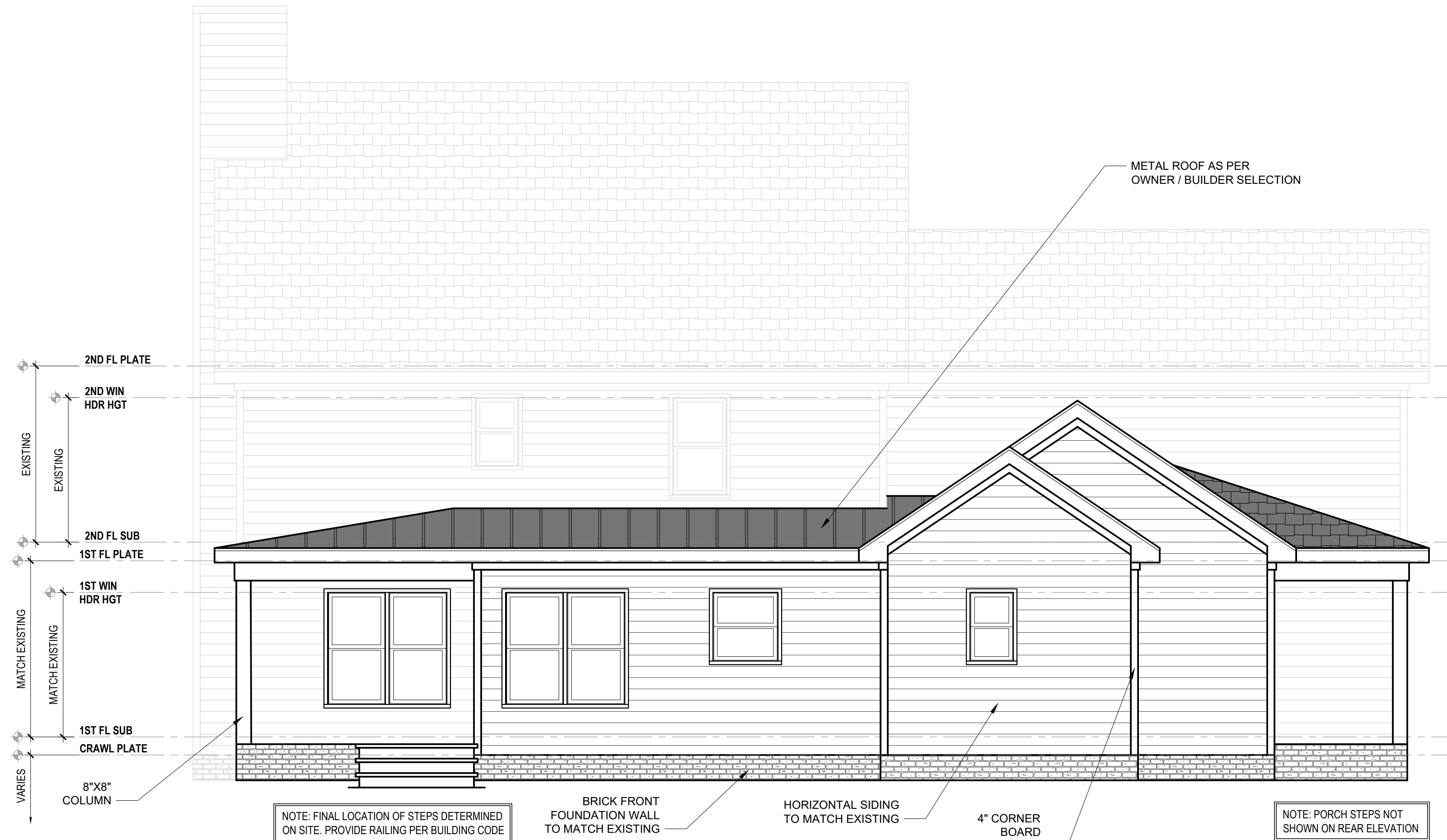


# 553 BUMPAS CREEK ACCESS



## REAR ELEVATION

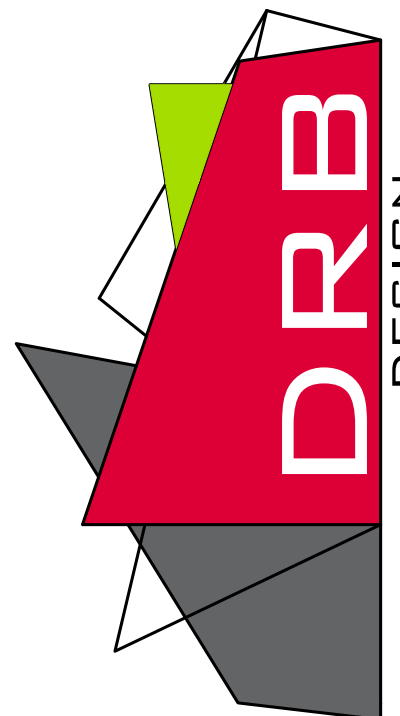
1/4" = 1'-0"

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.
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 arriving 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.

PROJECT #  
DRB2501-0243  
DATE  
07/14/2025  
DESIGNED BY  
DRB  
SIGNATURE  
CHECKED BY  
MMB  
SCALE  
1/4" = 1'-0"

WEBSITE  
WWW.  
drbhome  
design  
.com

SITE ADDRESS  
553 Bumpas Creek  
Access Dunn, NC



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

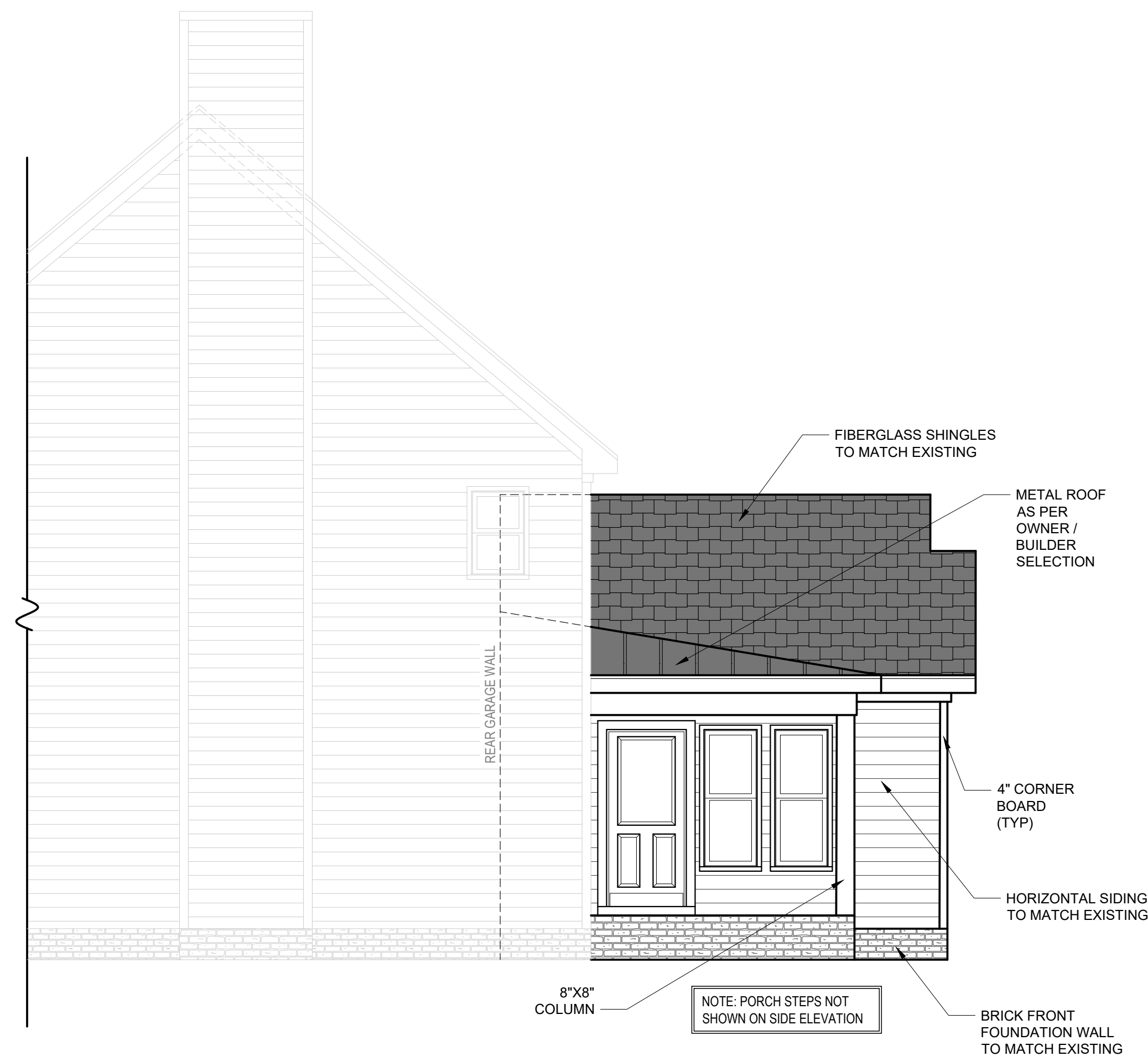
CLIENT NAME  
Smith Woodworks, Inc.  
1607 Clayhold Rd.  
Dunn NC, 28334  
910-890-2923  
scbsmith@yahoo.com

SHEET NAME  
ELEVATIONS  
SHEET #

1

of 6

# 553 BUMPAS CREEK ACCESS



## RIGHT ELEVATION

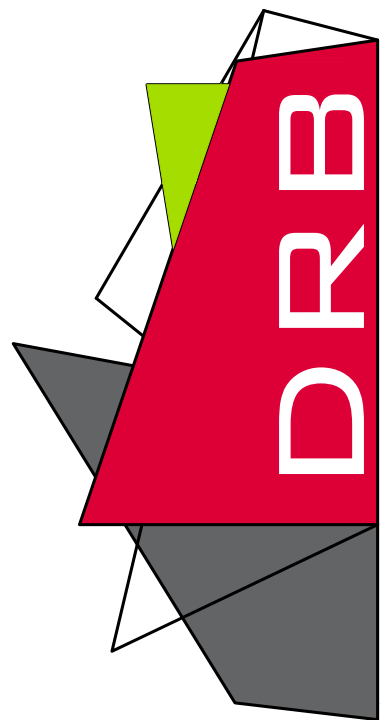
1/4" = 1'-0"

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.
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.

PROJECT #  
DRB2501-0243  
DATE  
07/14/2025  
DESIGNED BY  
DRB  
SIGNATURE  
  
CHECKED BY  
MMB  
SCALE  
1/4" = 1'-0"

WEBSITE  
WWW.  
drbhome  
design  
.com

SITE ADDRESS  
553 Bumpas Creek  
Access Dunn, NC



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

CLIENT NAME  
Smith Woodworks, Inc.  
1607 Clayhold Rd.  
Dunn NC, 28334  
910-890-2923  
scbsmith@yahoo.com

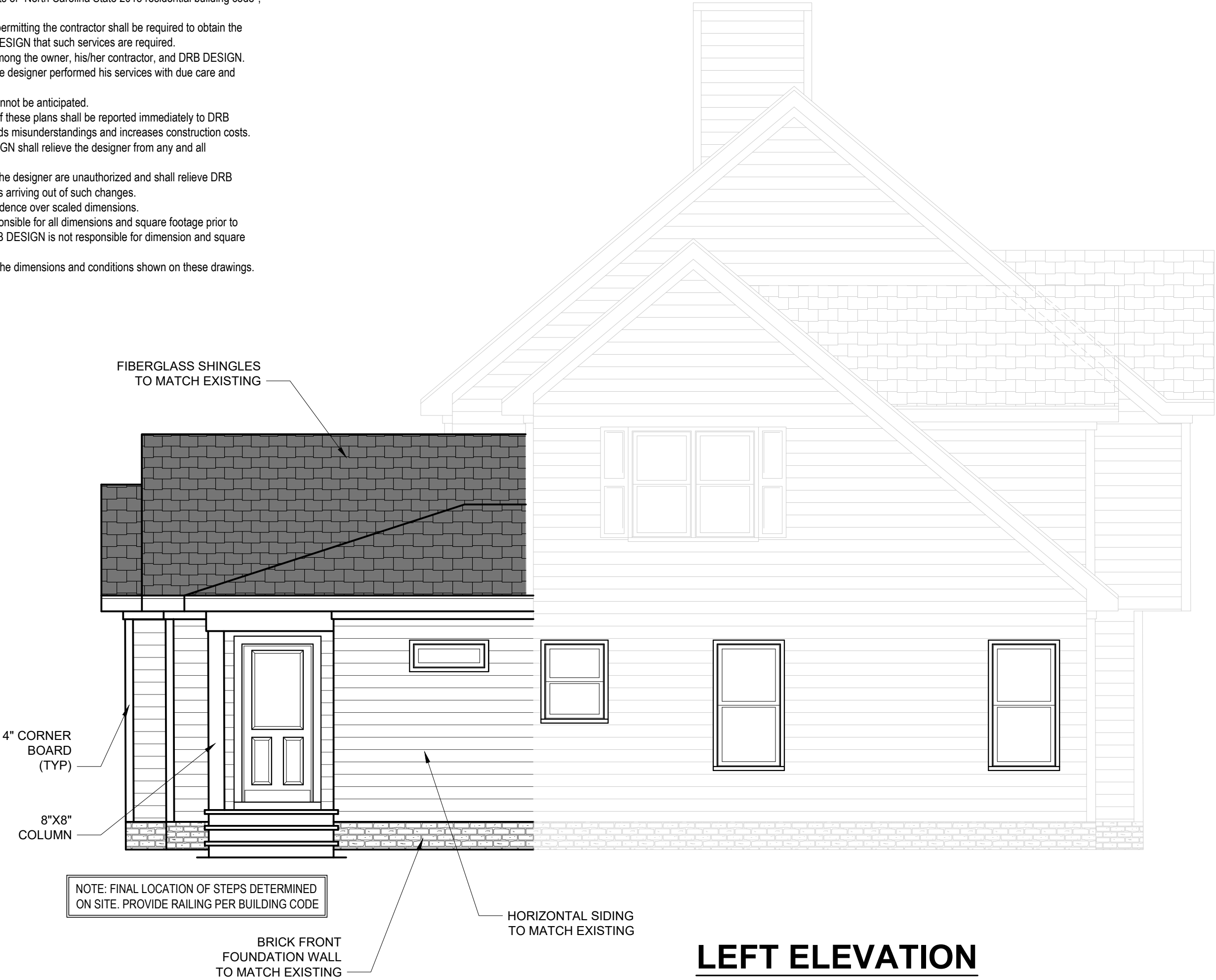
SHEET NAME  
ELEVATIONS  
SHEET #

2

of 6

# 553 BUMPAS CREEK ACCESS

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 arriving 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.

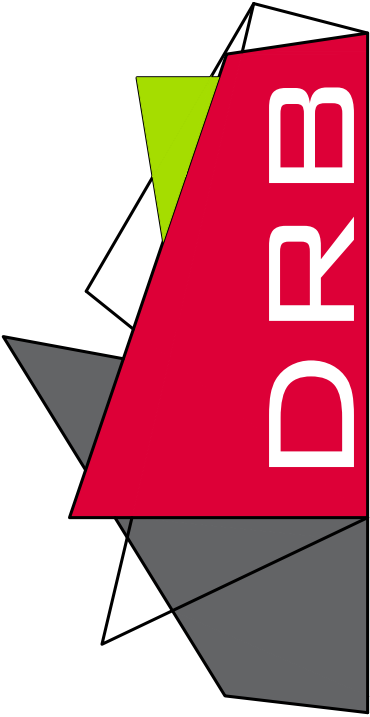


**LEFT ELEVATION**  
1/4" = 1'-0"

**PROJECT #**  
DRB2501-0243  
**DATE**  
07/14/2025  
**DESIGNED BY**  
DRB  
**SIGNATURE**  
  
**CHECKED BY**  
MMB  
**SCALE**  
1/4" = 1'-0"

**WEBSITE**  
WWW.  
drbhome  
design  
.com

**SITE ADDRESS**  
553 Bumpas Creek  
Access Dunn, NC

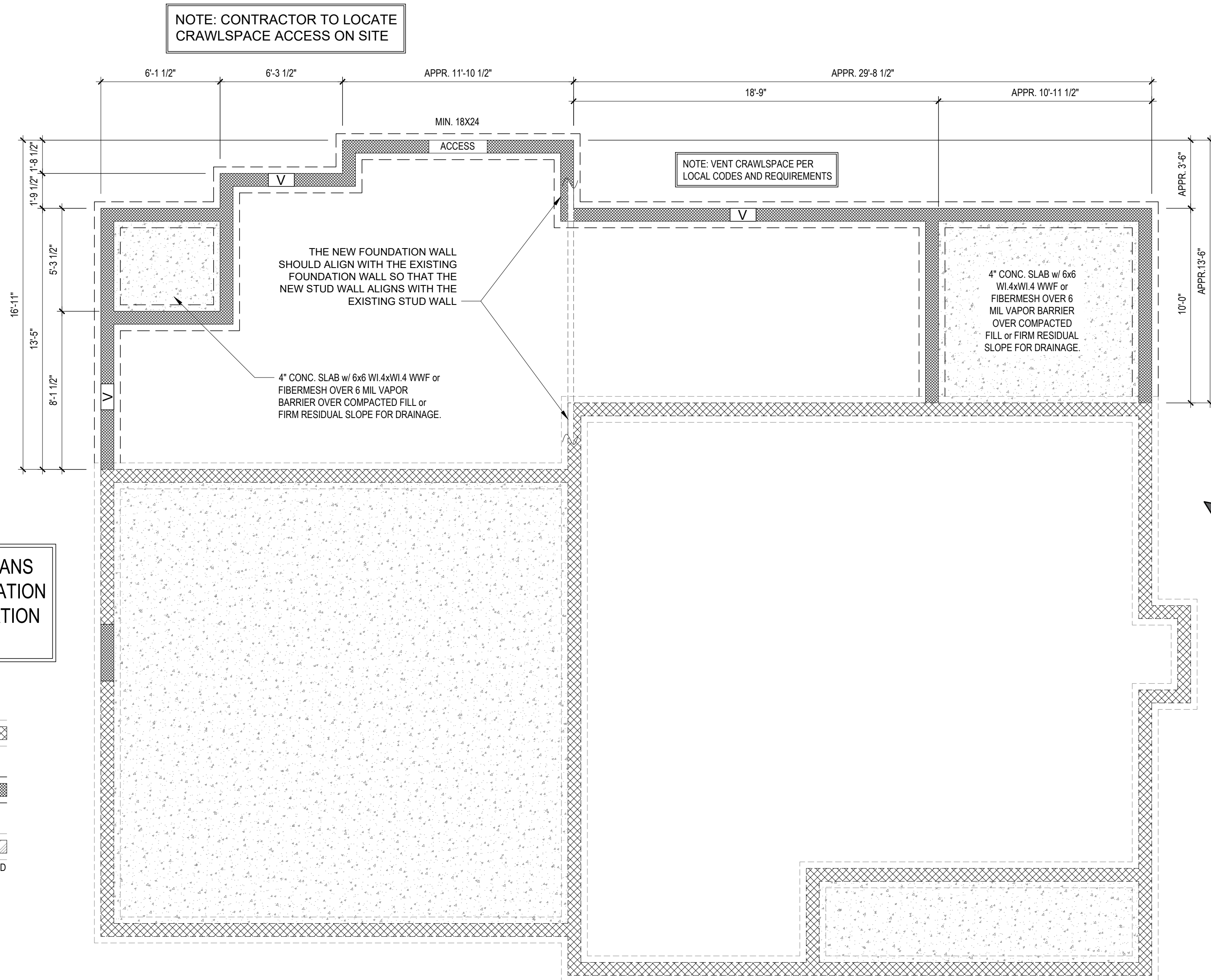


drbdesign@drbhomedesign.com 919.631.5979  
250 Shipwash Dr Suite 105 Garner, NC 27529

**CLIENT NAME**  
Smith Woodworks, Inc.  
1607 Clayhold Rd.  
Dunn NC, 28334  
910-890-2923  
scbsmith@yahoo.com

**SHEET NAME**  
ELEVATIONS  
**SHEET #**  
3  
of 6





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 arriving 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.

## FOUNDATION PLAN

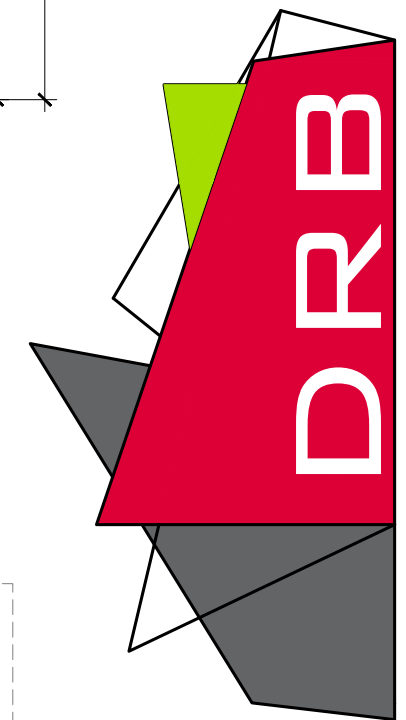
1/4" = 1'-0"

PROJECT #  
DRB2501-0243  
DATE  
07/14/2025  
DESIGNED BY  
DRB  
SIGNATURE

CHECKED BY  
MMB  
SCALE  
1/4" = 1'-0"

WEBSITE  
WWW.  
drbhome  
design  
.com

SITE ADDRESS  
553 Bumpas Creek  
Access Dunn, NC



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

CLIENT NAME  
Smith Woodworks, Inc.  
1607 Clayhold Rd.  
Dunn NC, 28334  
910-890-2923  
scbsmith@yahoo.com

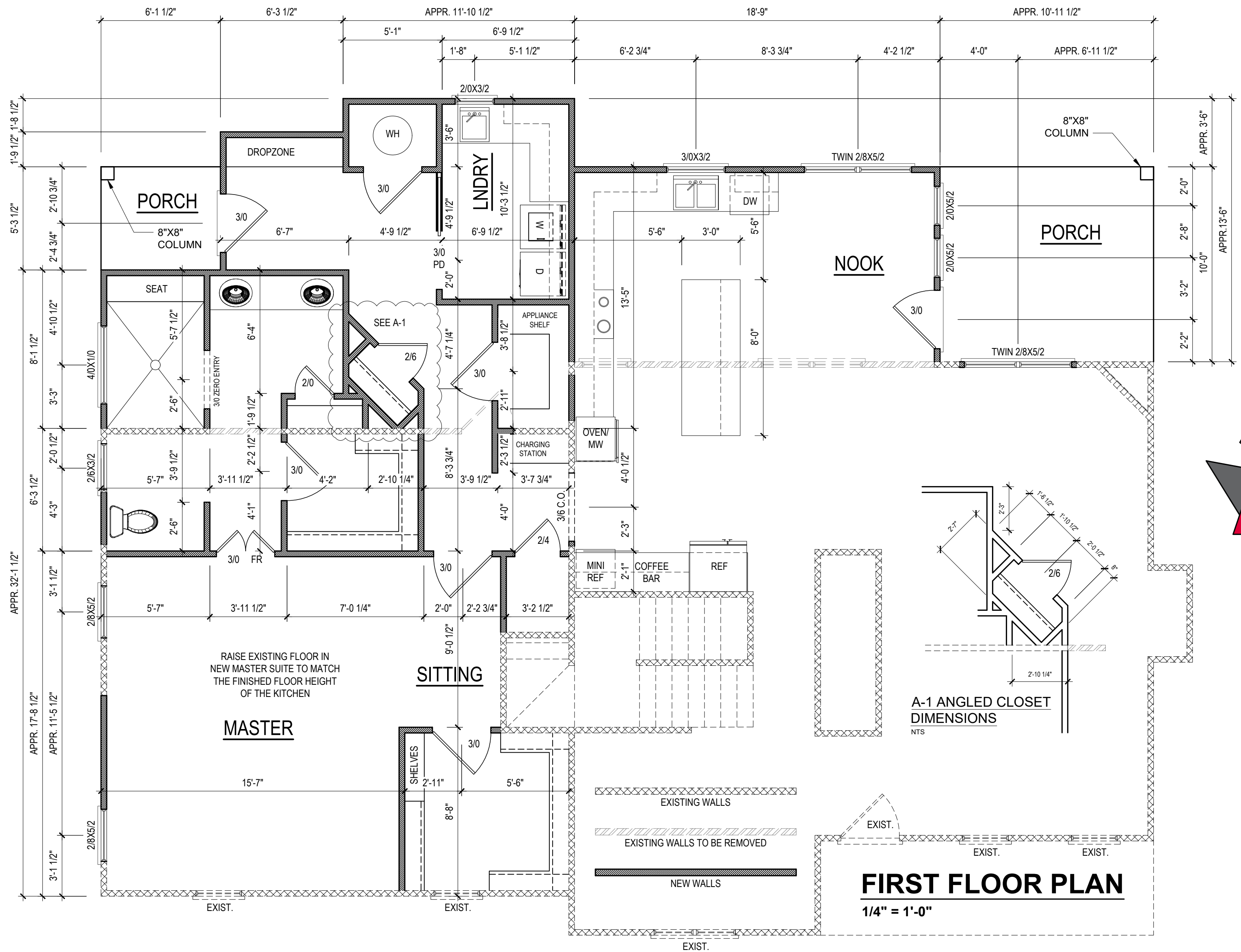
SHEET NAME  
FOUNDATION  
SHEET #

4

of 6

<u>HEATED SQUARE FOOTAGE</u>	
Addition	533
Remodel	795
 TOTAL HEATED	 1328
<u>UNHTD SQUARE FOOTAGE</u>	
Laundry Porch	32
Dining Porch	110
 TOTAL UNHEATED	 142
 TOTAL SQ FT	 1470

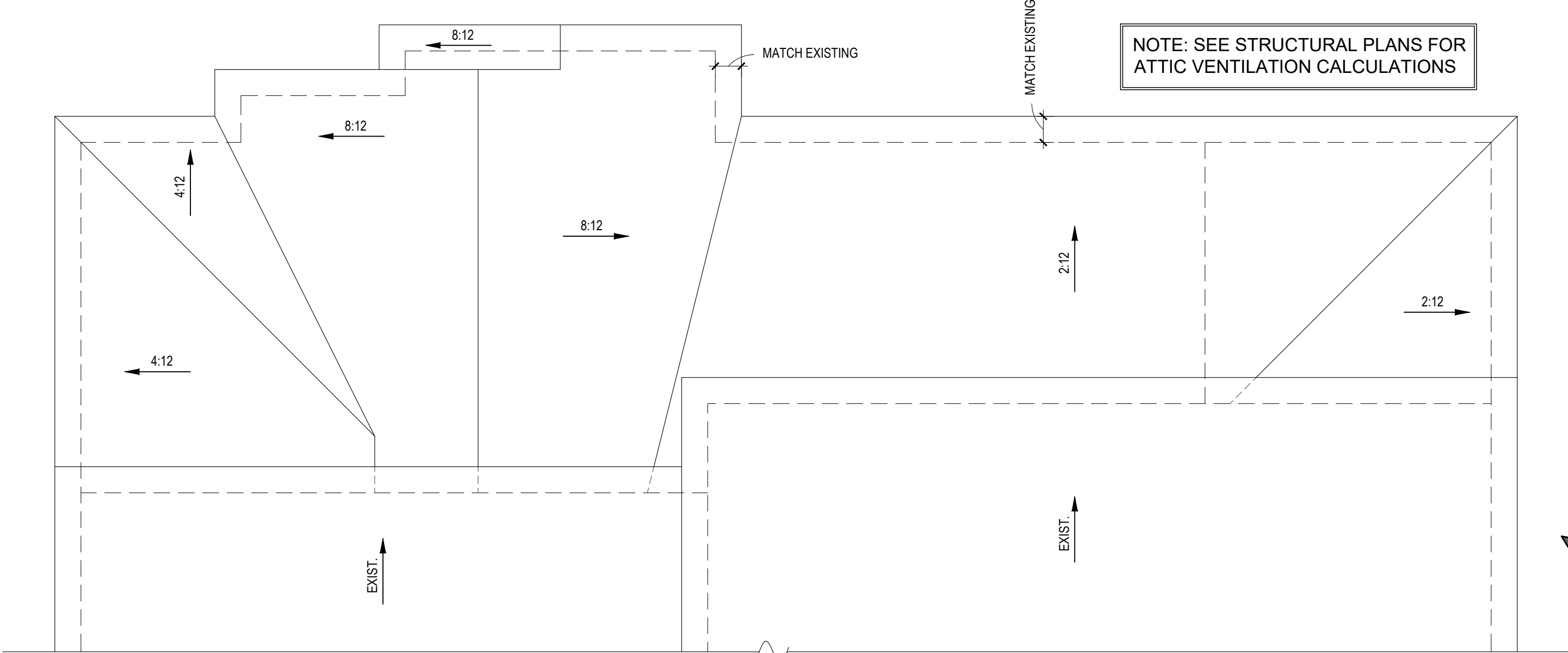
NOTE: EMERGENCY AND ESCAPE RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENABLE AREA OF 4 SQUARE FEET. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 22 INCHES. THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20 INCHES. EMERGENCY ESCAPE AND RESCUE OPENINGS MUST HAVE A MINIMUM TOTAL GLAZING AREA OF NOT LESS THAN 5 SQUARE FEET IN THE CASE OF A GROUND FLOOR LEVEL WINDOW AND NOT LESS THAN 5.7 SQUARE FEET IN THE CASE OF AN UPPER STORY WINDOW. MAXIMUM SILL HEIGHT - 44" A.F.F.



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.

6





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

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

NOTE: OVERHANG DIMENSIONS ARE FROM FRAMING

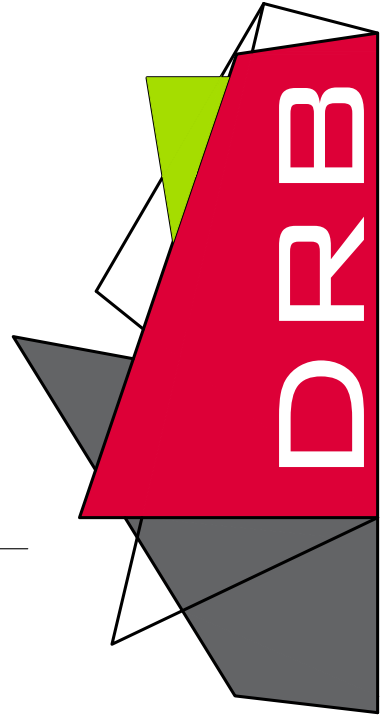
1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for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

**PROJECT #**  
DRB2501-0243  
**DATE**  
07/14/2025  
**DESIGNED BY**  
DRB  
**SIGNATURE**

**CHECKED BY**  
MMB  
**SCALE**  
1/4" = 1'-0"

**WEBSITE**  
www.drbhome  
design.com

**SITE ADDRESS**  
553 Bumpas Creek  
Access Dunn, NC



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

**CLIENT NAME**  
Smith Woodworks, Inc.  
1607 Clayhold Rd.  
Dunn NC, 28334  
910-890-2923  
sebsmith@yahoo.com

**SHEET NAME**  
ROOF  
**SHEET #**

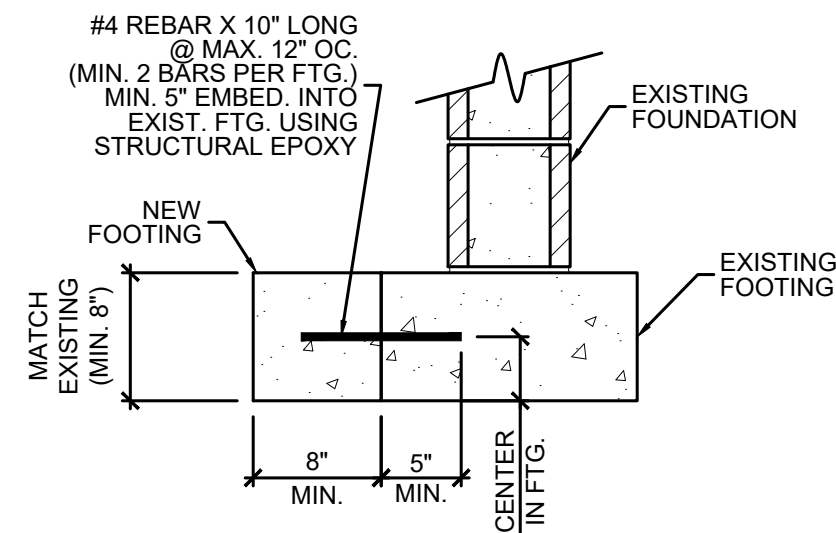
6 of 6

- 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.
- 2) 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.
- 3) ALL LUMBER SHALL BE SYP #2 (UNO)  
ALL LVL LUMBER TO BE 1.75" WIDE (ACTUAL) EACH SINGLE MEMBER AND  $F_b = 2600 \text{ PSI}$ ,  $E = 1.9M \text{ PSI}$  (OR GREATER)  
(I.E. iLEVEL MICROLAM)  
ALL LSL LUMBER IS TO BE 1.55E ( $F_b = 2325 \text{ PSI}$ ) (OR GREATER)  
ALL PSL LUMBER IS TO BE 1.8E ( $F_b = 2,400 \text{ PSI}$ ) (OR GREATER)
- 4) 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'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLES R602.7(1) AND R602.7(2).
- 5) 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)
- 6) REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 7) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50  
 $F_y = 50 \text{ KSI MIN.}$  (UNO)
- 8) ALL EXTERIOR LUMBER TO BE #2 SYP PT
- 9) ALL CONCRETE,  $f_c = 3000 \text{ PSI MIN.}$
- 10) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 11) 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.
- 12) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- 13) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- 14) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCRC.
- 15) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- 16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- 17) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

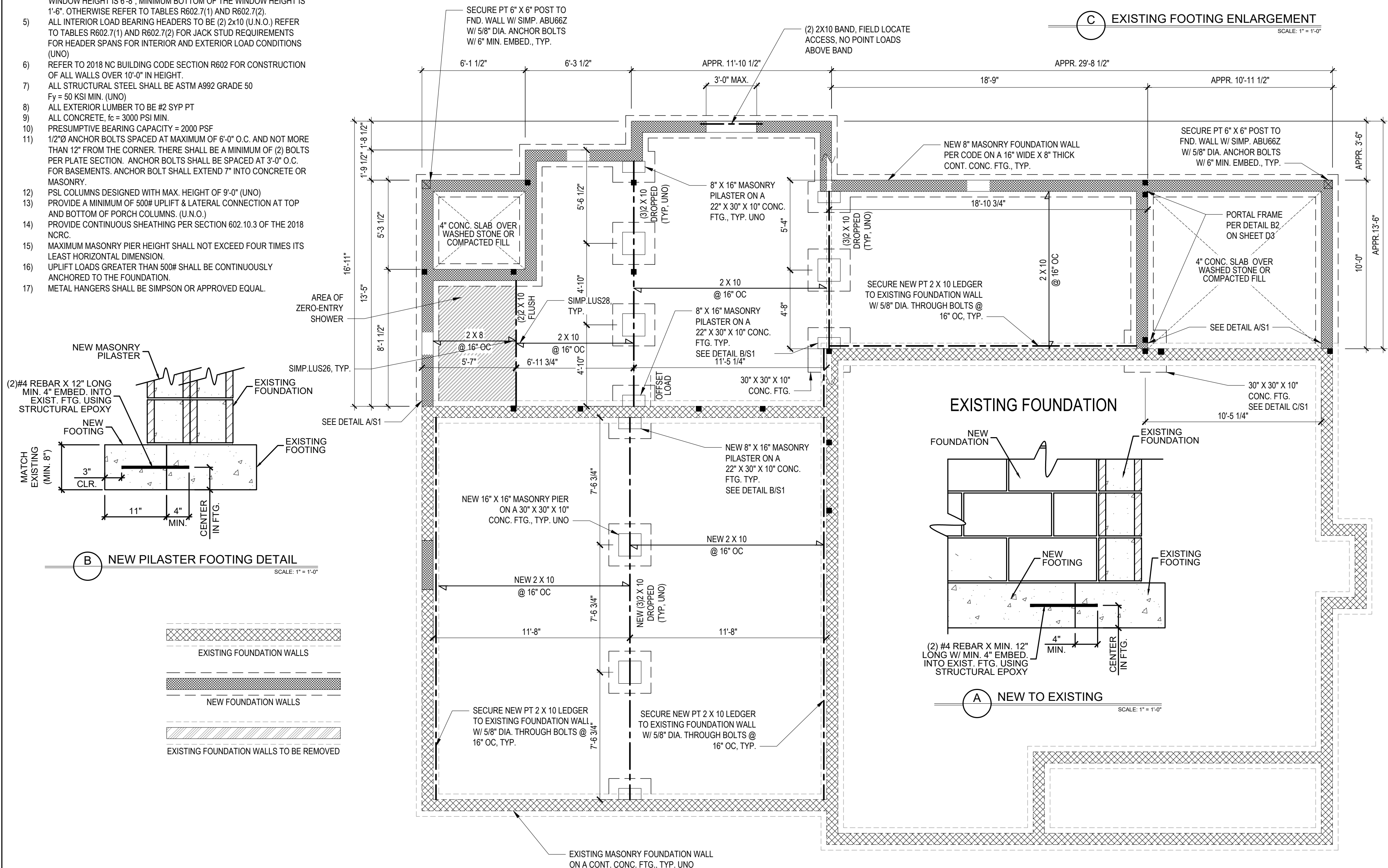
	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON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

THE EXISTING FRAMING SHOWN IS BASED ON LIMITED FIELD DATA. IF DURING DEMOLITION, FRAMING IS SHOWN TO BE DIFFERENT THAN WHAT IS SHOWN ON THIS PLAN, PLEASE CONTACT TE&D IMMEDIATELY.

INSTALL A DOUBLE JOIST UNDER NON-LOAD BEARING WALLS BUILT-INS, AND CABINETRY ABOVE THAT ARE PARALLEL TO THE FRAMING SYSTEM ON THIS PAGE, TYP UNO, BUILDER TO INSTALL AS REQUIRED, VIF DIMENSIONS

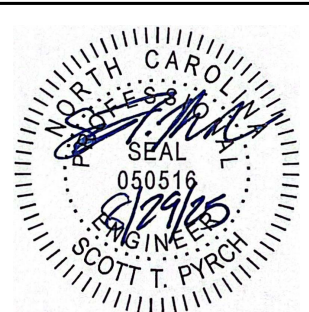


SCALE: 1" = 1'-0"



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

- <sup>a</sup> Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
- <sup>b</sup> 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.
- <sup>c</sup> 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.



T 919 773-1200 • F 919 773-9656  
250 Shipwash Drive • Garner • North Carolina • 27529  
[www.tyndallengineering.com](http://www.tyndallengineering.com)

ent: SMITH WOODWORKS, INC.

in: 553 BUMPAS CREEK ACCESS

**F DN. PLAN**  
**1ST. FLR. FRMG.**

Project #:  
DRB2501-0243

**Date:** \_\_\_\_\_

8/29/2025  
 Expires on 8/29/2025

HJS

DWG. Checked By:

AM

SEE PLAN

## REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

S1

1 of 6

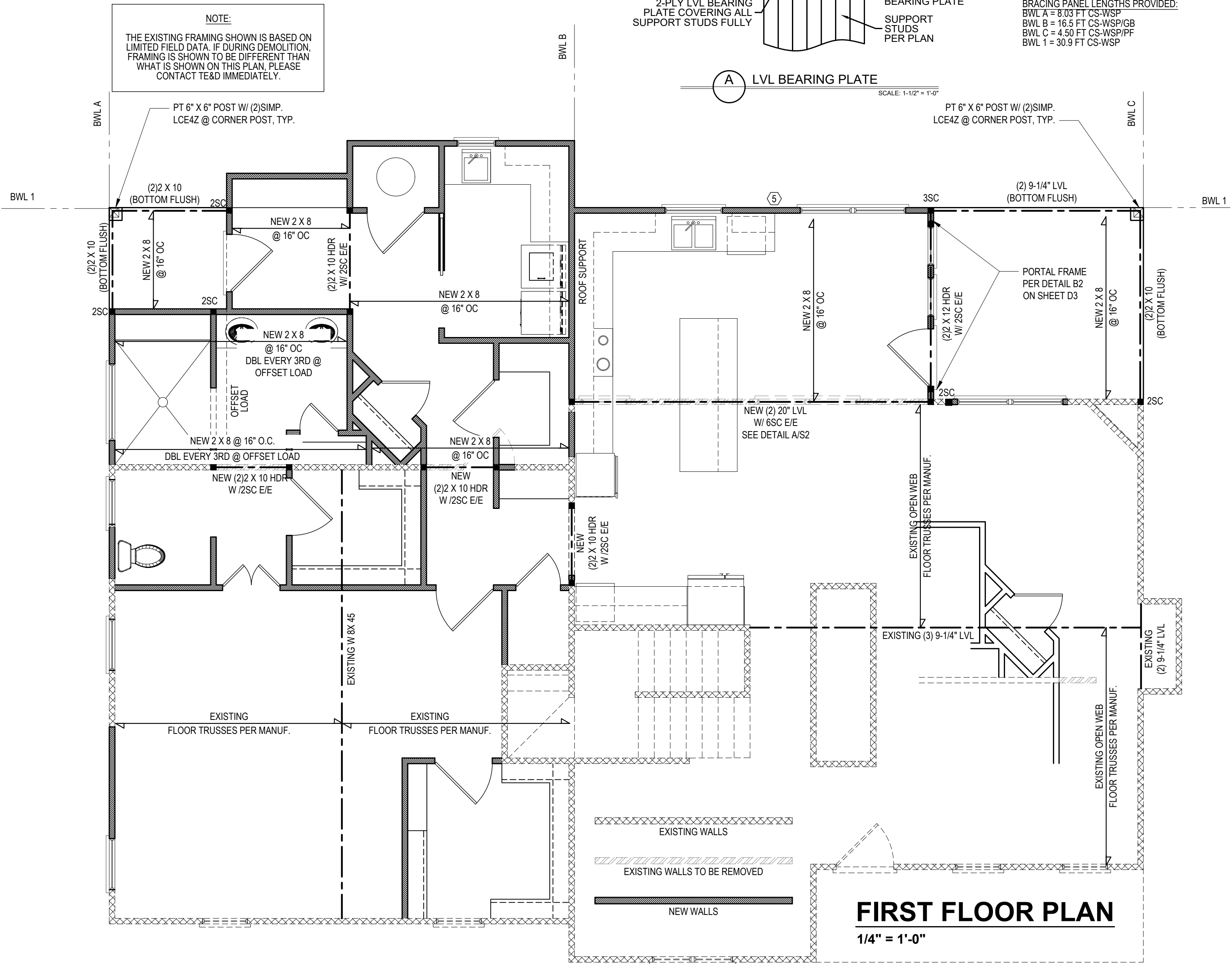


- 1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- 2) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 3) ALL LUMBER SHALL BE SYP #2 (UNO)  
ALL LVL LUMBER TO BE 1.75" WIDE (ACTUAL) EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI (OR GREATER)  
(I.E. ILEVEL MICROLAM)  
ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI) (OR GREATER)  
ALL PSL LUMBER IS TO BE 1.8E (Fb = 2,400 PSI) (OR GREATER)
- 4) 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'-8". MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLES R602.7(1) AND R602.7(2).
- 5) 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)
- 6) REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 7) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50  
Fy = 50 KSI MIN. (UNO)
- 8) ALL EXTERIOR LUMBER TO BE #2 SYP PT
- 9) ALL CONCRETE, fc = 3000 PSI MIN.
- 10) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 11) 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.
- 12) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- 13) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- 14) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCRC.
- 15) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- 16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- 17) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

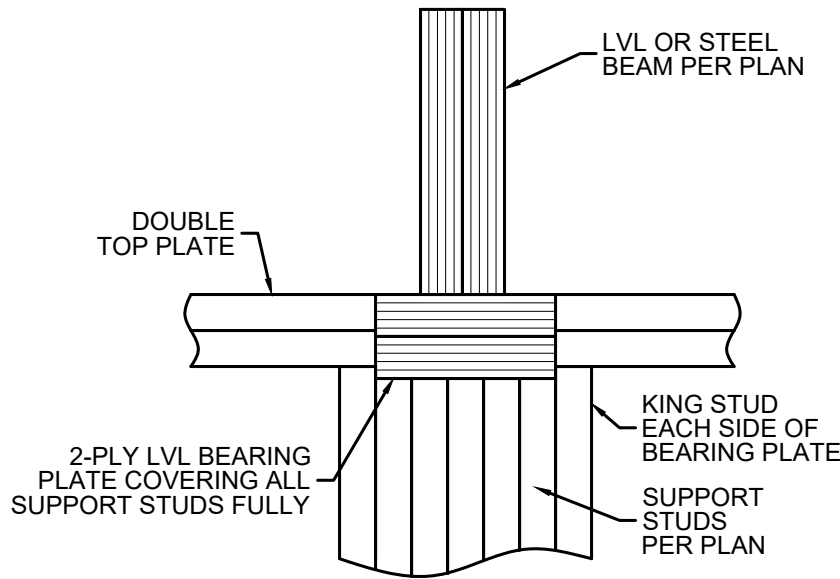
- 1) DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- 2) WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- 3) BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- ① REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- 4) 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
- 5) EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
- 6) 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 7/16". SHEATHING SHALL BE SECURED WITH MINIMUM 8d COMMON OR GALVANIZED BOX NAILS (2-1/2" LONG X 0.113" DIA.) SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 6" O.C. AT INTERMEDIATE SUPPORTS.
- 7) 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
- 8) 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

	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			

**NOTE:**  
THE EXISTING FRAMING SHOWN IS BASED ON LIMITED FIELD DATA. IF DURING DEMOLITION, FRAMING IS SHOWN TO BE DIFFERENT THAN WHAT IS SHOWN ON THIS PLAN, PLEASE CONTACT TE&D IMMEDIATELY.

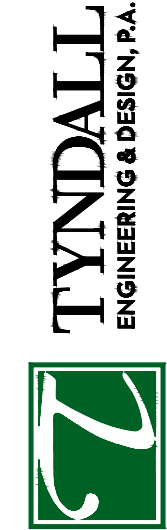
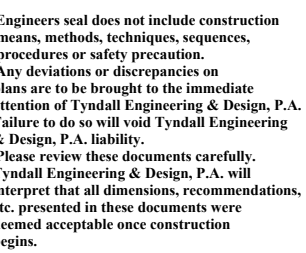


**1/4" = 1'-0"**



**BRACING PANEL LENGTHS REQUIRED:**  
 BWL A = 3.61 FT  
 BWL B = 7.72 FT  
 BWL C = 4.11 FT  
 BWL 1 = 3.41 FT

BRACING PANEL LENGTHS PROVIDED:  
BWL A = 8.03 FT CS-WSP  
BWL B = 16.5 FT CS-WSP/GB  
BWL C = 4.50 FT CS-WSP/PF  
BWL 1 = 30.9 FT CS-WSP



T 919 778-1200 • F 919 778-9454  
250 Shipwash Drive • Garner • North Carolina • 27529  
www.tyndallengineering.com

**SMITH WOODWORKS, INC.**

**553 BUMPAS CREEK ACCESS**

1ST FLR. HDR.  
2ND FLR. FRMG.

Project #:  
DBD2501-0242

Date:  
8/22/2025

Engineered By:  
LLC

DWG. Checked By:  
A M

Scale:  
SEI

<u>No.</u>	<u>Date:</u>	<u>Remarks</u>
1		
2		
3		
4		

Sheet Number

S2

2 of 6





FILENAME: Z:\BUILDER OFFICE\PROJECTS\2025\DRB2501-0243\DWG\2501-0243\DWG\2501-0243.DWG SAVED BY: SPYRCH LAST PLOT DATE: 2/2/2025 4:08 PM

### 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.

DESIGN LOADS:	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	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.O.)
- 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 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT. WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.
- 6) ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSI, BASED ON 2x10 UNO). ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL. ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI (U.N.O.) ALL LSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2325 PSI, E = 1.6M PSI (U.N.O.) ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E = 1.8M PSI (U.N.O.)
- 7) ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10 (U.N.O.) REFER TO TABLE R602.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.
- 8) ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50. ALL STEEL ANGLES, PLATES, AND C-CHANNELS SHALL BE ASTM A36. ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.
- 9) STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" AND FULL FLANGE WIDTH. PROVIDE SOLE BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG SCREWS (1/2"Ø x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOISTS ARE 10E NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- 10) PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6: 1/2"Ø ANCHOR BOLTS SPACED AT 6'-0" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. THERE SHALL BE A MINIMUM TWO ANCHOR BOLTS PER PLATE SECTION.
- 11) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.
- 12) WALL AND ROOF CLADDING VALUES:  
WALL CLADDING SHALL BE DESIGNED FOR 28.0 POUNDS PER SQUARE FOOT (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE. ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:  
39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1/12  
36.0 LBS/SQFT FOR ROOF PITCHES 1/12 TO 5/12  
18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12  
\*\*MEAN ROOF HEIGHT 30'-0" OR LESS
- 13) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.
- 14) REFER TO SECTION R602.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 15) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCRC.
- 16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- 17) REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.
- 18) PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (U.N.O.)
- 19) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- 20) MAXIMUM MASONRY PEIR HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- 21) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

### DEFINITIONS FOR COMMON ABBREVIATIONS

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

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

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

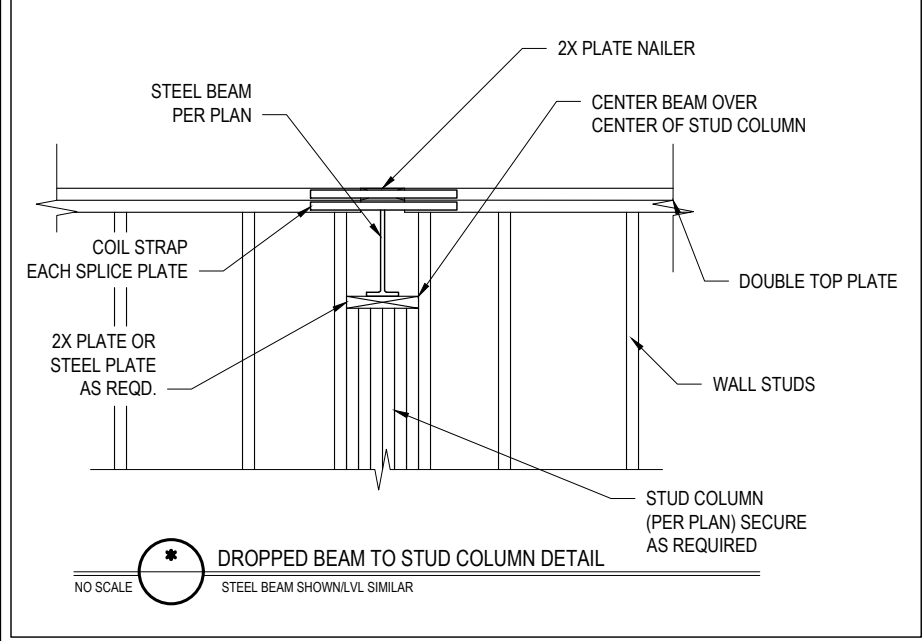
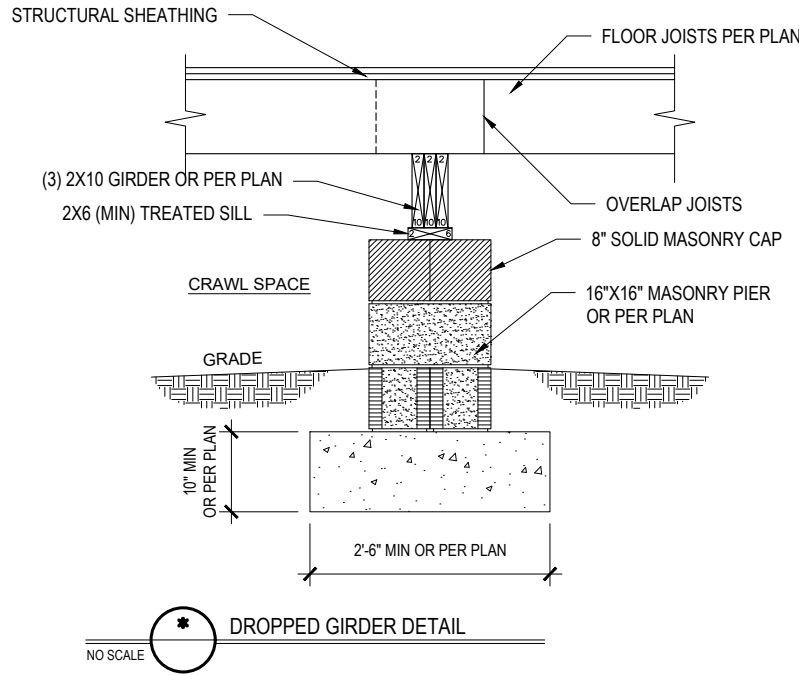
- \* THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET WHICH MAY BE LOCATED AT DIFFERENT LEVELS.  
\*\* FROM TOP OF FOOTING TO BOTTOM OF GIRDER  
\*\*\* DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL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

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

- A. THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION (4) ABOVE. LATERAL BRACING IS NOT REQUIRED.  
B. 4 x 4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE BOLTED TO THE POST AND GIRDER WITH ONE 5/8"Ø HOT DIPPED GALVANIZED BOLT AT EACH END OF THE BRACE.  
C. FOR FREESTANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN ACCORDANCE WITH THE FOLLOWING:

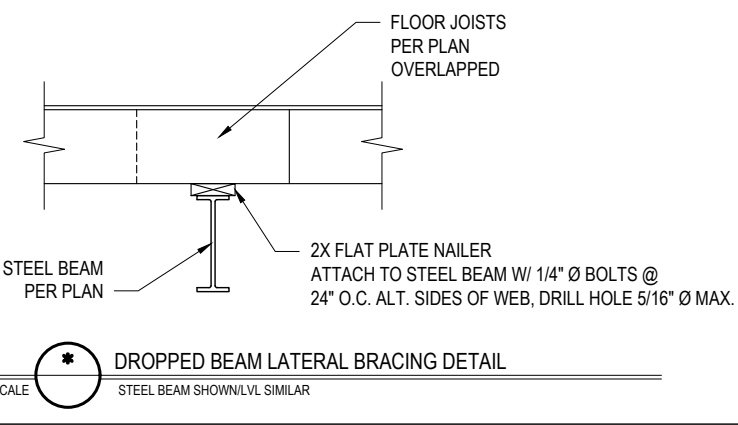
POST SIZE	MAX. TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 x 4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6 x 6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

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



CLIMATE ZONES	FENESTRATION U-FACTOR <sup>a,1</sup>	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC <sup>a,2</sup>	CEILING R-VALUE <sup>a,3</sup>	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE <sup>1</sup>	FLOOR R-VALUE	BASEMENT R-VALUE <sup>a,4</sup>	SLAB R-VALUE AND DEPTH <sup>d</sup>	CRAWL SPACE WALL R-VALUE <sup>c</sup>
3	0.35	0.55	0.30	15 or 30 cont	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont	19	5/13 <sup>f</sup>	0	5/13
4	0.35	0.55	0.30	38 or 30 cont <sup>i</sup>	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30 cont <sup>j</sup>	19, or 13 + 5 <sup>h</sup> or 15 + 3 <sup>h</sup>	13/17 or 13/12.5 cont	30 <sup>g</sup>	10/15	10	10/19

\* TABLE N1102.1 CLIMATE ZONES 3-5  
a. R-VALUES ARE MINIMUM. U-FACTORS AND SHGC ARE MAXIMUM. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.  
b. THE FENESTRATION U-FACTOR COLUMN EXCLUDED SKYLIGHTS. THE SOLAR HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.  
c. "15/15" MEANS R-15 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-15 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.  
d. FOR MONOLITHIC SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARDS TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 3" BELOW GRADE (WHICHEVER IS LESS). FOR FLOATING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 3" WHICHEVER IS LESS. R-0 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.  
e. DELETED  
f. BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.7 AND TABLE N1101.2.  
g. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-10 MINIMUM.  
h. THE FIRST VALUE IS CAVITY INSULATION; THE SECOND VALUE IS CONTINUOUS INSULATION; 30"13-0" MEANS R-13 CAVITY INSULATION PLUS R-15 INSULATED SHEATHING; 15-0" MEANS R-15 CAVITY INSULATION PLUS R-13 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 20% OR LESS OF THE EXTERIOR, INSULATED SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. IF STRUCTURAL SHEATHING COVERS MORE THAN 20% PERCENT OF THE EXTERIOR, IT SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. 13-0" MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.  
i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.  
j. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, 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.  
k. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MAXIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.20 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.  
l. R-30 SHALL BE DEEMED TO SATISFY THE CEILING INSULATION REQUIREMENT WHEN THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EASES. OTHERWISE R-38 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION BATTLE OR WITHIN 1 INCH OF THE ATTIC FLOOR DECK.  
m. TABLE VALUE REQUIRED EXCEPT FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF. THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR RAFFLE.  
n. R-19 FIBERGLASS BATT IS COMPRESSED AND INSTALLED IN A NOMINAL 2-4" FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATT RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2X4 WALL IS NOT DEEMED TO COMPLY.  
o. BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.



1014 SQ. FT. OF CRAWL SPACE / 150 = 6.76 SQ. FT. OF REQ'D VENTILATION WITHOUT CROSS VENTILATION  
6.76 SQ. FT. OF VENTILATION REQ'D / 0.88 SQ.FT. PER VENT = 8 VENTS REQ'D (BASED ON 8" X 16" VENTS)<sup>1</sup>

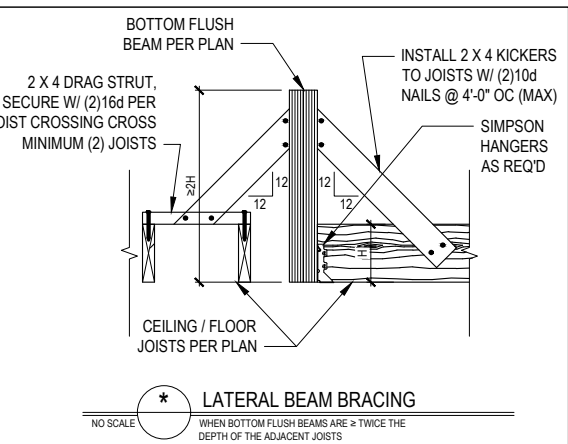
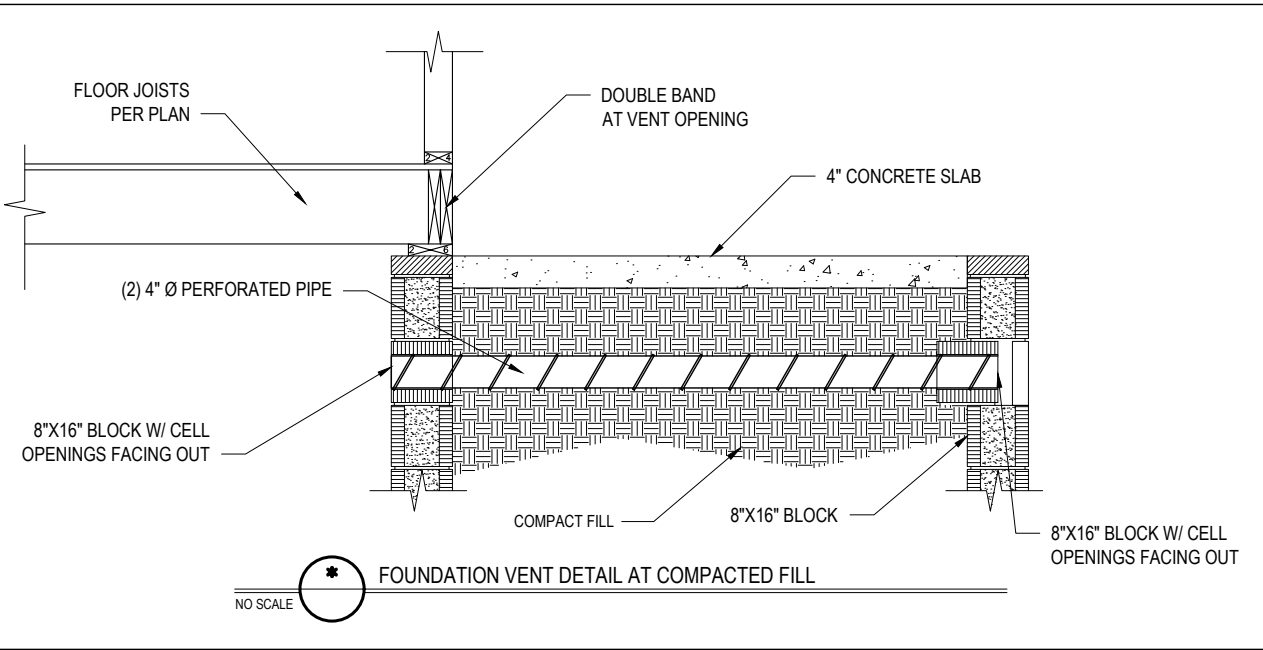
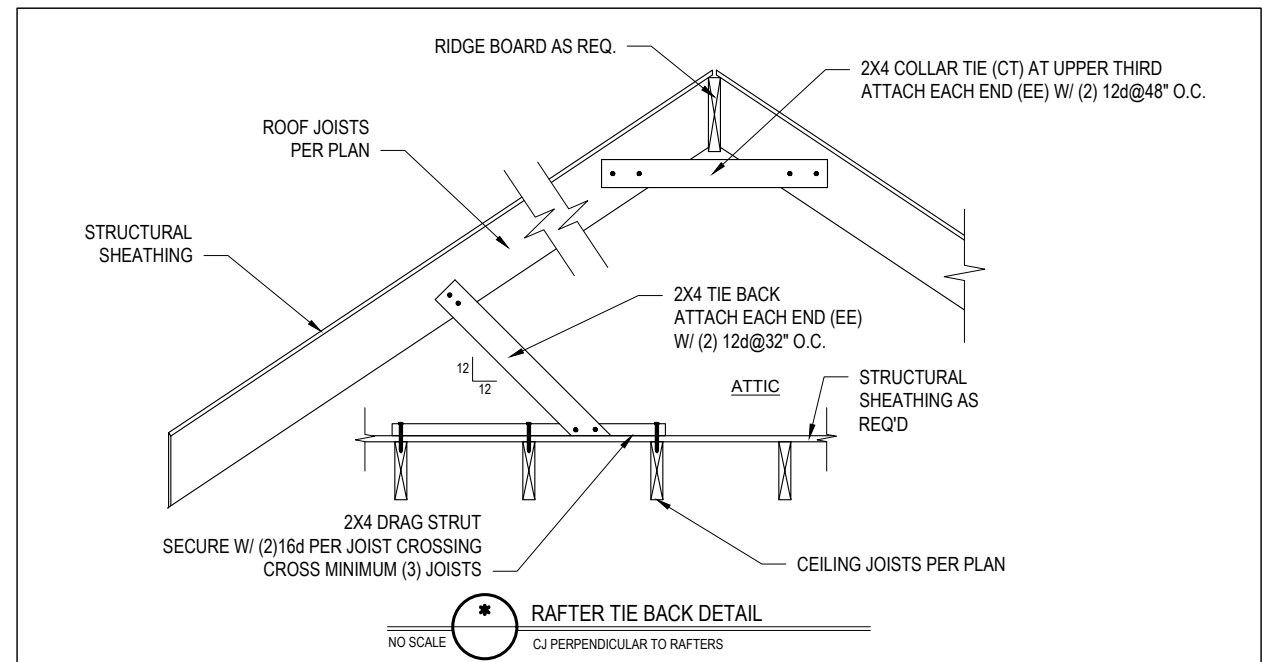
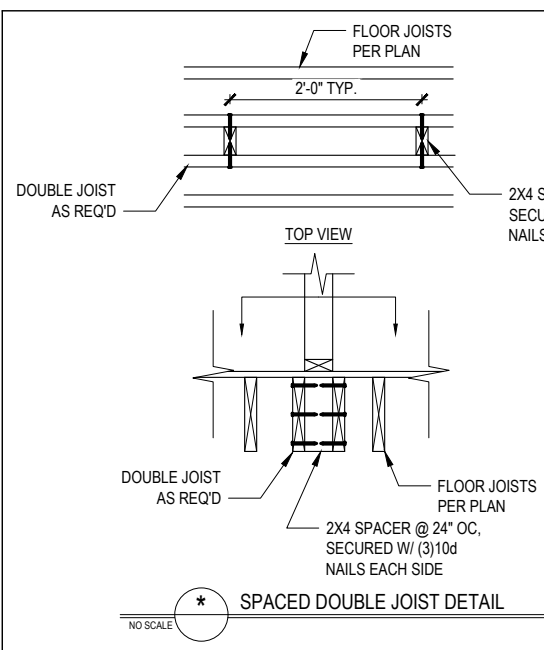
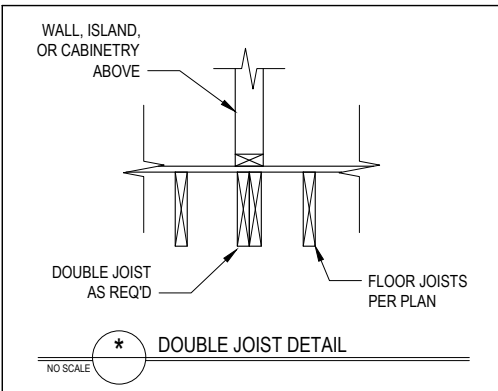
OR-

1014 SQ. FT. OF CRAWL SPACE / 1500 = .676 SQ. FT. OF REQ'D VENTILATION WITH CROSS VENTILATION  
.676 SQ. FT. OF VENTILATION REQ'D / 0.88 SQ.FT. PER VENT = 1 VENTS REQ'D (BASED ON 8" X 16" VENTS)<sup>2</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 1/100 OF THE CRAWL SPACE GROUND AREA WHERE THE REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. ONE FOUNDATION VENT SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. TO PREVENT BANISTER ENTRY WHEN THE CRAWL SPACE IS BUILT ON A SLOPED SITE, THE SPIRAL FOUNDATION WALLS MAY BE CONSTRUCTED WITHOUT WALL VENT OPENINGS. VENT DAMS SHALL BE PROVIDED WHEN THE BOTTOM OF THE FOUNDATION VENT OPENING IS LESS THAN 4 INCHES ABOVE THE FINISHED EXTERIOR GRADE.

WALL VENTED CRAWL SPACES REQUIRE FULL COVERAGE GROUND VAPOR RETARDERS.

\* CRAWL SPACE VENTILATION CALCULATION



\* 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.



TYNDALL  
ENGINEERING & DESIGN, P.A.



199 775-3200 • F 919 775-9468  
280 Shipwash Drive • Garner • North Carolina • 27529  
www.tyndallengineering.com

SMITH WOODWORKS, INC.

553 BUMPAS CREEK ACCESS

STANDARD  
DETAILS

Project #: DRB2501-0243  
Date: 8/29/2025  
Engineered By: HJS  
DWG. Checked By: AM  
Scale: NOT TO SCALE

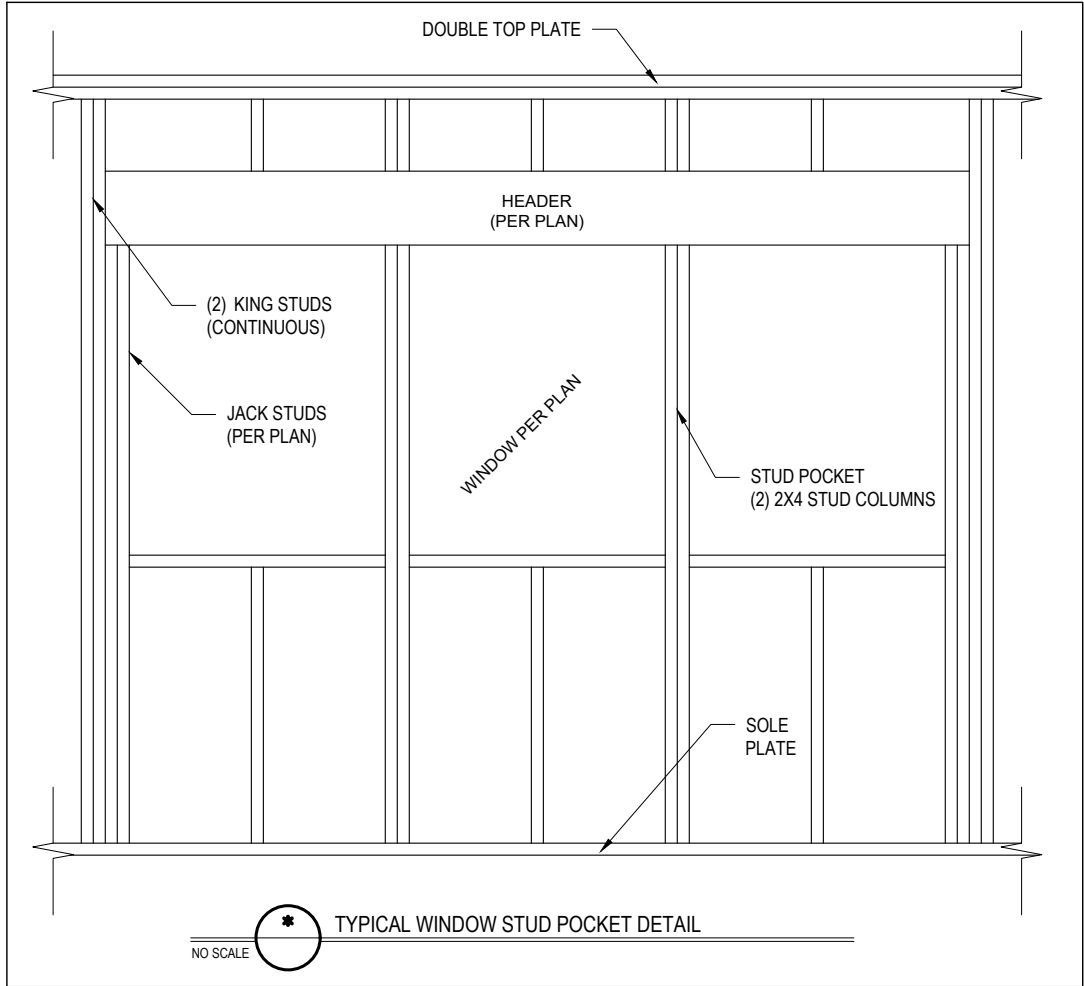
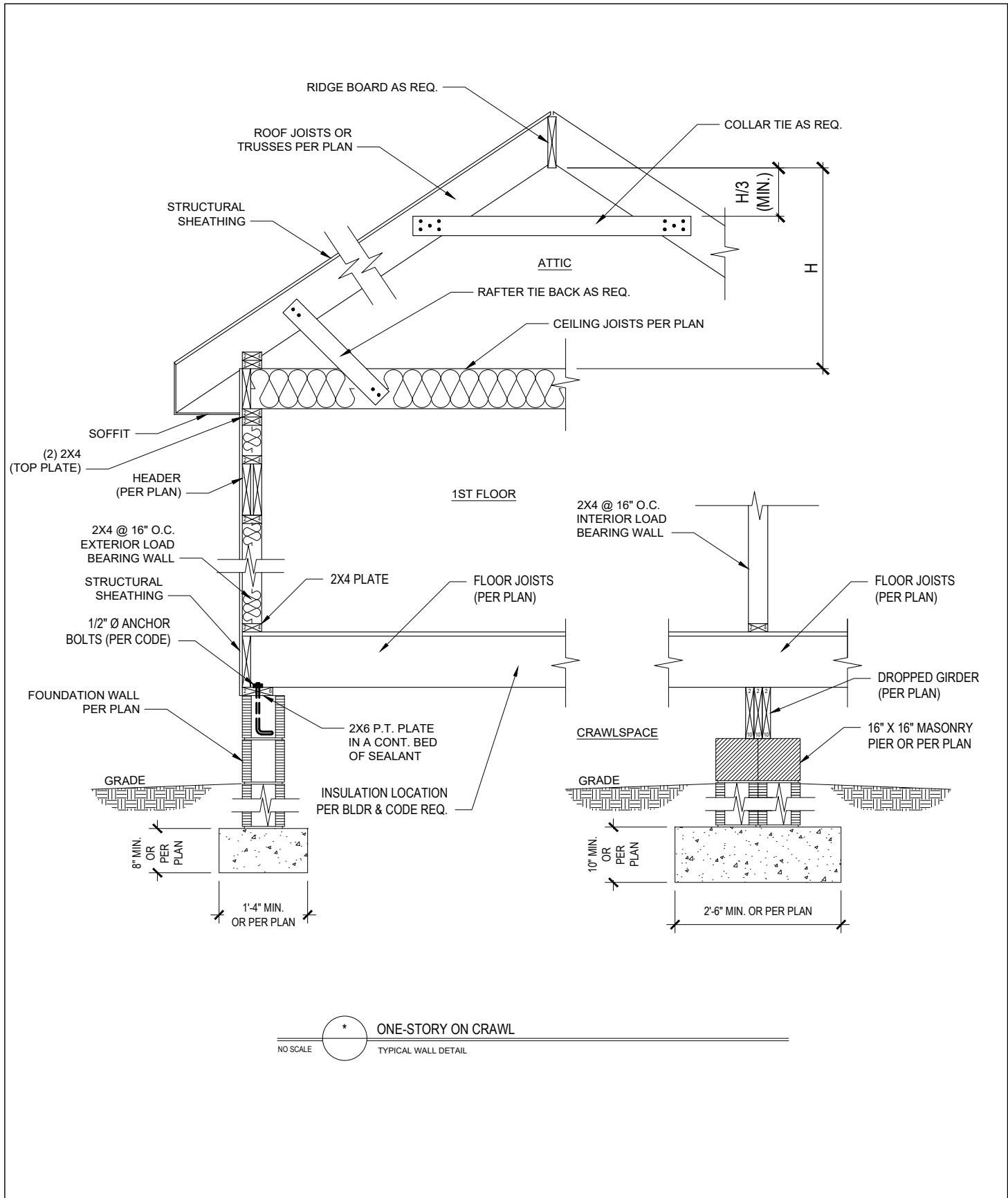
REVISIONS		
No.	Date:	Remarks

Sheet Number

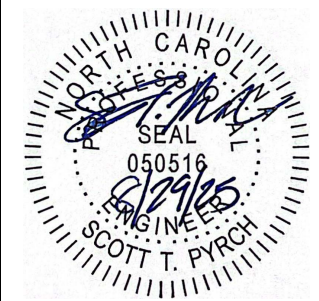
D1



FILENAME: Z:\BALEIGH OFFICE\OFFICE\DRB2501-0243\CAL FILES\DRB2501-0243\_TYNDALL.WOODWORKS\_INC\DRB2501-0243\_TYNDALL.WOODWORKS\_INC.DWG LAST PLOT DATE: 8/29/2025 4:08 PM



\* 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.



**TYNDALL**  
ENGINEERING & DESIGN, P.A.



1919 778-3850 • F 919 778-9668  
Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.  
553 Bumpas Creek Access

**SMITH WOODWORKS, INC.**

**553 BUMPAS CREEK ACCESS**

**STANDARD DETAILS**

Project #: DRB2501-0243  
Date: 8/29/2025  
Engineered By: HJS  
DWG. Checked By: AM  
Scale: NOT TO SCALE

REVISIONS		
No.	Date:	Remarks
1		
2		
3		
4		

Sheet Number

D2

5 of 6



- DESIGNED FOR SEISMIC ZONE C AND WIND SPEEDS OF 120 MPH OR LESS.
- 2) BRACING REQUIREMENTS AS DESCRIBED IN ACCORDANCE WITH SECTION 902.10.4 OF THE 2018 NBC.
- 3) BRACING REQUIREMENTS SHALL BE PER TABLE REQD. 10.3.3.3 AND 10.3.3.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- 4) REFERENCE FIGURE 902.10.3.4 (1.3) OF THE 2018 NBC.
- 5) INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS DESCRIBED IN SECTION 902.11.1 (1.10) UNLESS OTHERWISE NOTED.
- 6) 1) 17" GYPSUM BOARD (8) MINIMUM LENGTH OF 8'-0" (SHEATHING) SHALL BE USED AT INTERMEDIATE SUPPORTS.
- 7) 3" WOOD STRUCTURAL PANEL (WSP) SECURED W/ 64 COMMON NAILS SPACED @ 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.
- 8) EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSP METHOD AS DESCRIBED IN SECTION 902.11.1 (1.10) UNLESS OTHERWISE NOTED.
- 9) SHEATHING SHALL BE CONTINUOUS OVER ALL WALLS INCLUDING AREAS ABOVE AND BELOW OPENINGS & CABLE END WALLS. SHEATHING SHALL BE SHEATHED WITH WOOD STRUCTURAL PANELS (WSP) OR GYPSUM BOARD (GB) SHEATHING. THE SHEATHING SHALL BE SECURED WITH UNKNINKED OR COMMON NAIL FASTENERS. SHEATHING SHALL BE SPACED @ 6" O.C. AT PANEL EDGES AND SPACED @ 12" O.C. AT INTERMEDIATE SUPPORTS.
- 10) EXTERIOR BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
- 1) 17" GYPSUM BOARD (8) MINIMUM LENGTH OF 8'-0" OF WALL HEIGHT
  - 2) 30" ADJUNCT TO OPENINGS GREATER THAN 67% AND 18" FOR OPENINGS LESS THAN 67% OF WALL HEIGHT
  - 3) 48" FOR OPENINGS GREATER THAN 67% OF WALL HEIGHT
  - 4) 48" FOR OPENINGS GREATER THAN 67% OF WALL HEIGHT
- 11) SHEATH INTERIOR AND EXTERIOR.
- 12) FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF THE CORNER & A HOLD-DOWN DEVICE WITH FIGURE REQD. 10.3.3.4 (1.10) OF A CORNER RETURN. EITHER A MINIMUM 24" IN-LED CORNER WALL PANEL SHALL BE PROVIDED FOR THE CORNER & A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL. PROVIDE A CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
- 13) MINIMUM 80# HOLD-DOWN DEVICE

NO SCALE

6 of 6