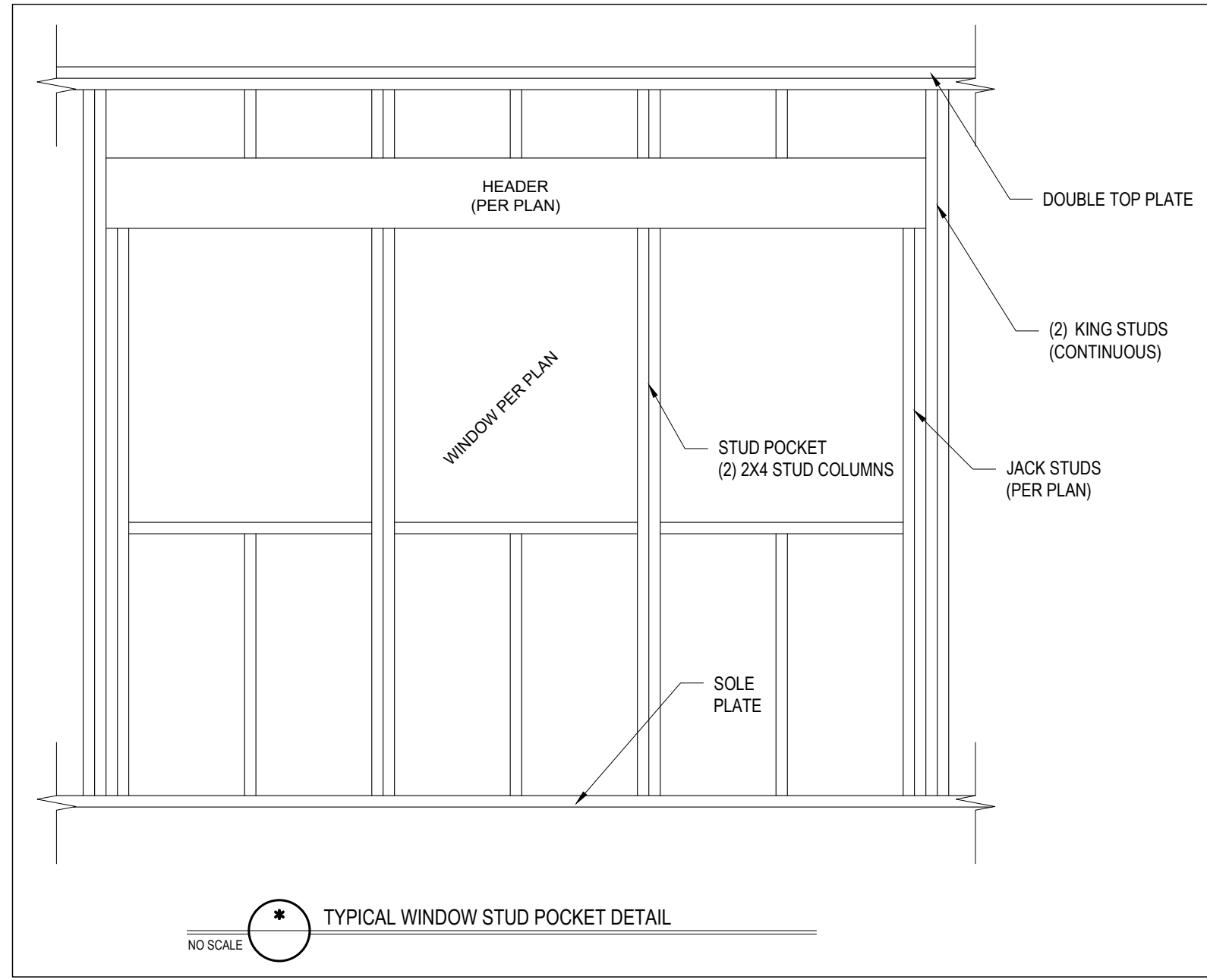
NO SCALE \* ONE-STORY ON CRAWL TYPICAL WALL DETAIL



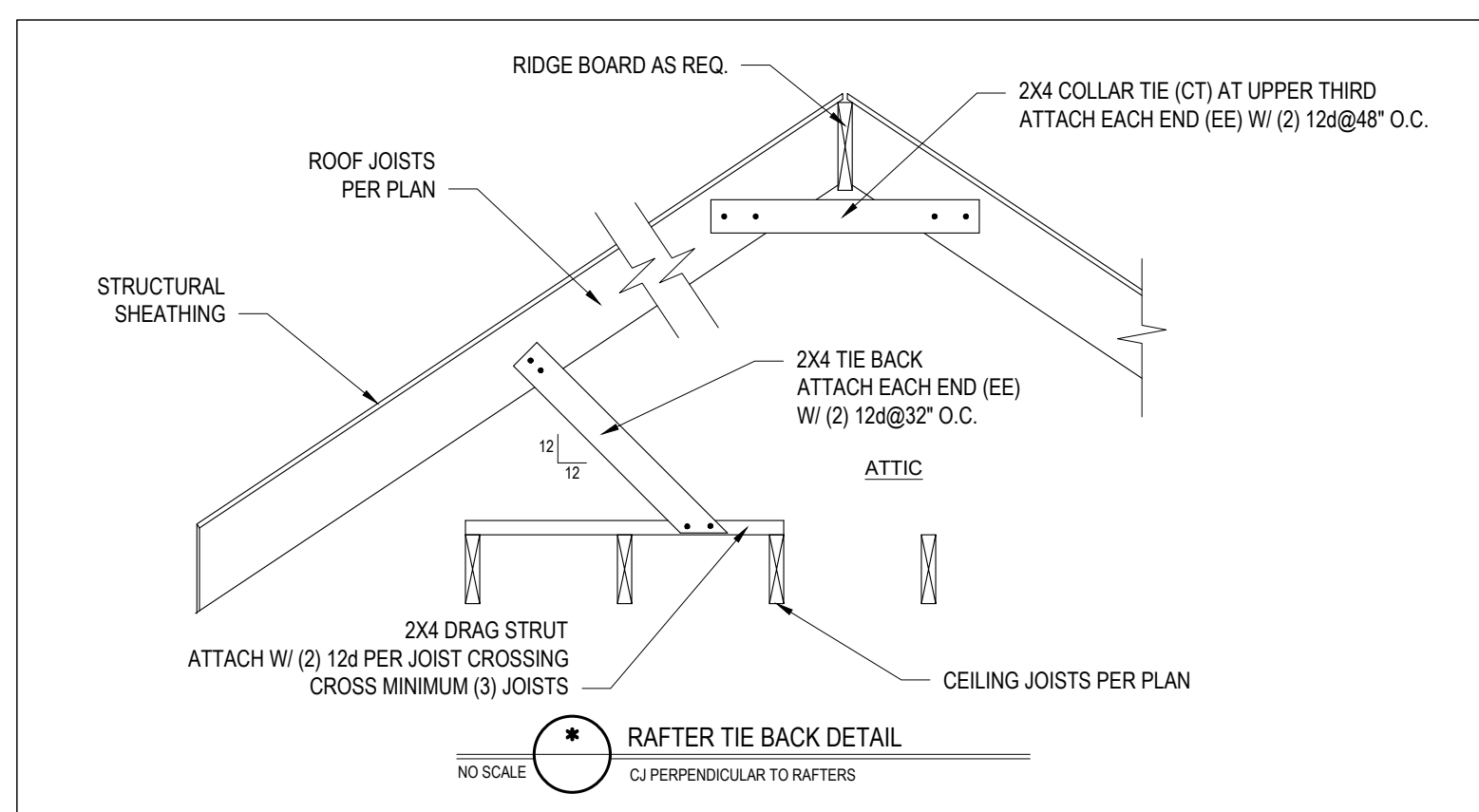
NO SCALE \* STEEL COLUMN AT WALL



HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISES. HANDRAIL HEIGHT MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL NOT BE LESS THAN 30 INCHES AND NOT MORE THAN 38 INCHES.  
NO SCALE \* TYPICAL STAIRWAY DETAIL



NO SCALE \* TYPICAL WINDOW STUD POCKET DETAIL



NO SCALE \* RAFTER TIE BACK DETAIL C) PERPENDICULAR TO RAFTERS

\* Engineers seal does not include construction means, methods, techniques, experience, procedures or safety precautions. Any deviation or discrepancy 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.  
1107 W. 72nd St. • #107 72nd Ave.  
North Carolina • 27609  
www.tyndallengineering.com  
200 Blytheville Drive • Garner • 27838

Client: SANDRA TAYLOR  
Project: TAYLOR RESIDENCE

STANDARD  
DETAILS

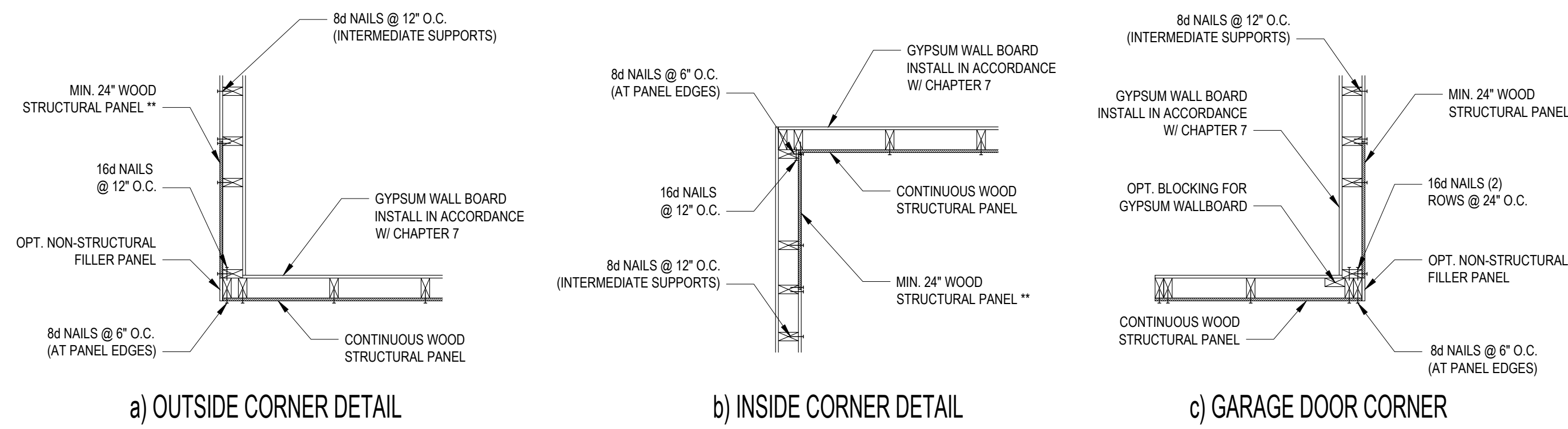
Project #: DRB2001-0049  
Date: 01/05/21  
Drawn/Design By: IJE  
DWG. Checked By: PAT  
Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number

D2

FILENAME: Z:\WPB\_2020\062001-0049\_SANDRA\_TAYLOR\CAD\_FILES\DRB2001-0049\_LEWS\_SWD.BT; PREDRAWN: TYNDALL; LAST PLOT DATE: 1/29/2021 11:15 AM



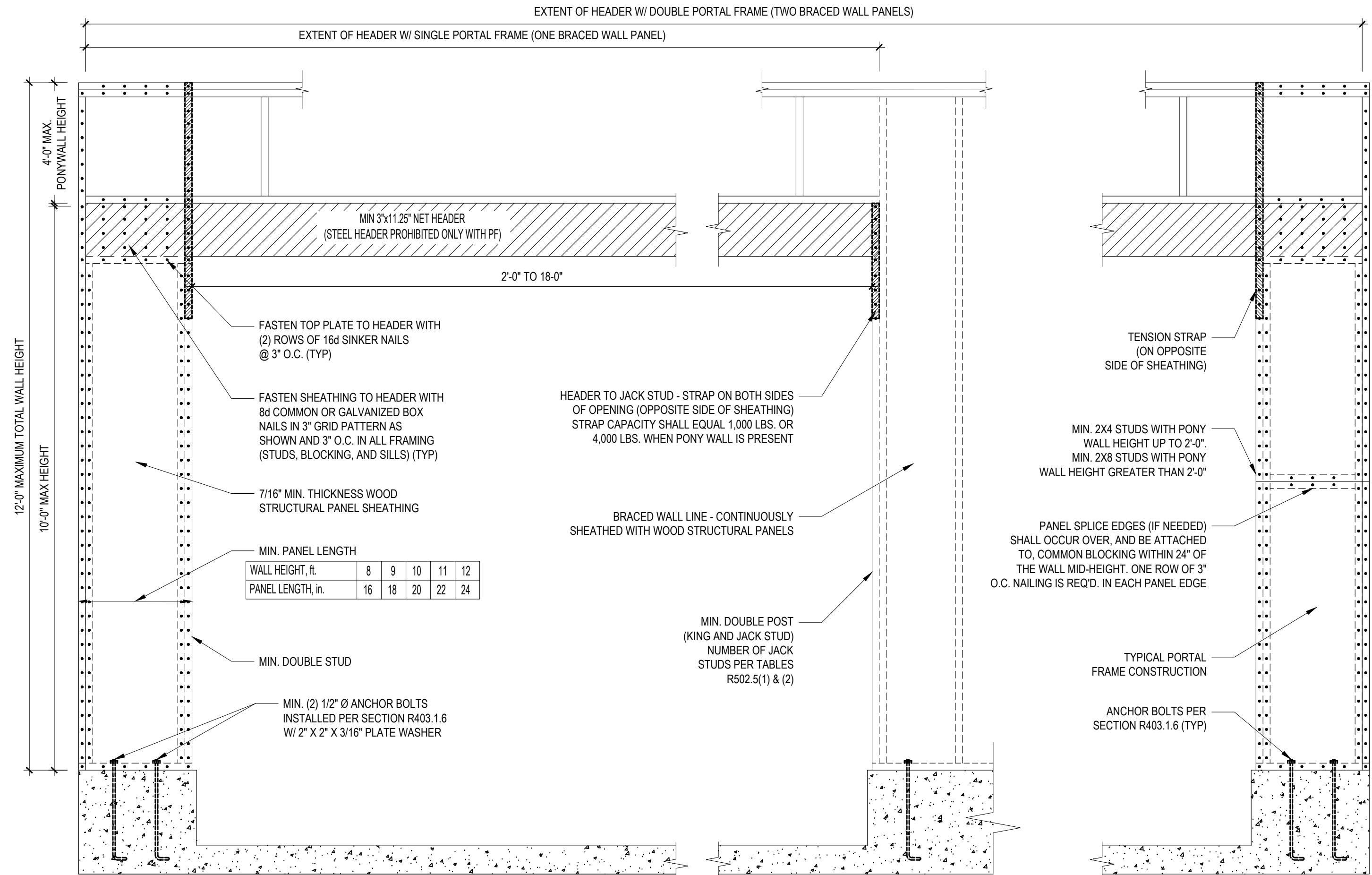
**B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING**  
NO SCALE

**STRUCTURAL SHEATHING NOTES**

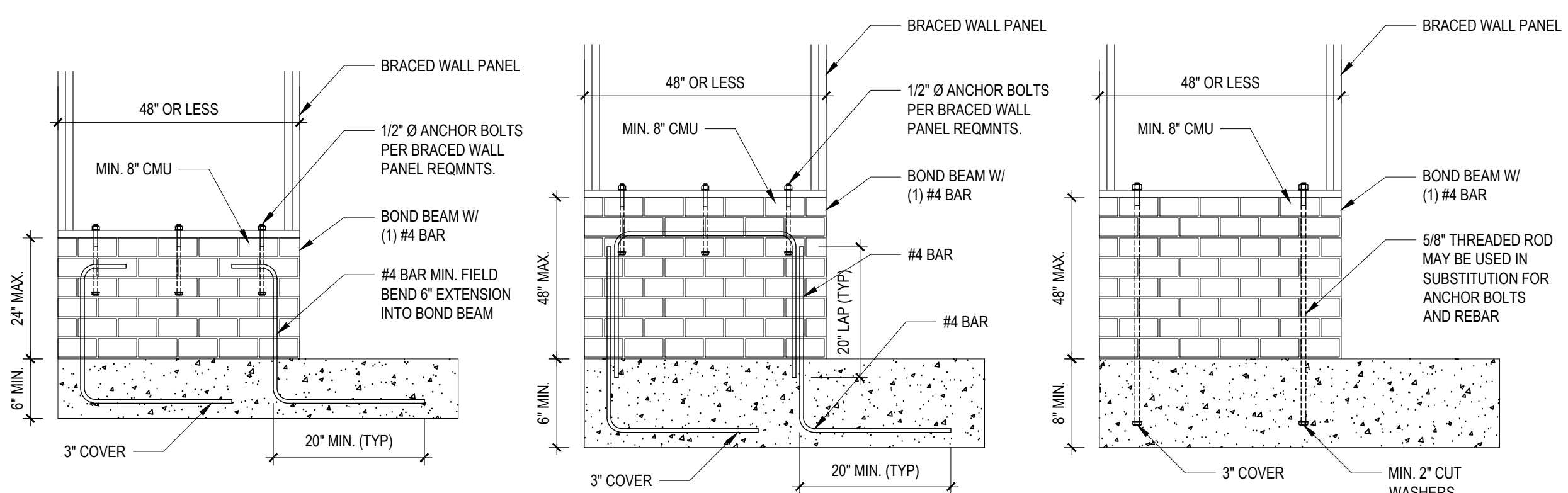
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.3 OF THE 2018 NRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- REFERENCE FIGURE R602.10.4.3 OF THE 2018 NRC.
- 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\"/>

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\"/>	

**B3: BRACE WALL PANEL CONNECTIONS**  
NO SCALE



**B2: METHOD CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME**  
FIGURE R602.10.1



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

Engineers and architects are not responsible for construction 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.  
1100 W. 75th Ave., Suite 100  
Tampa, FL 33634  
www.tyndalleng.com

Client: **SANDRA TAYLOR**  
Project: **TAYLOR RESIDENCE**

**SHEATHING DETAILS**

Project #: **DRB2001-0049**  
Date: **01/05/21**  
Drawn/Design By: **LJE**  
DWG. Checked By: **PAT**  
Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number  
**D3**  
7 of 7