



**FRONT ELEVATION**

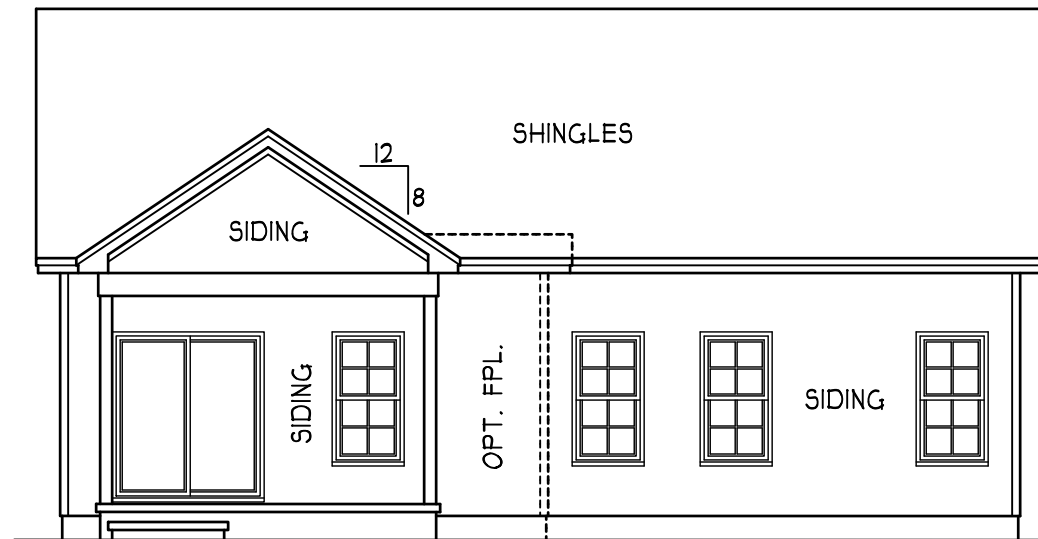
SCALE 1/4" = 1'-0"

**ATTIC VENTILATION:**

THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1 TO 150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE AREA MAY BE 1 TO 300 , PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION TO BE PROVIDED BY EAVE OR CORNICE VENTS.

GROSS ATTIC AREA TO BE VENTILATED 1998 SQ.FT.

1998/150 = 13.32 SQ.FT. NET FREE AREA



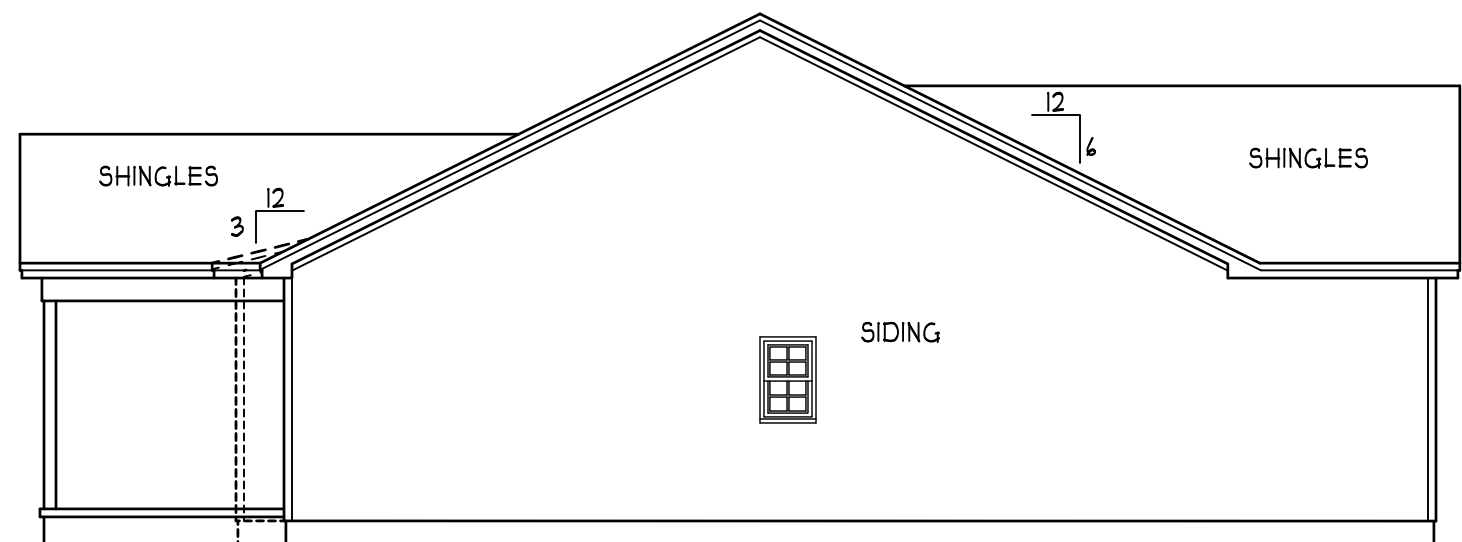
**REAR ELEVATION**

SCALE 1/8" = 1'-0"

**ENERGY COMPLIANCE**

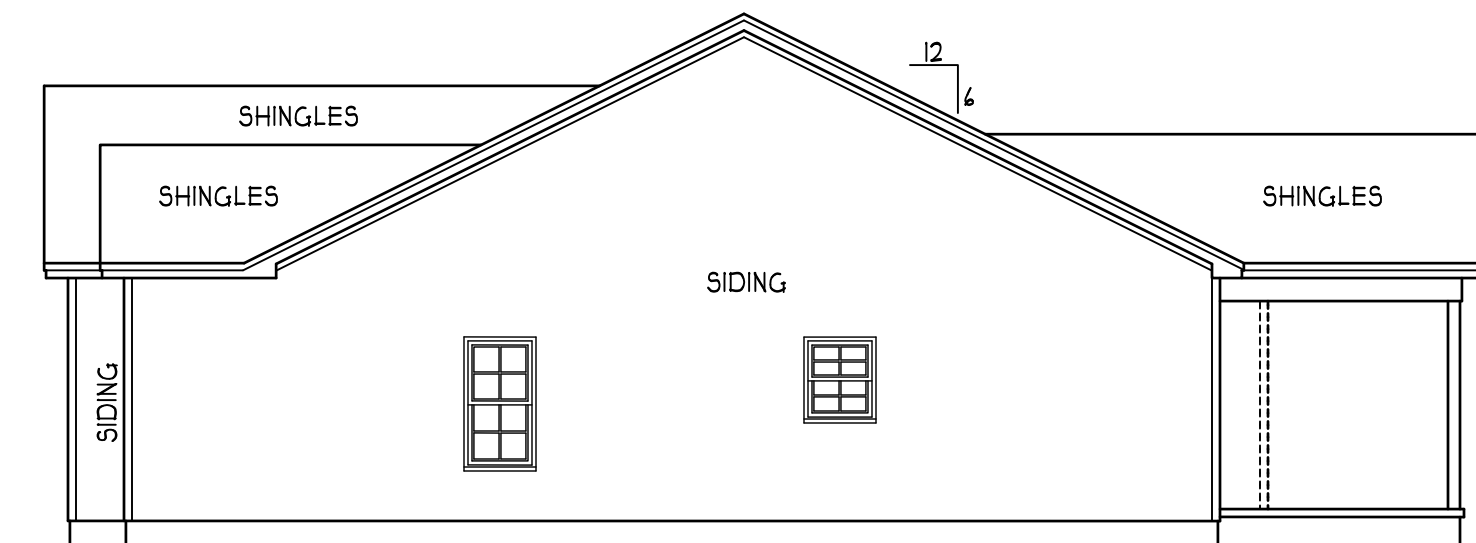
ZONE 3 = MAX. GLAZING U-FACTOR .35  
R-VALUE = CEILING R38, WALLS R15, FLOORS R19  
FOR JOHNSTON, SAMPSON, WAYNE COUNTY

ZONE 4 = MAX. GLAZING U-FACTOR .35  
R-VALUE = CEILING R38, WALLS R15, FLOORS R19  
FOR WAKE, DURHAM, ORANGE COUNTY



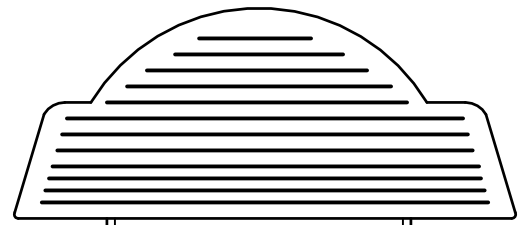
**LEFT ELEVATION**

SCALE 1/8" = 1'-0"



**RIGHT ELEVATION**

SCALE 1/8" = 1'-0"



**THE MASONBORO**  
GARAGE LEFT  
**S&S HOMES**

HEATED FOOTAGE:  
**#1394**

SQUARE FOOTAGE:  
FIRST FLOOR = 1394  
FRONT PORCH = 29  
REAR PORCH = 140  
GARAGE = 435

DESIGNED BY:  
HEATHER or  
JOHNA THAN HALL  
165 HEATHERSTONE CT  
BENSON NC 27504  
(919) 207-1403

**H SQUARED HOME DESIGN, INC.**

ANY DEVIATION OF THE SPECIFIED MEASUREMENTS OR DIMENSIONS VOIDS H SQUARED HOME DESIGN, INC.'S LIABILITY.

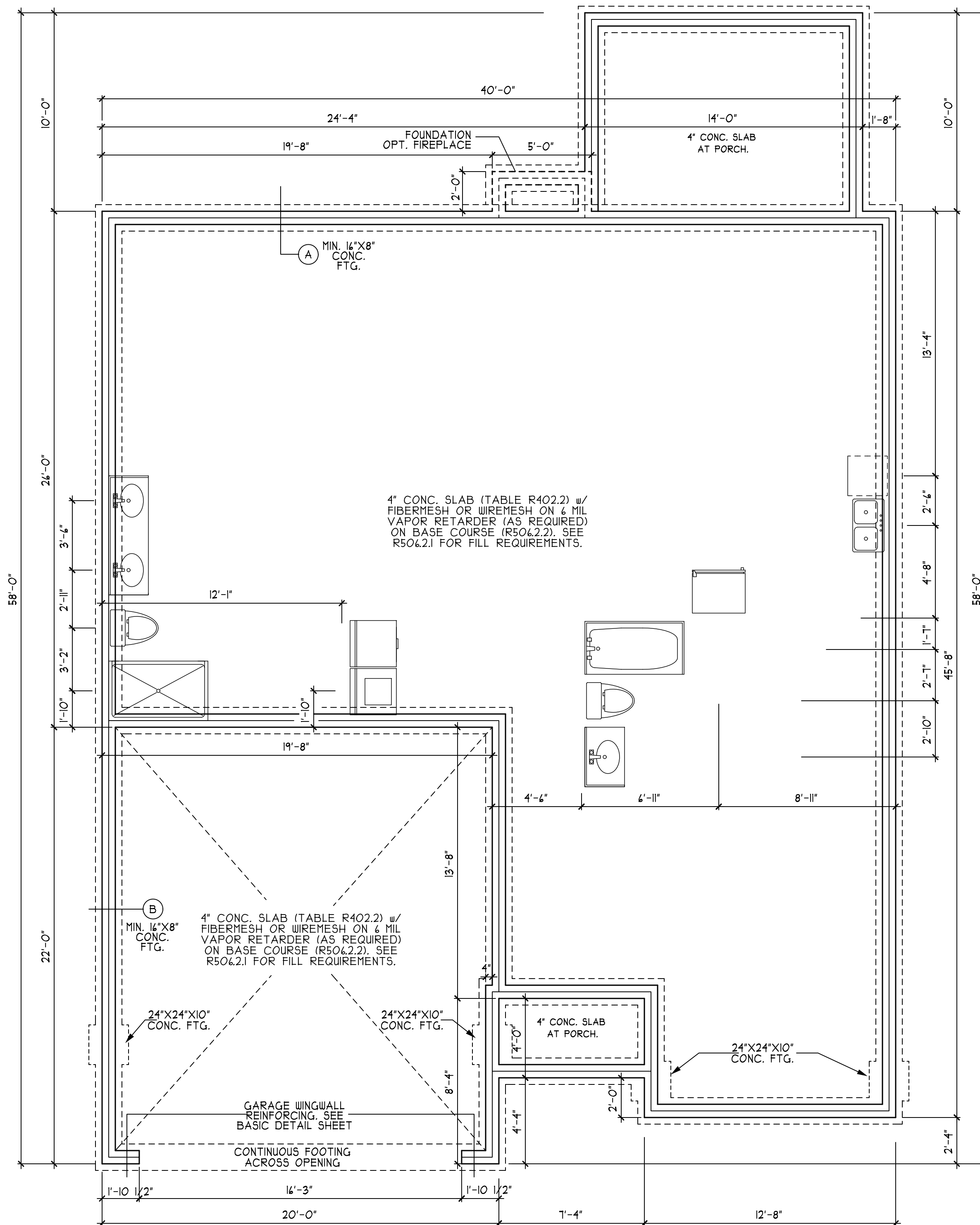
THIS PLAN HAS BEEN DRAWN IN ACCORDANCE WITH NORTH CAROLINA STATE RESIDENTIAL BUILDING CODES 2018 EDITION.

THIS PLAN IS TO ONLY BE BUILT BY THE ABOVE CITED BUILDER OR HOMEOWNER. RELEASED FOR MULTI-BUILDS AS APPROVED BY H SQUARED.

DATE: 03/01/24

1 STORY

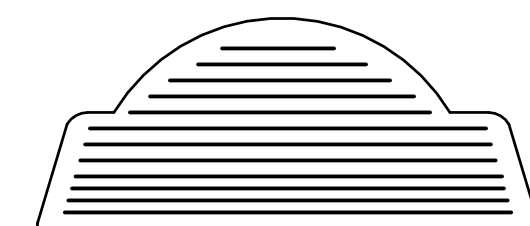
FILE: 020924



**DAMP PROOFING**  
 FOR DRAINAGE, DAMP PROOFING & WATER PROOFING REFER TO SECTION 405 & 406 IN 2018 EDITION NC RES. CODES

REFER TO BASIC DETAIL SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS, AND STRUCTURAL NOTES

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



**THE MASONBORO**  
 GARAGE LEFT  
**S&S HOMES**

HEATED FOOTAGE:  
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DATE: 03/07/24

1 STORY

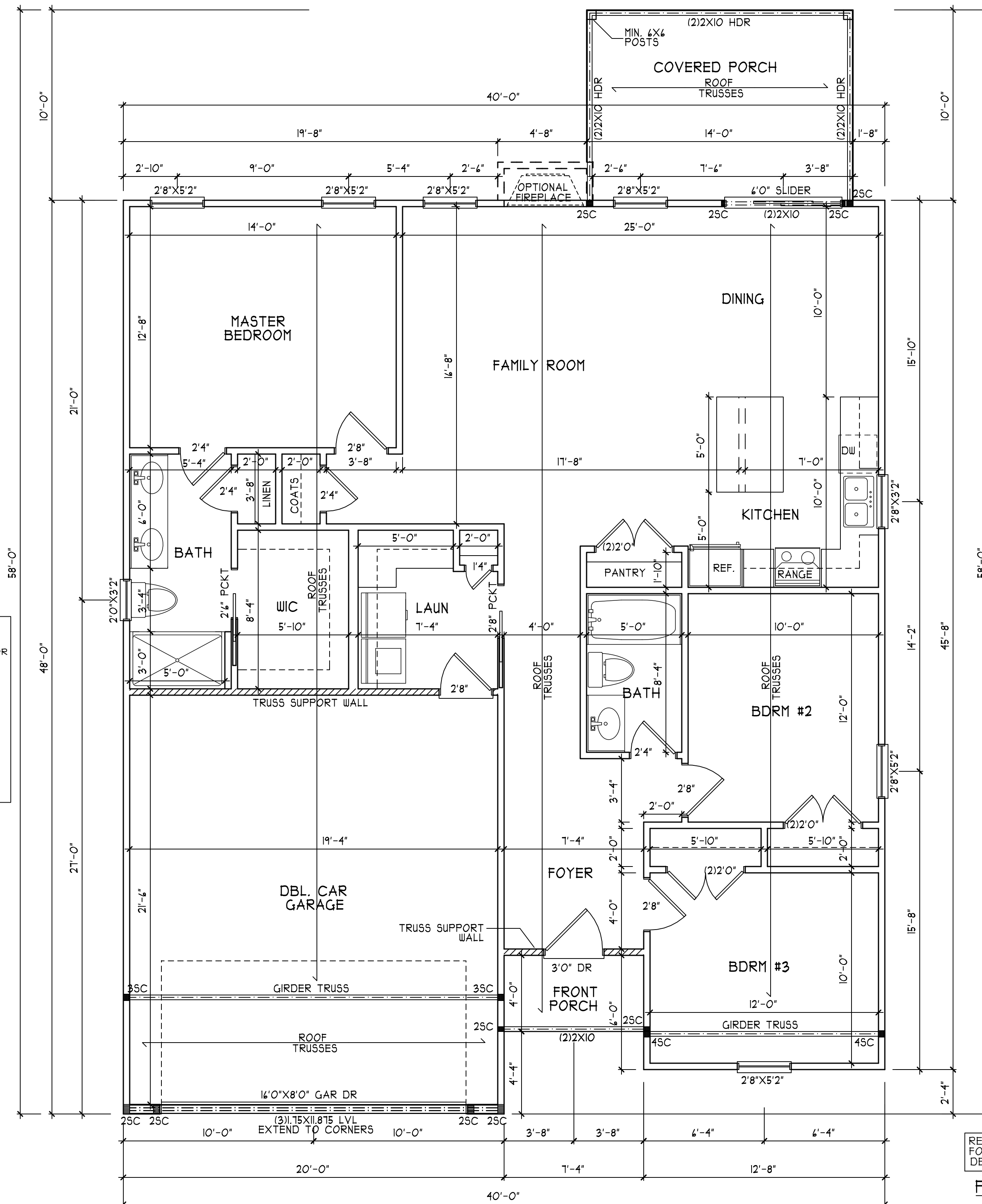
FILE: 020924

**TRUSS SYSTEM REQUIREMENTS**  
NC (2018 NCRC):

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED TRUSS PROFILES. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH THE TRUSS MANUFACTURER.
2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).
4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

**HEADER/BEAM & COLUMN NOTES**

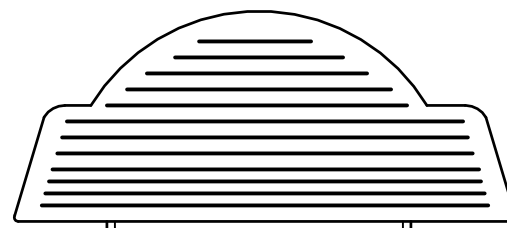
1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2) 2x10 (4" WALL) OR (3) 2x10 (4" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM 4 IN TABLE R402.3(5) OR AS BELOW PER NCDOL COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 4' SPAN: (2) KING STUDS
  - OVER 4' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS



REFER TO BASIC DETAIL SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS, AND STRUCTURAL NOTES

**FIRST FLOOR PLAN**

SCALE 1/4" = 1'-0"



**THE MASONBORO**  
GARAGE LEFT  
**S&S HOMES**

HEATED FOOTAGE:  
**#1394**

SQUARE FOOTAGE:	= 1394
FIRST FLOOR	= 29
FRONT PORCH	= 140
REAR PORCH	= 435
GARAGE	

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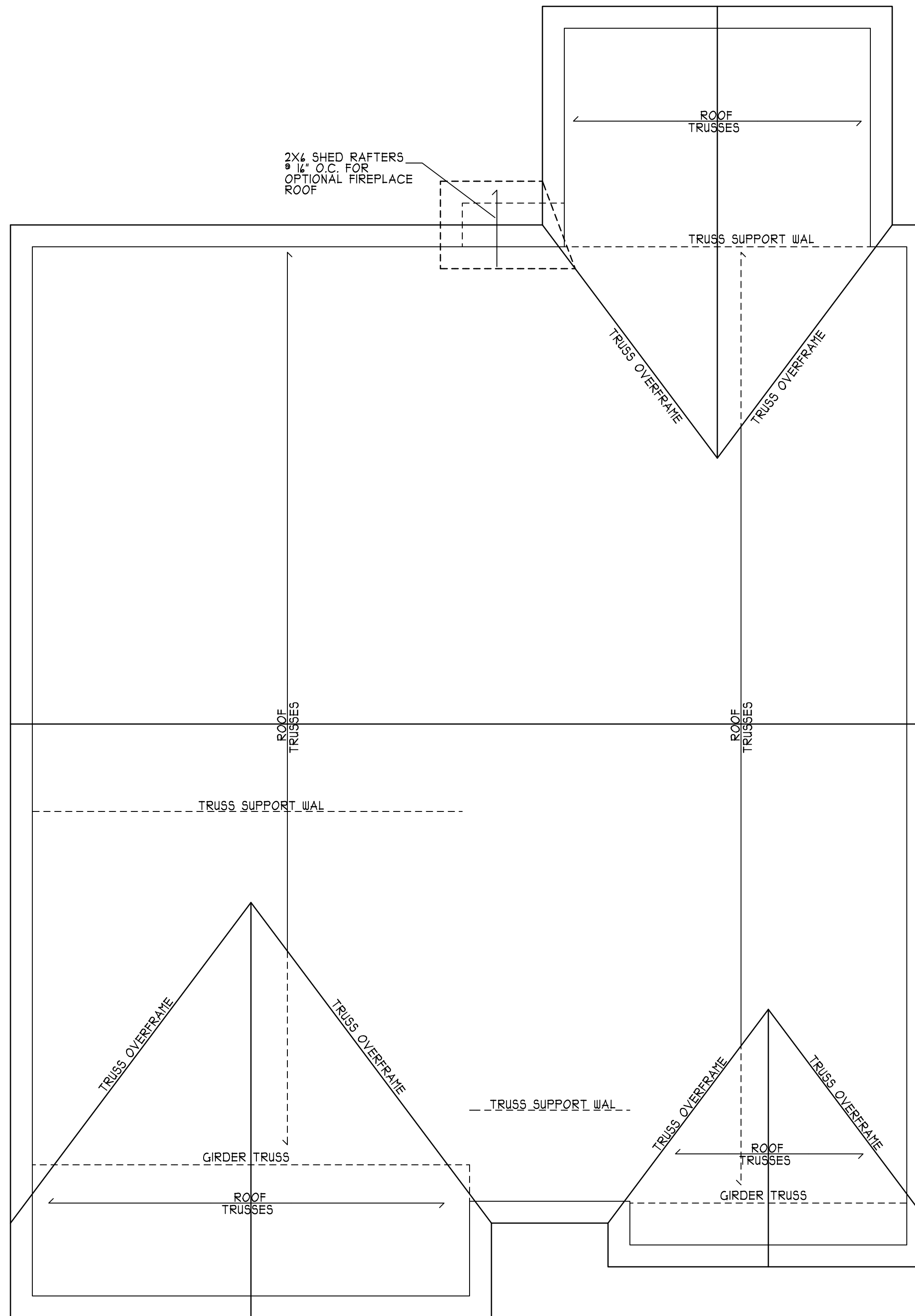
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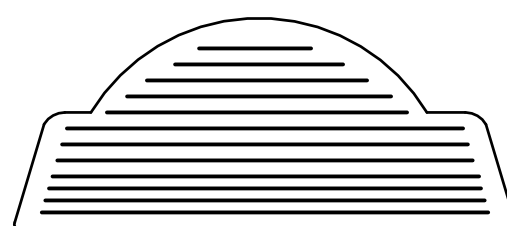


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**ROOF PLAN**  
SCALE 1/4" = 1'-0"

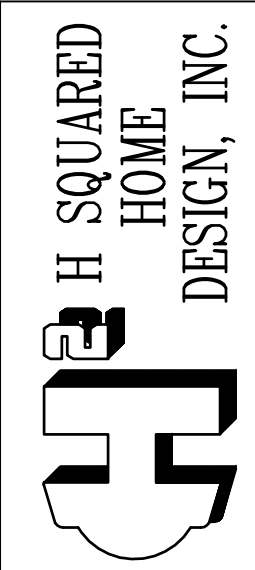


**THE MASONBORO**  
GARAGE LEFT  
**S&S HOMES**

HEATED FOOTAGE:  
**#1394**

SQUARE FOOTAGE:	1394	29	140	435
FIRST FLOOR				
FRONT PORCH				
REAR PORCH				
GARAGE				

DESIGNED BY:  
HEATHER or  
JOHANNA HALL  
165 HEATHERSTONE CT  
BENSON NC 27504  
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DATE: 03/01/24

1 STORY

FILE: 020924

# STRUCTURAL NOTES

- 1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER OR DESIGNER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER OR DESIGNER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
- 2) DESIGN LOADS (R301.4)
- |                                 | LIVE LOAD (PSF) | DEAD LOAD (PSF) | DEFLECTION (LL) |
|---------------------------------|-----------------|-----------------|-----------------|
| ROOMS OTHER THAN SLEEPING ROOMS | 40              | 10              | L/360           |
| SLEEPING ROOMS                  | 30              | 10              | L/360           |
| ATTIC WITH PERMANENT STAIR      | 40              | 10              | L/360           |
| ATTIC WITH OUT PERMANENT STAIR  | 20              | 10              | L/360           |
| ATTIC WITH OUT STORAGE          | 10              | 10              | L/240           |
| STAIRS                          | 40              | ---             | L/360           |
| EXTERIOR BALCONIES              | 40              | 10              | L/360           |
| DECKS                           | 40              | 10              | L/360           |
| GUARDRAILS AND HANDRAILS        | 200             | ---             | ---             |
| PASSENGER VEHICLE GARAGES       | 50              | 10              | L/360           |
| FIRE ESCAPES                    | 40              | 10              | L/360           |
| SNOW                            | ---             | ---             | ---             |
- WIND LOAD (BASED ON 130 MPH WIND VELOCITY & EXPOSURE B)
- 3) WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION R402.10.3. THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE R402.10.1. THE LENGTH OF BRACED PANELS SHALL BE DETERMINED BY SECTION R402.10.4. LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOUSLY SHEATHING WALLS WITH STRUCTURAL SHEATHING PER SECTION R402.10.3. NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED.
- 4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINMENT PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.
- 5) ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
- 6) ALL FRAMING LUMBER SHALL BE SPF #2 (F<sub>b</sub> = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2 (F<sub>b</sub>=915 PSI). PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (F<sub>c(perp)</sub> = 425 PSI - MIN).
- 7) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 4'-0" MAX. BEAM SPAN (UNO), (2) 2x4 STUDS FOR BEAM SPAN GREATER THAN 4'-0" (UNO).
- 8) L.V.L. SHALL BE LAMINATED VENEER LUMBER: F<sub>b</sub>=2400 PSI, F<sub>v</sub>=285 PSI, E=1.9x10<sup>6</sup> PSI. P.S.L. SHALL BE PARALLEL STRAND LUMBER: F<sub>b</sub>=2900 PSI, F<sub>v</sub>=290 PSI, E=2.0x10<sup>6</sup> PSI. L.S.L. SHALL BE LAMINATED STRAND LUMBER: F<sub>b</sub>=2250 PSI, F<sub>v</sub>=400 PSI, E=1.55x10<sup>6</sup> PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.
- 9) ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH ANY SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH DESIGNER OR ENGINEER.
- 10) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
- 11) REBAR SHALL BE DEFORMED STEEL, ASTM#45, GRADE 40.
- 12) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 4" FROM EACH END.
- 13) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 4'-0" SPAN AND 4"x4"x5/16" STEEL ANGLE WITH 4" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).
- 14) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.
- 15) THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2018 EDITION SHALL BE AS FOLLOWS:

ROOF:  
45.4 PSF - 2.25:12 PITCH OR LESS  
34.8 PSF - 2.25:12 TO 1:12 PITCH  
21 PSF - 1:12 TO 12:12 PITCH

WALLS:  
24.1 PSF - WALLS

## FOUNDATION STRUCTURAL NOTES:

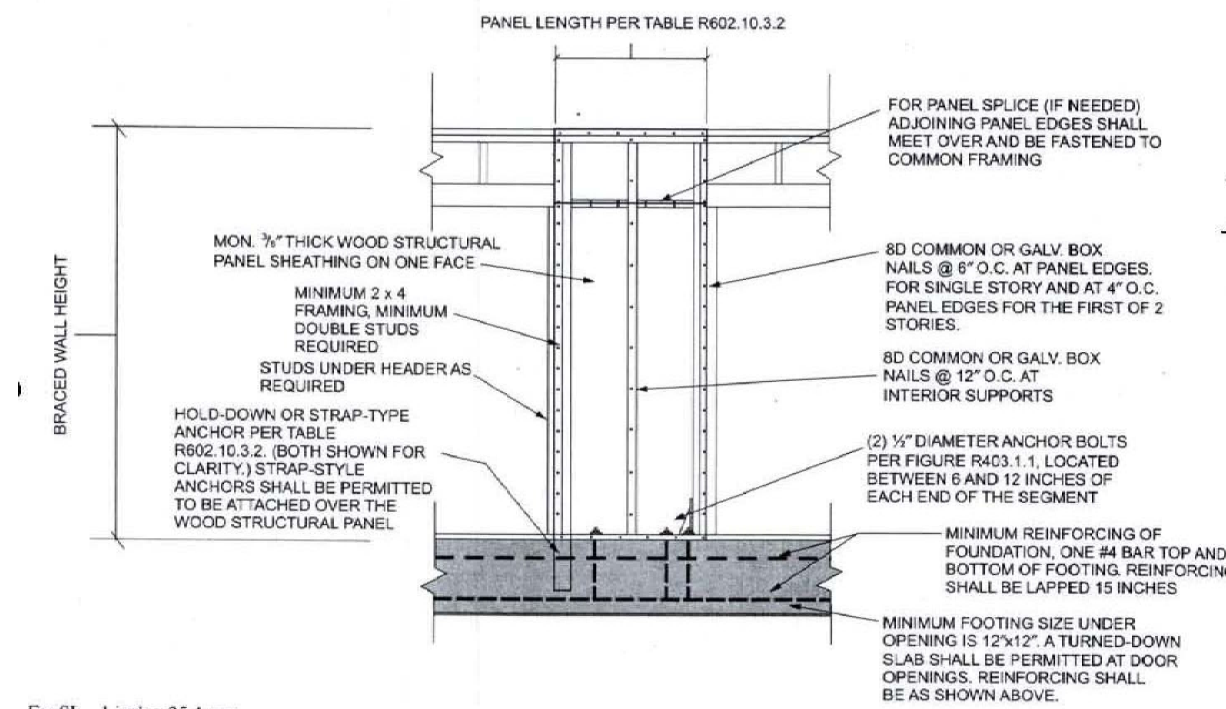
NC (2018 NCR):

- 1) (3) 2x10 SYP #2 OR SPF#2 GIRDER, TYPICAL UNO.
- 2) CONCRETE BLOCK PIER SIZE SHALL BE:  
SIZE HOLLOW MASONRY SOLID MASONRY  
8 x 16 UP TO 32' HIGH UP TO 5'-0" HIGH  
12 x 16 UP TO 48' HIGH UP TO 9'-0" HIGH  
16 x 16 UP TO 64' HIGH UP TO 12'-0" HIGH  
24 x 24 UP TO 96' HIGH UP TO 12'-0" HIGH  
WITH 30" x 30" x 10' CONCRETE FOOTING, UNO.
- 3) WALL FOOTING AS FOLLOWS:  
DEPTH: 8" - UP TO 2-1/2 STORY  
10" - 3 STORY  
WIDTH: SIDING (OR EQUAL)  
- 16" - UP TO 2-1/2 STORY  
- 20" - 3 STORY  
BRICK VENEER  
- 16" - 1 STORY  
- 20" - 2 STORY  
- 24" - 3 STORY

FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.11 (1 THRU 4)  
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

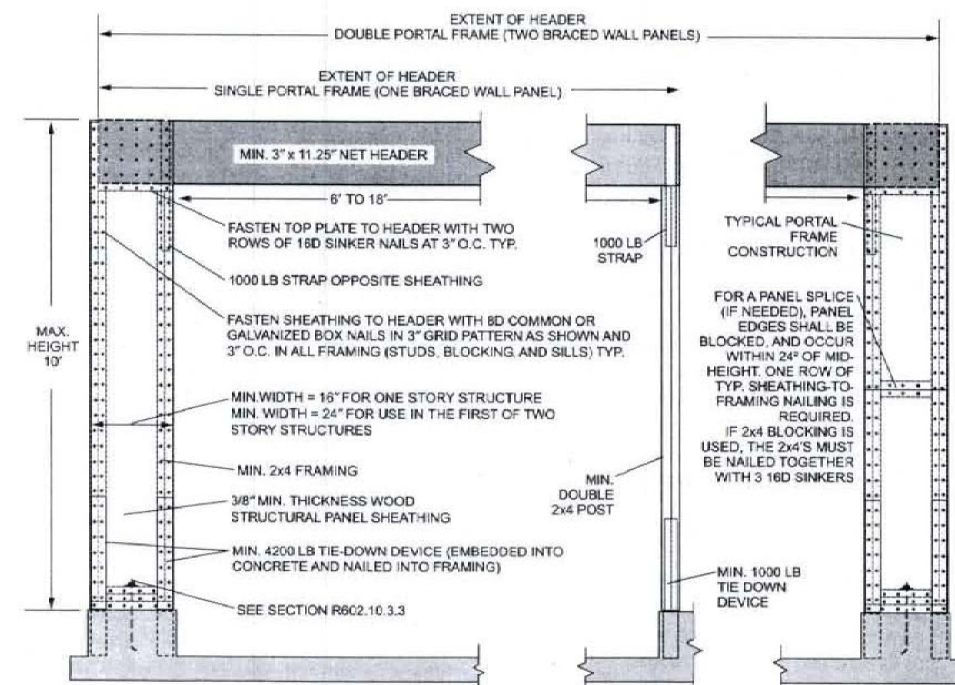
- 4) (4) 2x10 SYP#2 OR SPF#2 GIRDER.  
5) (2) 1.15x9.25 LVL OR LSL GIRDER  
6) (3) 1.15x9.25 LVL OR LSL GIRDER

1. ■■ DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.
8. ABBREVIATIONS:  
"SJ" = SINGLE JOIST  
"DJ" = DOUBLE JOIST  
"TJ" = TRIPLE JOIST



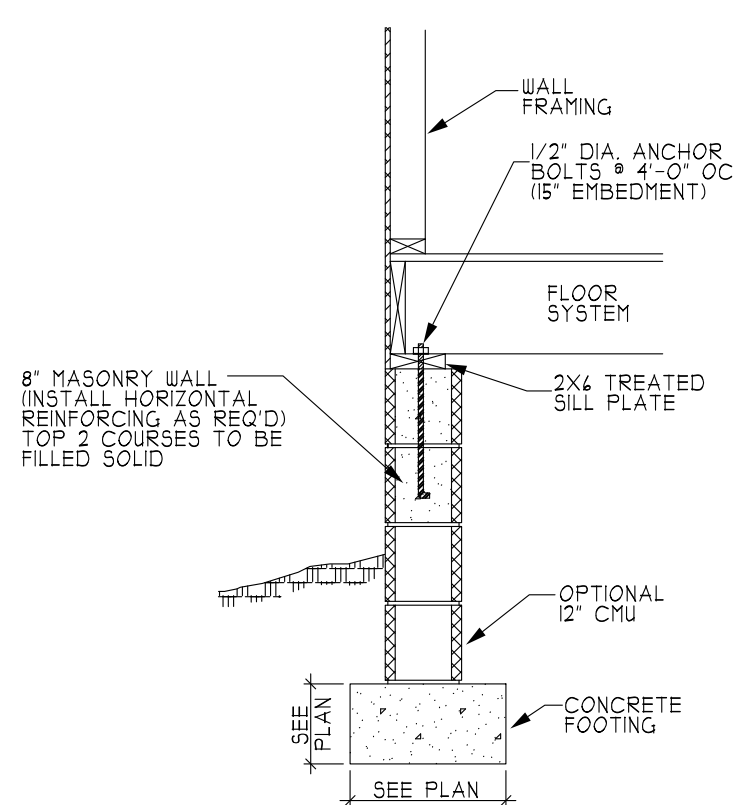
For SF: 1 inch = 25.4 mm.

FIGURE R602.10.3.2 ALTERNATE BRACED WALL PANEL

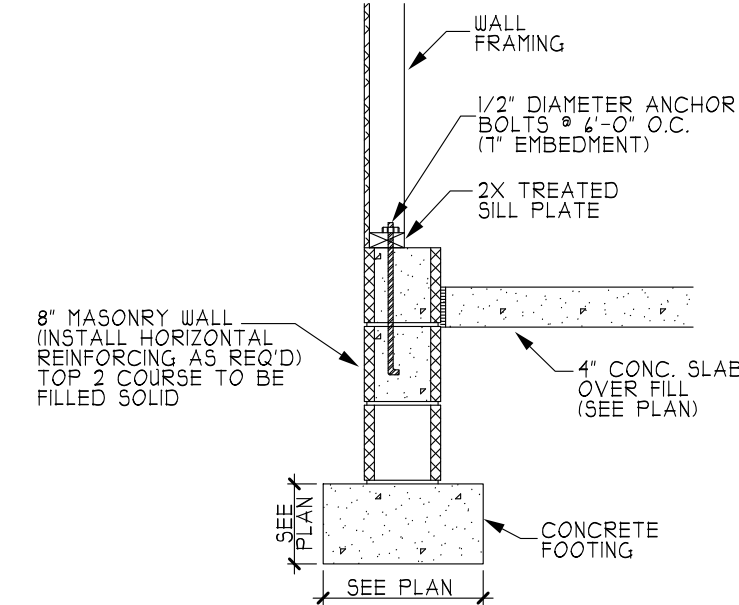


For SF: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound force = 4.448 N.

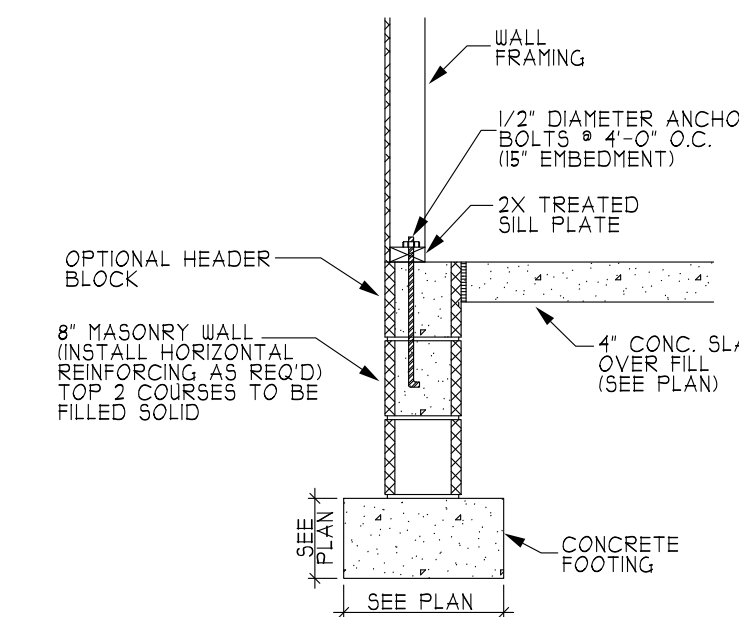
FIGURE R602.10.3.3 METHOD PFH: PORTAL FRAME WITH HOLD-DOWNS



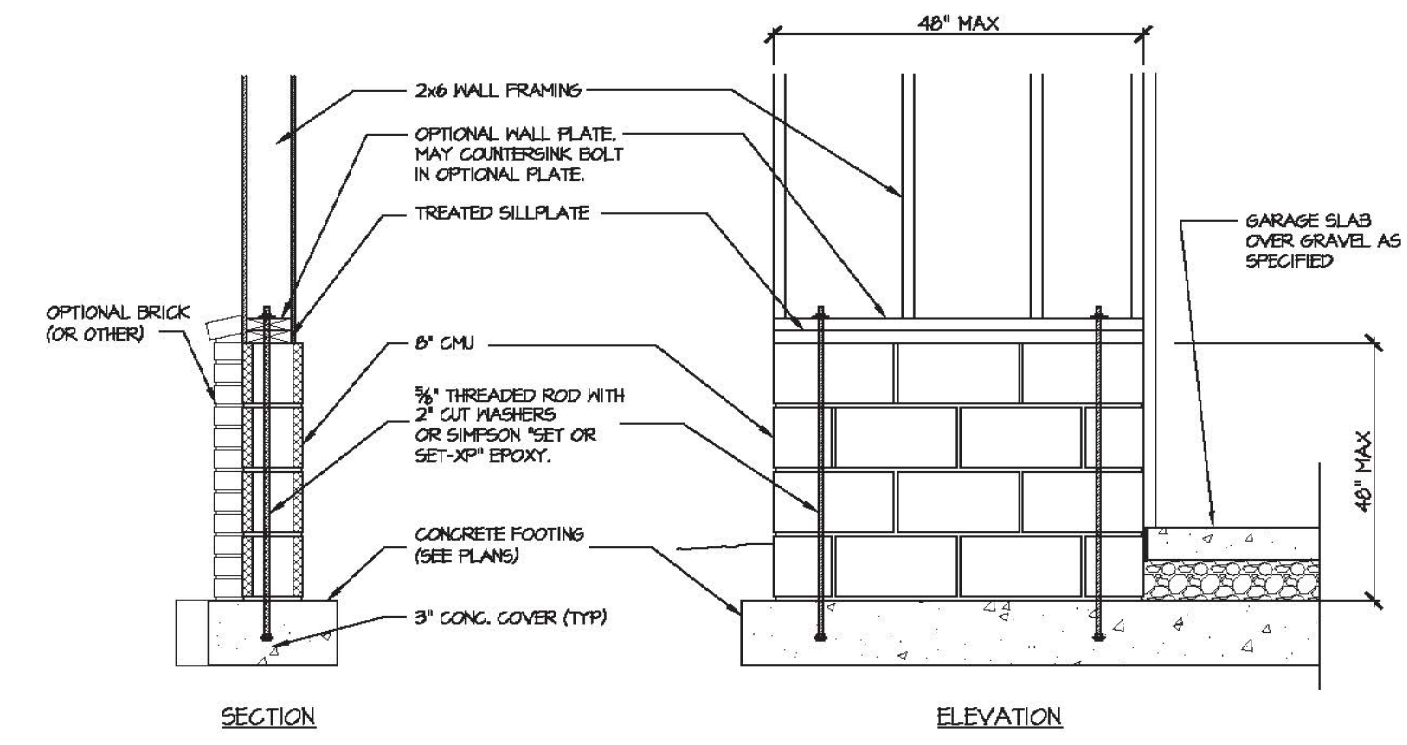
A CRAWL SPACE FOOTING (SIDING)



B GARAGE WALL FOOTING



C STEM WALL FOOTING



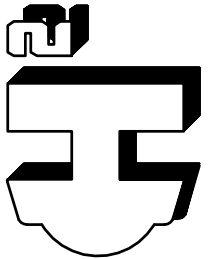
GARAGE 'WING WALL' REINFORCING PER IRC FIGURE R602.10.4.3

BASIC BUILDING  
DETAIL SHEET FOR 130 MPH

\*PLEASE NOTE THAT NOT ALL DETAILS APPLY TO EVERY PLAN.

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