FRONT ELEVATION

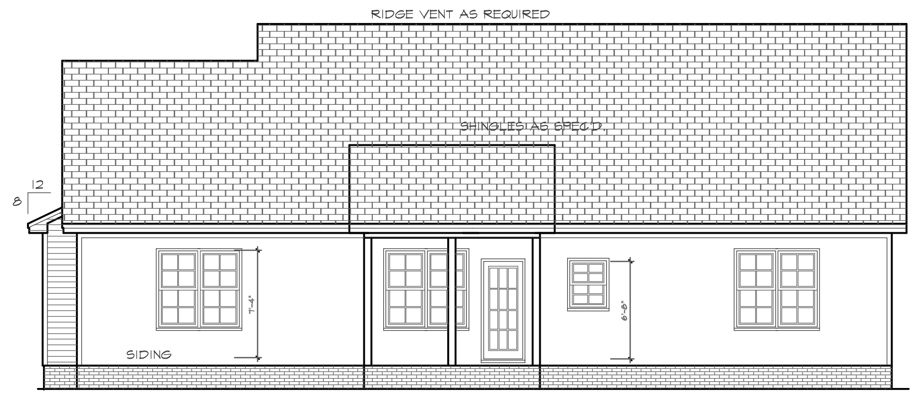
SCALE 1/4" = 1'0"

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 THE 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 - 1,978 SQ. FT.
1,978/300 = 6.6 SQ. FT. NET FREE AREA

50% OF VENTING MUST BE 3 FEET ABOVE THE EAVE OR SOFFIT VENTS



REAR ELEVATION

SCALE 1/8" = 1'0"

MIDTOWN DESIGNS

Plan #
NRH 1881 The Caleb 2 Car
GARAGE LEFT

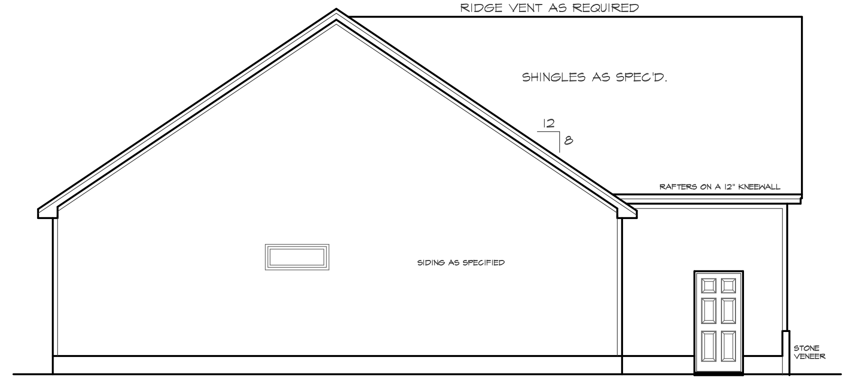
MidTown Designs Inc, 1732 Deacon Falls Way, Wendell NC 27591 Phone: 919-783-8626 www.midtowndesigns.com

THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2021IRC)

NC (2018 NCRC) : Wind : 115 - 120 mph
IF IN 130 MPH ZONE FOLLOW ALL APPLICABLE CODES

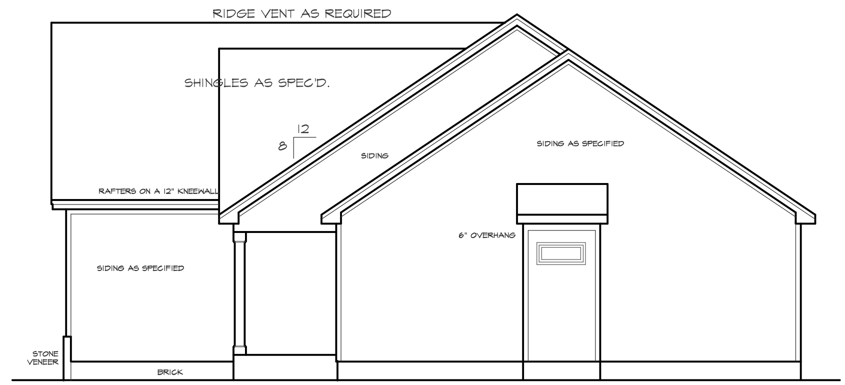
DATE 1/23/2025

PROJECT # 250107



LEFT SIDE ELEVATION

SCALE 1/8" = 1'0"



RIGHT SIDE ELEVATION

SCALE 1/8" = 1'0"

MIDTOWN DESIGNS

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NRH 1881 The Caleb 2 Car
GARAGE LEFT

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DATE 1/23/2025

PROJECT #
250107

FOUNDATION STRUCTURAL NOTES:

1. (3) 2 x 10 SPF #2 GIRDER, DROPPED TYPICAL UNO.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW 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	

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
- 18" - 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 R404.1.1 (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.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)
4'0" BOLT SPACING IN 130 MPH WIND ZONE

4. "▤" 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.

5. ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST

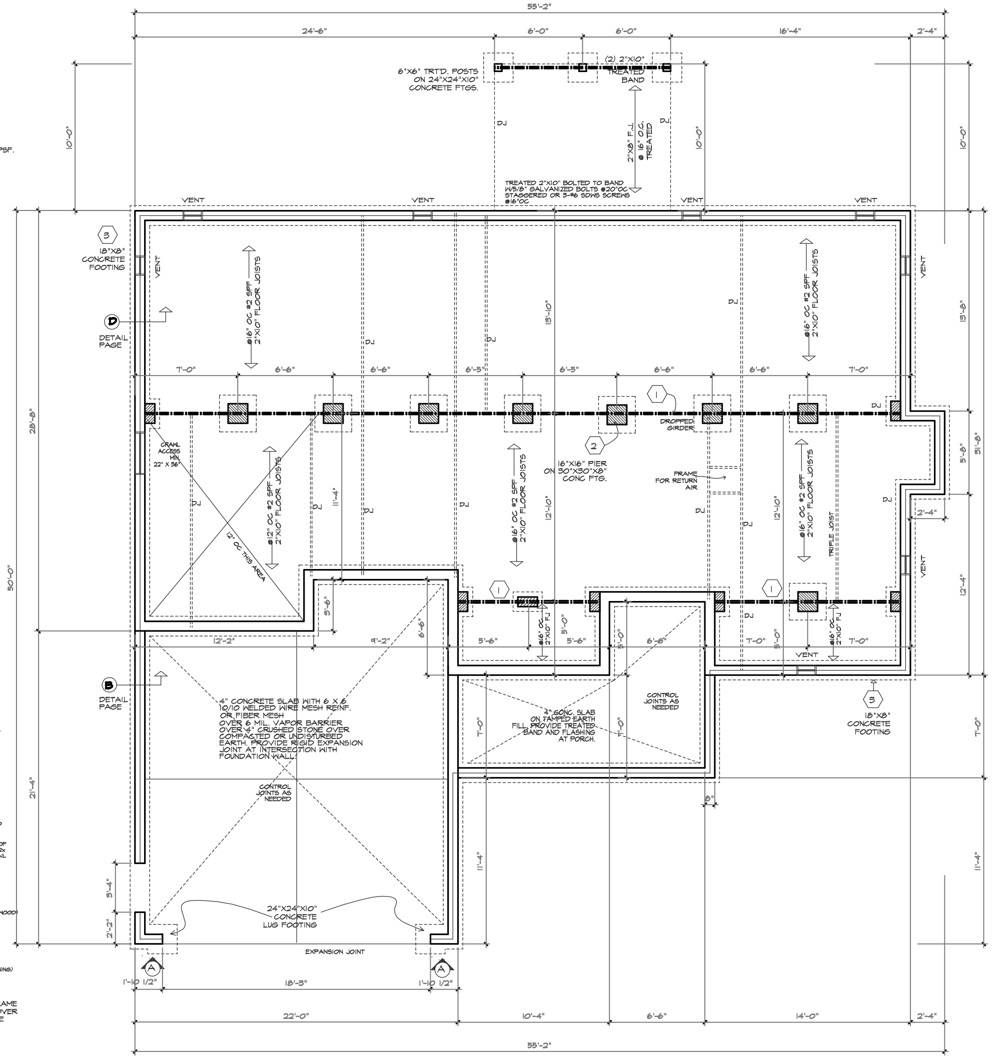
FOUNDATION VENTING

SECTION R408 UNDER FLOOR SPACE

R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) shall be provided with ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet (0.67 m squared for each 100 m squared) of under-floor space area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of said building.

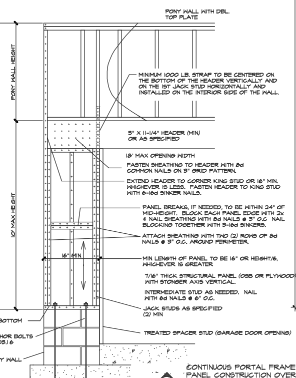
CRAWL AREA TO BE VENTED: 1422 SQ.FT.
1422/300 = 4.74 NET FREE VENTING AREA REQUIRED

R408.2 Ground Vapor Retarder
A minimum 6 mil. polyethlyne vapor retarder shall be installed to cover all earth in the crawl space with joints lapped not less than 12"



FOUNDATION PLAN

SCALE 1/4" = 1'-0"



A — CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.

MIDTOWN DESIGNS

Plan #
NRH 1881 The Caleb 2 Car
GARAGE LEFT

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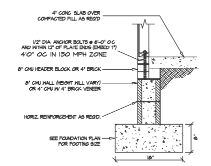
DATE 1/23/2025

PROJECT # 250107



SLAB FND. W/ STEM WALL (A)
N.T.S.

FOUNDATION STRUCTURAL NOTES:

1. (3) 2 x 10 SPF #2 GIRDER, DROPPED TYPICAL UNO.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW 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	

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
- 18" - 3 STORY

BRICK VENEER
- 16" - 1 STORY
- 20" - 2 STORY
- 24" - 3 STORY

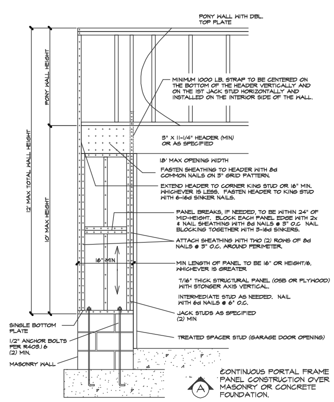
FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.1.1 (1 THRU 4)
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)
4'0" BOLT SPACING IN 130 MPH WIND ZONE

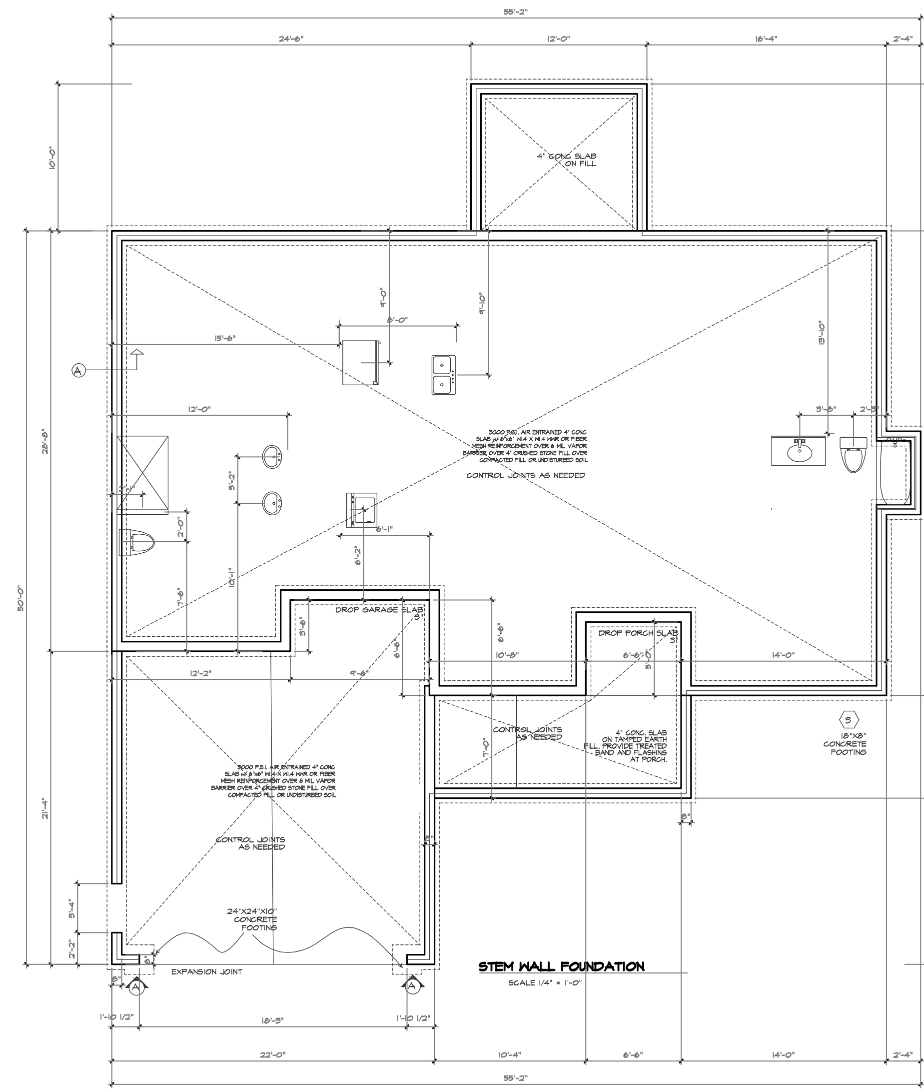
4. "▦" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5. ABBREVIATIONS:

"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST



(A) CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.



STEM WALL FOUNDATION

SCALE 1/4" = 1'-0"

MIDTOWN DESIGNS

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GARAGE LEFT

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NC (2018 NCRC) ; Wind : 115 - 120 mph
IF IN 130 MPH ZONE FOLLOW ALL APPLICABLE CODES

DATE 1/23/2025

PROJECT # 250107

FOUNDATION STRUCTURAL NOTES:

1. (3) 2 x 10 SPF #2 GIRDER, DROPPED TYPICAL UNO.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HALLOW 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	

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
- 18" - 3 STORY

BRICK VENEER
- 16" - 1 STORY
- 20" - 2 STORY
- 24" - 3 STORY

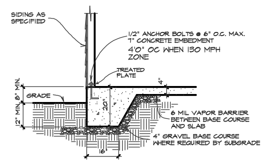
FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.1.1 (1 THRU 4)
NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

ATTACH SILL PLATE WITH 1/2"dia. ANCHOR BOLTS AT 6'-0" CENTERS (7" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)
4'0" BOLT SPACING IN 130 MPH WIND ZONE

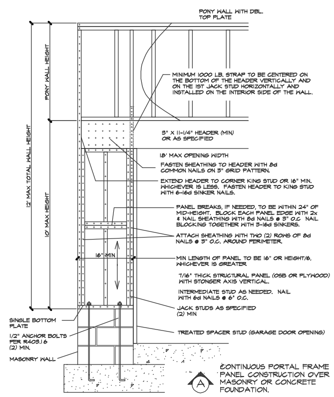
4. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

5. ABBREVIATIONS:

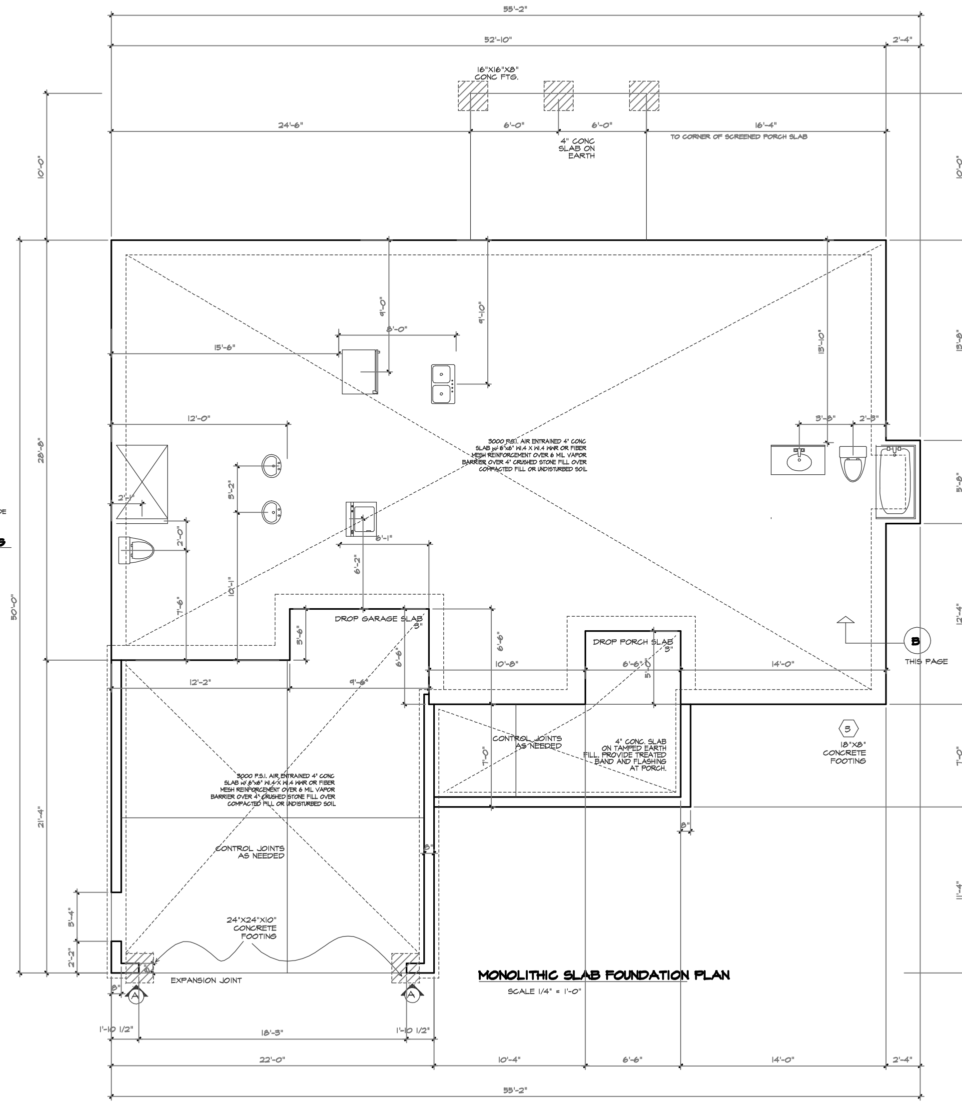
"SJ" = SINGLE JOIST
"DJ" = DOUBLE JOIST
"TJ" = TRIPLE JOIST



B SECTION THROUGH MONOLITHIC SLAB/ FOOTING
SCALE 1/2" = 1'-0"



A CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.



MONOLITHIC SLAB FOUNDATION PLAN
SCALE 1/4" = 1'-0"

MIDTOWN DESIGNS

Plan #
NRH 1881 The Caleb 2 Car
GARAGE LEFT

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THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2021IRC)
NC (2018 NCRC) / Wind : 115 - 120 mph
IF IN 130 MPH ZONE FOLLOW ALL APPLICABLE CODES

DATE 1/23/2025

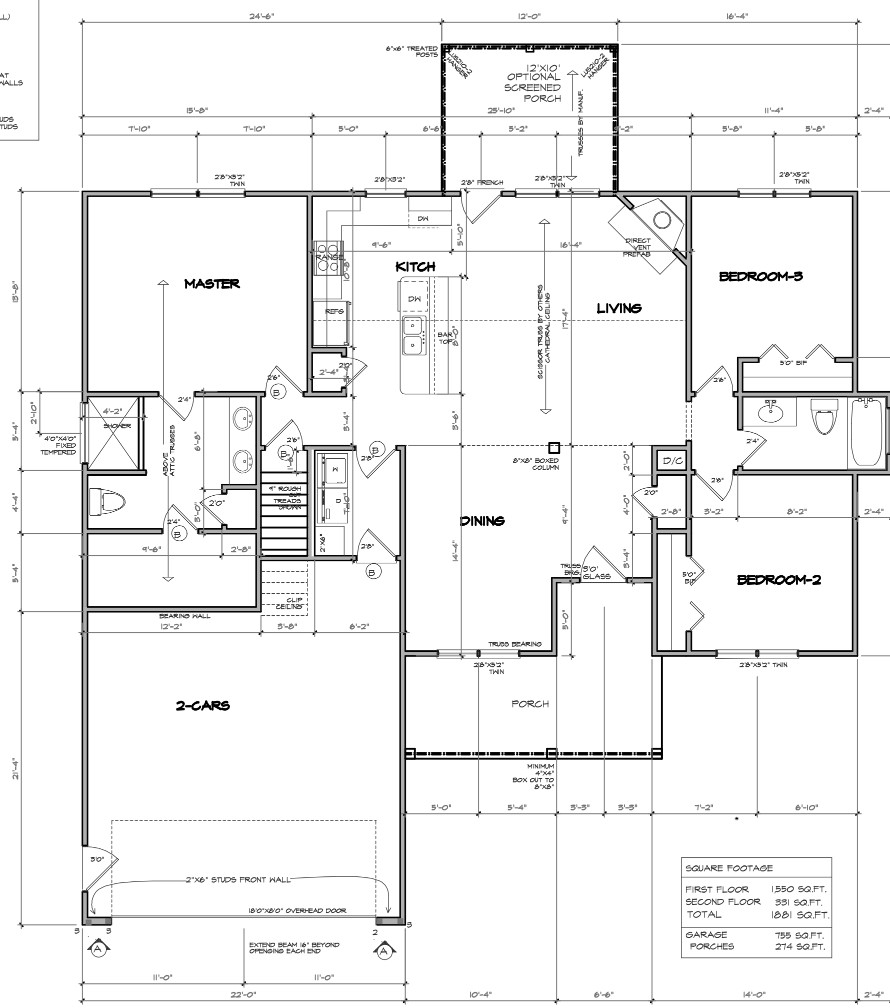
PROJECT # 250107

HEADER/BEAM & COLUMN NOTES

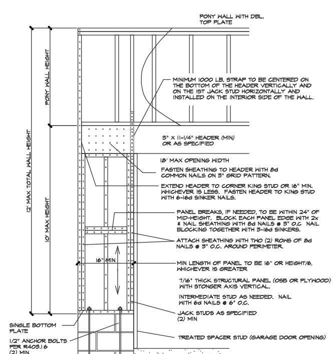
1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2) 2x10 (4" WALL) OR (3) 2x10 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.

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 "d" IN TABLE R602.7.2 OR AS BELOW:

- UP TO 4' SPAN: (1) KING STUD
- OVER 4' UP TO 8' SPAN: (2) KING STUDS
- OVER 8' UP TO 11' SPAN: (3) KINGS STUDS
- OVER 11' SPAN: (4) KING STUDS



SQUARE FOOTAGE	
FIRST FLOOR	1,550 SQ.FT.
SECOND FLOOR	331 SQ.FT.
TOTAL	1881 SQ.FT.
GARAGE	755 SQ.FT.
PORCHES	274 SQ.FT.



CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.

FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"

MIDTOWN DESIGNS

Purchaser must verify all dimensions and conditions before beginning construction.

MidTown Designs Inc. assumes no liability for contractors practices and procedures

These drawings are instruments of service and as such shall remain property of the designer

Plan # NRH 1881 The Caleb 2 Car

GARAGE LEFT

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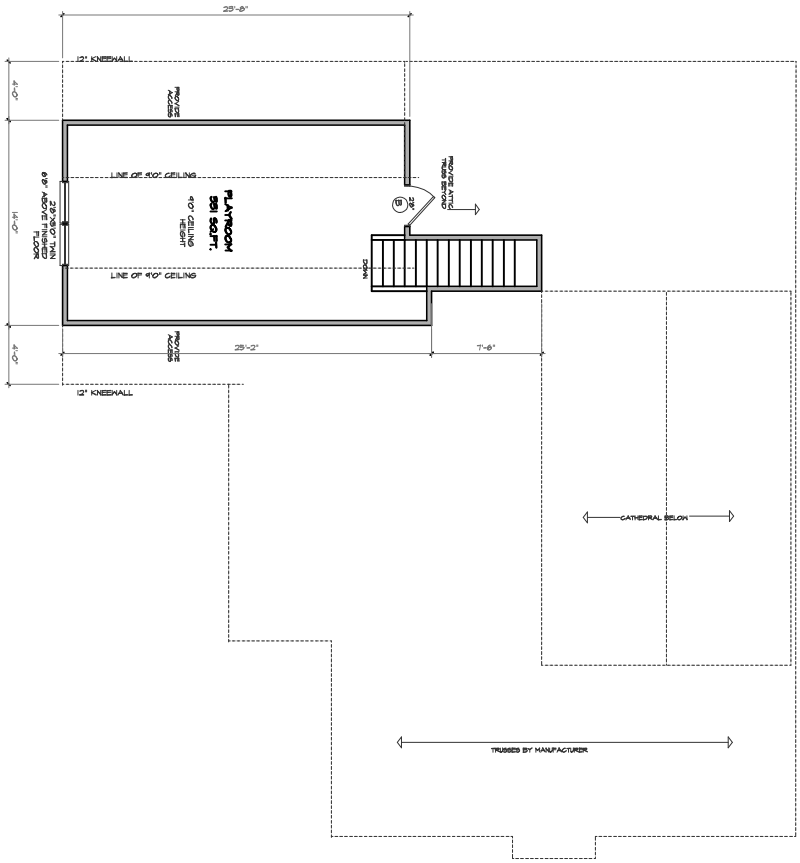
THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2021IRC)

NC (2018 NCRC) ; Wind : 115 - 120 mph IF IN 130 MPH ZONE FOLLOW ALL APPLICABLE CODES

DATE 2/4/2025

PROJECT # 250107



SECOND FLOOR PLAN

SCALE 1/4" = 1'-0"

PROJECT # 25007

DATE 1/29/2025

THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2021IRC)

NC (2018 NCRC) ; Wind : 115 - 120 mph

IF IN 150 MPH ZONE FOLLOW ALL APPLICABLE CODES

Plan #

NRH 1881 The Caleb 2 Car

GARAGE LEFT

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MidTown Designs Inc. assumes no responsibility for contractors practices and procedures

These drawings are instruments of service and shall remain property of the designer

MIDTOWN DESIGNS

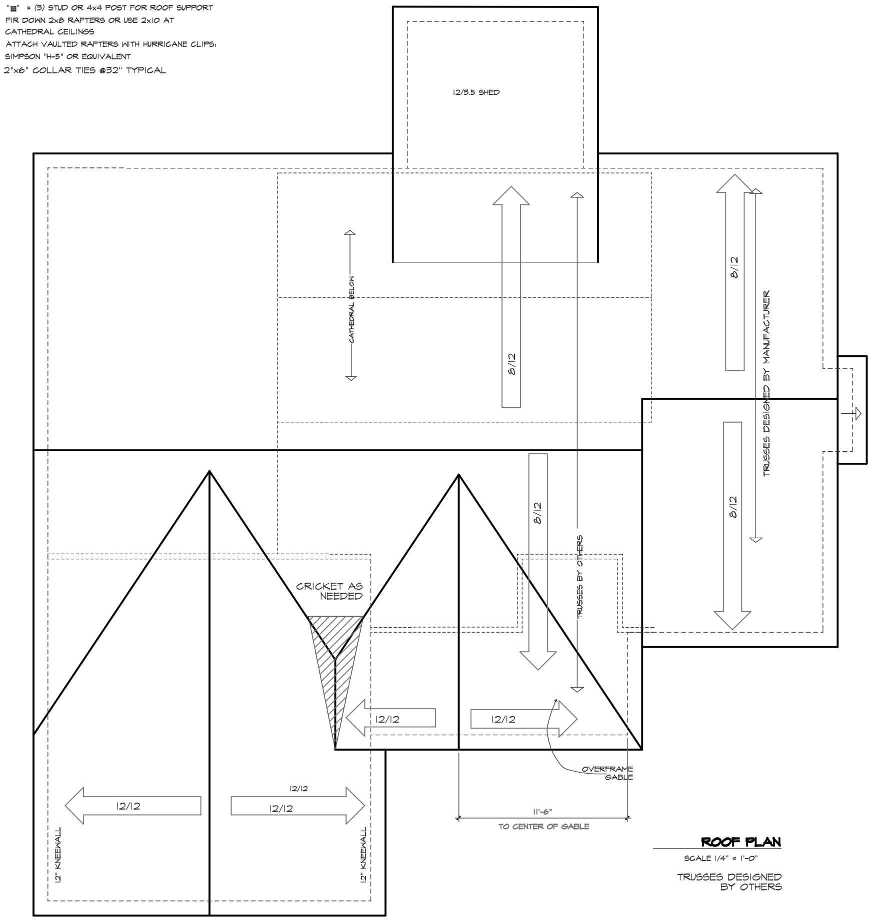
ROOF FRAMING NOTES:

(115-120) MPH WIND ZONE)
IF 130 MPH FOLLOW APPLICABLE CODE

1. ALL RAFTERS TO BE 2x8 @ 16" O.C. WITH 2 X 12 RIDGE, UNO.
2. (2)2x10 OR (1) 1.75" X 11 7/8" LVL HIP. (2)2x10 HIPS MAY BE SPLICED WITH A MINIMUM 6'-0" OVERLAP AT CENTER.
3. (2)2x10 OR (1) 1.75" X 9.25" LVL VALLEY. DO NOT SPLICE VALLEYS
4. 1-1.75x11 7/8" LVL VALLEY
5. FALSE FRAME VALLEY ON 2x10 FLAT PLATE
6. 2"X6" RAFTERS @16" O.C. W/ 2x8 RIDGE
7. 2"X10" RAFTERS @16" O.C. W/ 2x12 RIDGE

- "SR" = SINGLE RAFTER
- "DR" = DOUBLE RAFTER
- "TR" = TRIPLE RAFTER
- "RS" = ROOF SUPPORT FOR RAFTER SPLICE
- "▪" = (3) STUD OR 4x4 POST FOR ROOF SUPPORT
- FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS: SIMPSON "H-5" OR EQUIVALENT

2"x6" COLLAR TIES @32" TYPICAL



ROOF PLAN

SCALE 1/4" = 1'-0"

TRUSSES DESIGNED BY OTHERS

MIDTOWN DESIGNS

Plan #
NRH 1881 The Caleb 2 Car
GARAGE LEFT

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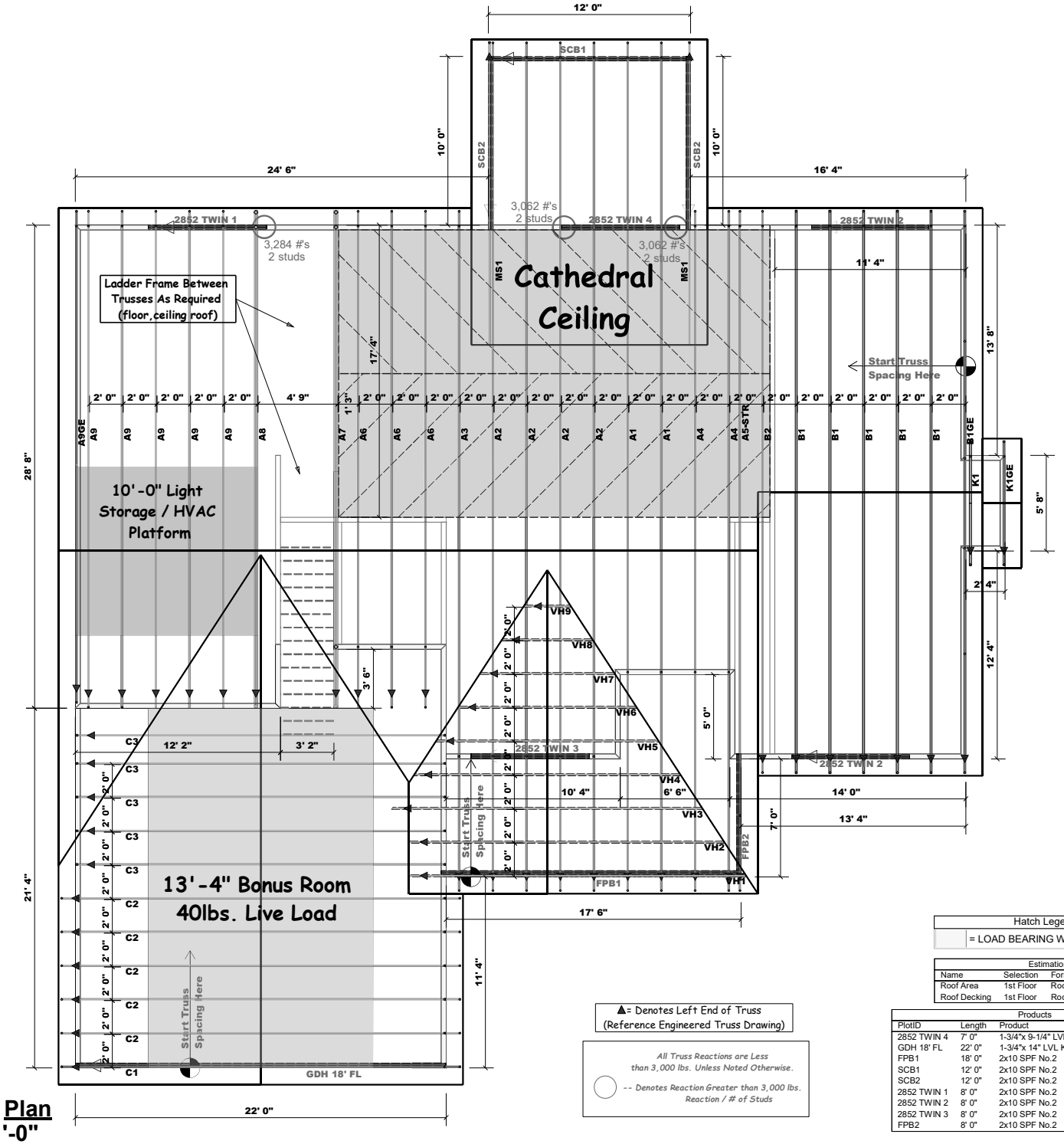
DATE 1/23/2025

PROJECT #
250107



Truss Placement Plan
SCALE: 1/4" = 1'-0"

Hatch Legend
= LOAD BEARING WALLS @ 9-1-8 Hgt.

Estimation			
Name	Selection	Formula	Calculation
Roof Area	1st Floor	Roof Area	3188.58
Roof Decking	1st Floor	Roof Decking	110

▲= Denotes Left End of Truss
(Reference Engineered Truss Drawing)

All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

-- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

Products				
PlotID	Length	Product	Plies	Net Qty
2852 TWIN 4	7' 0"	1-3/4"x 9-1/4" LVL Kerto-S	2	2
GDH 18' FL	22' 0"	1-3/4"x 14" LVL Kerto-S	2	2
FPB1	18' 0"	2x10 SPF No.2	3	3
SCB1	12' 0"	2x10 SPF No.2	2	2
SCB2	12' 0"	2x10 SPF No.2	2	4
2852 TWIN 1	8' 0"	2x10 SPF No.2	2	2
2852 TWIN 2	8' 0"	2x10 SPF No.2	2	4
2852 TWIN 3	8' 0"	2x10 SPF No.2	2	2
FPB2	8' 0"	2x10 SPF No.2	2	2

COMTECH
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park
Fayetteville, N.C. 28309
Phone: (910) 864-8787
Fax: (910) 864-4444

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature Lenny Norris
Lenny Norris

LOAD CHART FOR JACK STUDS
(BASED ON TABLES R502.5(1) & (b))
NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADER/GIRDER

ENGINEERED FLOOR OR ROOF REACTION (LBS)	REQ'D # STUDS FOR (2) 1.5" HEADER	ENGINEERED FLOOR OR ROOF REACTION (LBS)	REQ'D # STUDS FOR (3) 1.5" HEADER	ENGINEERED FLOOR OR ROOF REACTION (LBS)	REQ'D # STUDS FOR (4) 1.5" HEADER
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				

CITY / CO.	Johnston Co. / Johnston
ADDRESS	Site Address
MODEL	ROOF
DATE REV.	/ /
DRAWN BY	Lenny Norris
SALES REP.	Lenny Norris
BUILDER	Neuse River Homes
JOB NAME	Lot 10 Honaker Farms
PLAN	NRH 1881 CALEB 2-CAR
SEAL DATE	Seal Date
QUOTE #	Quote #
JOB #	J1224-6968

STRUCTURAL NOTES

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2018 EDITION (2021 IRC), PLUS ALL LOCAL CODES AND REGULATIONS.
ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

2) DESIGN LOADS SEE TABLE R301.5

WIND SPEED: (REFER TO TABLE R301.2.4)
VERIFY ZONE BEFORE CONSTRUCTION.

3) WALL BRACING: WALLS SHALL BE BRACED ALONG BRACED WALL LINES ACCORDING TO SECTION R602.10. THE AMOUNT, LOCATION, AND CONSTRUCTION OF BRACING SHALL COMPLY WITH R602.10. NOTE THAT THE BRACING SHOWN ON THE PLANS IS BASED ON THE PRESCRIPTIVE BRACING REQUIREMENTS OF THE CODE AND SHALL BE VERIFIED AND/ORAPPROVED BY THE CODE OFFICIAL.

4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIT ENTRAINED 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 FRAMNG LUMBER SHALL BE SPF #2(FB = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP #2 (FB=975 PSI). PLATE MATERIAL MAY BE SPF #3 OR SYP #3 (FC(PERP) = 425 PSI - MIN).

7) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2X4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN (UNO), (2)2X4 STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO).

8) L.V.L SHALL BE LAMINATED VENEER LUMBER: FB=2600 PSI, FV=285 PSI, E=1,900,000 PSI. P.S.L SHALL BE PARALLEL STRAND LUMBER: FB=2900 PSI, FV=290 PSI, E=2,000,000 PSI. L.S.L SHALL BE LAMINATED STRAND LUMBER: FB=2250 PSI, FV=400 PSI, E=1,550,000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.

9) ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

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 SUPORT 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. ASTM615, GRADE 60.

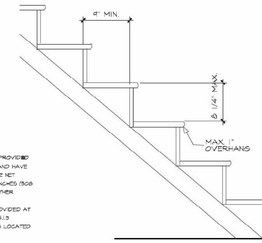
12) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX). AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

13) BRICK LINTELS SHALL BE 3 1/2"X3 1/2"X1/4" STEEL. ANGLE FOR UP TO 6'-0" SPAN AND 6"X4"X5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0" (UNO).

14) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS SEE R301.2(6)

ATTIC ACCESS

SECTION R807
R807.1 ATTIC ACCESSAN ATTIC ACCESS OPENING SHALL BE PROVIDED TO ATTIC AREAS THAT EXCEED 400 SQUARE FEET (37.16 M2) AND HAVE A VERTICAL HEIGHT OF 60 INCHES (1524 MM) OR GREATER. THE NET CLEAR OPENING SHALL NOT BE LESS THAN 20 INCHES BY 30 INCHES (508 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. A 30-INCH (762 MM) MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE PROVIDED AT SOME POINT ABOVE THE ACCESS OPENING. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.
EXCEPTIONS:
1. CONCEALED AREAS NOT LOCATED OVER THE MAIN STRUCTURE INCLUDING PORCHES, AREAS BEHIND KNEE WALLS, DORMERS, BAY WINDOWS, ETC. ARE NOT REQUIRED TO HAVE ACCESS.
2. PULL DOWN STAIR TREADS, STRINGERS, HANDRAILS, AND HARDWARE MAY PROTRUDE INTO THE NET CLEAR OPENING.



STAIR DETAIL

NO SCALE

STAIR NOTES:

1. STAIRS RISERS MUST BE UNIFORM AND NOT EXCEED 8 1/4".
2. TREADS SHALL NOT BE LESS THAN 10" DEEP A 1" PROJECTION OVER RISER IS PERMITTED.
3. A MINIMUM OF 6'8" HEADROOM MUST BE MAINTAINED AT ALL PLACES ON STAIR.
4. THE WIDTH OF THE STAIR SHALL BE A MINIMUM OF 3'0". HANDRAIL MAY PROJECT FROM EACH SIDE OF STAIR A DISTANCE OF 3 1/2" INTO THE REQUIRED WIDTH.
5. WINDERS MUST BE A MINIMUM OF 9" IN WIDTH AT 12" FROM THE NARROWEST SIDE. TREAD SHALL BE NO NARROWER THAN 4" AT ANY POINT AND AVERAGE NO LESS THAN 9 INCHES.
6. HANDRAILS SHALL BE NO LESS THAN 34" AND NO MORE THAN 38" ABOVE TREAD NOSING.
7. WINDERS AND SPIRAL STAIRS SHALL HAVE THE HANDRAIL LOCATED ON THE OUTSIDE RADIUS.
8. ALL REQUIRED HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS.

DWELLING / GARAGE SEPARATION

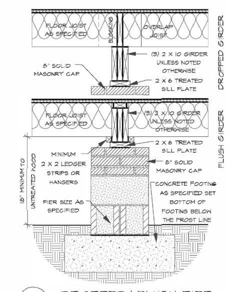
REFER TO SECTIONS R302.5, R302.6, AND R302.7
WALLS. A MINIMUM 1/2" GYPSUM BOARD MUST BE INSTALLED ON ALL WALLS SUPPORTING FLOOR/CEILING ASSEMBLIES USED FOR SEPARATION REQUIRED BY THIS SECTION.
STAIRS. A MINIMUM OF 1/2" GYPSUM BOARD MUST BE INSTALLED ON THE UNDERSIDE AND EXPOSED SIDES OF ALL STAIRWAYS.
CEILINGS. A MINIMUM OF 1/2" GYPSUM MUST BE INSTALLED ON THE GARAGE CEILING IF THERE ARE NO HABITABLE ROOM ABOVE THE GARAGE. IF THERE ARE HABITABLE ROOM ABOVE THE GARAGE A MINIMUM OF 5/8" TYPE X GYPSUM BOARD MUST BE INSTALLED ON THE GARAGE CEILING.
OPENING PENETRATIONS. OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1 3/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS.
DUCT PENETRATIONS. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE *DWELLING* FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE (0.48 MM) SHEET STEEL OR OTHER *APPROVED* MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.
OTHER PENETRATIONS. PENETRATIONS THROUGH THE SEPARATION REQUIRED IN SECTION R302.6 SHALL BE PROTECTED AS REQUIRED BY SECTION R302.11, ITEM 4.

DECK BRACING

SECTION AM109
AM109.1 DECK BRACING. DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY. THE FOLLOWING ARE ACCEPTABLE MEANS TO PROVIDE LATERAL STABILITY.
AM109.1.1. WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" ABOVE FINISHED GRADE PER FIGURE AM109 AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION AM104, LATERAL BRACING IS NOT REQUIRED.
AM109.1.2. 4 X 4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45 DEGREES AND 60 DEGREES FROM THE HORIZONTAL. KNEE BRACES SHALL BE BOLTED TO THE POST AND THE GIRDER/DOUBLE BAND WITH ONE 5/8 INCH HOT DIPPED GALVANIZED BOLT WITH NUT AND WASHER AT BOTH ENDS OF THE BRACE PER FIGURE AM109.1
AM109.1.3. FOR FREESTANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POST IN ACCORDANCE WITH FIGURE AM109.2 AND THE FOLLOWING:

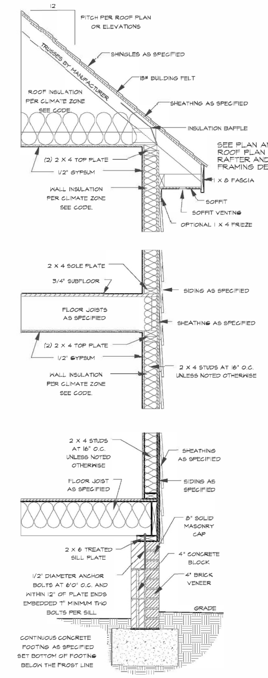
POST SIZE	MAX TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 X 4	48 SF	4'-0"	2'-6"	1'-0"
6 X 6	120 SF	6'-0"	3'-6"	1'-8"

AM109.1.4. 2 X 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO 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 INCH HOT DIPPED GALVANIZED BOLT WITH NUT AND WASHER AT EACH END OF EACH BRACING MEMBER PER FIGURE AM109.3.
AM109.1.5. FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 45.



C DROPPED/ FLUSH PIER

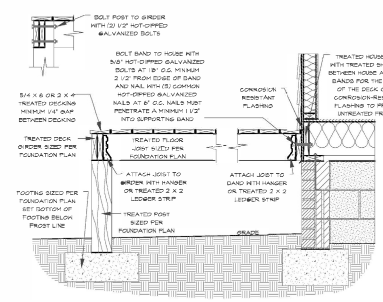
SCALE 3/4" = 1'-0"



TYPICAL

WALL SECTION

SCALE 3/4" = 1'-0"



DECK ATTACHMENT DETAIL TO FRAMED WALL

SCALE 3/4" TO 1'-0"

THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2021 IRC)

HOUSE DESIGNED FOR 115 or 120 MPH EXPOSURE B

ANCHOR BOLTS SHALL BE MINIMUM 1/2" DIAMETER & SHALL EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE.
ANCHOR BOLTS TO BE NO MORE THAN 6' ON CENTER AND WITHIN 12" OF ALL CORNERS. THERE SHALL BE A MINIMUM OF TWO (2) ANCHOR BOLTS PER PLATE SECTION.

MINIMUM VALUES FOR ENERGY COMPLIANCE
ZONE 4A, & 3. VERIFY ZONE BEFORE CONSTRUCTION

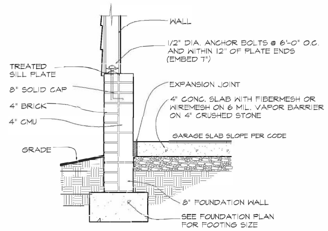
TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION U-FACTOR[b,i]	SKYLIGHT[b] U-FACTOR	GLAZED FENESTRATION SHGC[b,k]	CEILING R-VALUE[m]	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE[i]	FLOOR R-VALUE	BASEMENT[c,e] WALL R-VALUE	SLAB[d] R-VALUE & DEPTH	CRAWL SPACE[c] WALL R-VALUE
3	0.35	0.55	0.30	38 or 30ci[l]	15 or 13+2.5[h]	5/13 or 5/10ci	19	5/13[f]	0	5/13
4	0.35	0.55	0.30	38 or 30ci[l]	15 or 13+2.5[h]	5/13 or 5/10ci	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30ci[l]	19[n] or 13+5[h] or 15+3[h]	13/17 or 13/12.5ci	30[g]	10/15	10	10/19

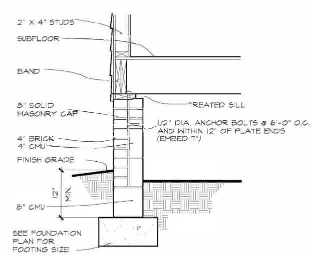
TABLE R402.1.4
EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION U-FACTOR[d]	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR[b]	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.35	0.55	0.030	0.077	0.141	0.047	0.091[c]	0.136
4	0.35	0.55	0.030	0.077	0.141	0.047	0.059	0.065
5	0.35	0.55	0.030	0.061	0.082	0.033	0.059	0.065

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
b. When more than half the insulation is on the interior, the mass wall *U*-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4 and 0.054 in Climate Zone 5.
c. Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.
d. A maximum of two glazed fenestration product assemblies having a *U*-factor no greater than 0.55 and a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty. When applying this note and using the REScheck "UA Trade-off" compliance method to allow continued use of the software, the applicable fenestration products shall be modeled as meeting the *U*-factor of 0.35 and the SHGC of 0.30, as applicable, but the fenestration products actual *U*-factor and actual SHGC shall be noted in the comments section of the software for documentation of application of this note to the applicable products. Compliance for these substitute products shall be verified compared to the allowed substituted maximum *U*-value requirement and maximum SHGC requirement, as applicable.



B SECTION AT GARAGE SLAB



D SECTION AT CRAWL

Purchaser must verify all dimensions and conditions before beginning construction.

MidTown Designs Inc. assumes no liability for contractors practices and procedures

These drawings are instruments of service and as such shall remain property of the designer

RESIDENCE FOR:

Detail Sheet

DATE	REV	DATE	REV

LOT
SUB.
DATE
SCALE

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