HAZEL

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STREET ADDRESS		APT. NO.
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1.1	SS-1	SPEC. SHEET						
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4	A-1	ELEVATIONS						
7	A-3	FOUNDATIONS						
8	A-3C	CONCRETE SLAB CONTROL JOINTS						
9	A-4	FOUNDATION HOLD DOWNS						
10	A-5	PLUMBING						
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	ET-1D	EXTERIOR TRIM DETAILS						
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	SEP-1	STANDARD ENERGY PACKAGE DETAILS						
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	WS-1C	WALL SECTION DETAILS						

FOOTPRINT	
BASE HOUSE:	
WIDTH:	40'-0"
DEPTH:	41'-0"
MAXIMUM:	
WIDTH:	40'-0"
DEPTH:	41'-0"

NVR, Inc.
5285 Westview Drive,
Suite 100
Frederick, MD 21703

DAVID MENTZER ZACHARY NORTH CAROLINA NO. 46063 REGISTERED ARCHITECT

AUGUST 7, 2023

FIRST FLOOR SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	1121 SF
	1121 SF

SECOND FLOOR SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
2ND FLOOR (BASE SF)	1420 SF
	1420 SF

GARAGE SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
TWO CAR GARAGE	400 SF
	400 SF

TOTAL FINISHED SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	1121 SF
2ND FLOOR (BASE SF)	1420 SF
	2541 SF

SET NO. – VERSION: HZL00 - 01
SHEET NO.: CS-1
PAGE NO.:

RELEASE NO. ----

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GENERAL

1. These plans and specifications are the sole property of NVR. Any unauthorized use of these plans without the written consent of NVR is prohibited.
2. These plans are subjected to modification as necessary to meet code requirements or to facilitate mechanical/plumbing installations or to incorporate design improvements.
3. These plans are not to be scaled for construction purposes. Dimension lines and notes supersede all scale references.
4. Single Family Attached/Detached - Automatic residential fire sprinkler systems shall be installed in accordance with **NCRBC P2904** or **NFPA 13D** where required.
5. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes or engineering design in accordance with **Section 301.1.3**.

CODE ANALYSIS

1. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes including, but not limited to:

   NCRC 2018, NCMC 2018, NCPC 2018, NCFGC 2018, NEC 2020 w/ NC Amendments, NCEC 2018, NCFPC 2018

2. Constr. Type: V-B
3. Max Stories: 3

ENERGY AND MECHANICAL

1. Insulation requirements per 2018 NCRC Chapter 11, Energy Efficiency, or Chapter 4 of the 2018 North Carolina Energy Conservation Code (NCECC), or Chapter 4 of the 2015 International Energy Conversation Code (IECC), Residential Energy Efficiency by the prescriptive method. See NVR "Standard Energy Package" for field procedures and details.

   R-values shown below are the minimum used.

CLIMATE ZONE	FENESTRATION U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	FRAME WALL R-VALUE 2x4 / 2x6	FLOOR R-VALUE	BASEMENT WALL R-VALUE UNFIN. / FIN.	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE
3	0.35	0.30	38	15 / 19	19	5 / 15	NA	5 / 15
4	0.35	0.30	38	15 / 19	19	10 / 15	10	10 / 15

2. All HVAC equipment is sized based on ACCA Manual J calculations. Ductwork is sized using ACCA Manual D. Minimum efficiencies of equipment are as listed below. Upgrades for improved energy performance may be installed.
   - Air conditioner - 14 SEER
   - Gas furnace - 92% / 96%
   - Heat Pump - 8.2 HSPF
3. Winter interior design temperatures shall be 70°F and summer interior design temperatures shall be 75°F. Exterior design temperatures vary based on geographic location and are listed on the Manual J calculations.
4. Roof ventilation calculations are based on the following specifications:

   Ridge vent: Minimum 18 sq. in. of vent per linear foot
   Soffit vent: Minimum 9.9 sq. in. of vent per linear foot
   Roof jack (box vent): Minimum 45 sq. in. of vent per unit

5. See NVR "Standard Energy Package" for field procedures and details.

DESIGN LOADS

Table of Loads for House Structure, Per **Table 301.5**

Floor Living Areas	- 40# P.S.F. (Live)	
	- 10# P.S.F. (Dead)	unless noted otherwise by calculations
Floor Sleeping Areas	- 30# P.S.F. (Live)	unless noted otherwise by calculations
	- 10# P.S.F. (Dead)	unless noted otherwise by calculations
Garage Floors	- 50# P.S.F. (Live)	
	- 50# P.S.F. (Dead)	
Roof Areas - Top Chord	- 20# P.S.F. (Live)	
	- 10# P.S.F. (Dead)	
- Bottom Chord	- 10# P.S.F. (Live)	(Attics without storage)
	- 20# P.S.F. (Live)	(Attics with limited storage)
	- 10# P.S.F. (Dead)	
Habitable Attics	- 30# P.S.F. (Live)	
Trusses	- Areas up to **130 mph** ultimate wind speed per **Table R301.2(4)**	
	- Exposure category 'B'	
Walls	- Areas up to **130 mph** ultimate wind speed per **Table R301.2(4)**	

Vult	115 mph	130 mph
Vasd	89 mph	101 mph

Note: Linear interpolation between contour lines permitted.

Stairs	- 40# P.S.F. (Live)	
	- 10# P.S.F. (Dead)	

Allowable deflection of structural members per IRC **Table R301.7**

Design Criteria

Design Codes:
1. National Design specification for Wood Construction by National Forest Products Association.
2. Specification for the Design Fabrication and Erection of Structural Steel for Buildings by American Institute of Steel Construction.

Materials:

Headers*	Southern Pine (KD-19), No. 1 Grade
Studs	Spruce-Pine-Fir, Stud Grade
Jacks	Spruce-Pine-Fir, Stud Grade
Beams**	Southern Pine (KD-19), No. 1 Grade
Joists	2x10 Hem-Fir (KD-19), No. 2 Grade or better (NCLIB & WWPA)
	2x8 Southern Pine (KD-19), No. 1 Grade or better
	2x10 Spruce-Pine-Fir (KD-19), No. 2 Grade or better (NLGA)
LVL	1.9E Minimum

* **Where required, Laminated Veneer Lumber may be used per Engineering**
** **Structural Steel - A.S.T.M. A36**

FOUNDATIONS

1. All plain and reinforced concrete shall comply with requirements in **ACI 318.**
2. Concrete footings shall be poured a maximum 5" slump, 5 bag mix, and 2,500 psi minimum strength per **Table R402.2.2**. Concrete walls shall be poured a maximum 5" slump, 5 1/2-bag mix, and 3,000 psi minimum strength per **Foundation Wall Design** table below. Special soil and or wall height conditions may require a higher psi mix.
3. Walls and footings designed as unreinforced unless otherwise specified on foundation plans or details. Special soil and/or site conditions may require the addition of reinforcing.
4. Footing frost depth to be no less than 12" per **R403.1.4** and **Table R301.2(1)**.
5. Minimum Soil Bearing Capacity shall be 2,000 PSF per **Table R401.4.1.**
6. Slab requirements:

   Interior slabs on grade (excluding garage slabs) to be minimum 3-1/2" concrete (may be represented on plans as nominal 4") over 4" sub-base, with vapor barrier (6-mil polyethylene) as required per **Section 506** and a minimum 2,500 PSI per **Table R402.2.**

   Non-structural garage slabs shall be nominal 3-1/2" thick and shall be installed on compacted / undisturbed soil per **Table R402.2**. Slabs shall be 3,500 PSI air-entrained concrete.

   Structural garage slabs utilizing grade beams shall be nominal 4" thick. Slabs shall be 3,500 PSI air-entrained concrete.

   Porch slab and exterior concrete work shall be nominal 4" minimum 3,500 PSI air-entrained concrete with 6x6 W1.4xW1.4 mesh or equivalent fiber mesh reinforcement.

7. Unconditioned crawl spaces shall have a minimum net area of ventilation not less than 1 square foot for each 150 square feet of area, unless the ground surface is covered by a Class 1 vapor retarder, in which case the minimum net area of ventilation shall not be less than 1 square foot for each 1,500 square feet of area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of the building, per **R408.1.2.**
8. Foundation drains shall be located per local codes and according to local site conditions. Drain discharge by gravity or mechanical means to conform with approved site plan and installed per **Section R405.1.**
9. The top course of block of foundation walls shall be semi-solid block or open cores of hollow block shall be filled with mortar.
10. Block piers to be solid block or mortar-filled hollow block.
11. A poured concrete foundation wall designed to withstand an equivalent fluid weight of 30# per cubic ft. may be substituted where masonry units (block) are shown on plans.
12. Concrete and masonry foundation walls shall be dampproofed with min. 3/8" portland cement parging from footing to top of finished grade. The parging shall be covered with a coat of approved bituminous material applied at the recommended rate per **R406.1.**
13. Where required, concrete and masonry foundation walls shall be waterproofed with an approved membrane extending from footing to top of finished grade. The joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane. Waterproofing to be in accordance with **R406.2**.
14. Reserved for future use.
15. Foundation framing anchors shall be 1/2"x18" anchor bolts with 7" minimum embedment or Simpson Strong-Tie MASA / USP FA3 (16 gauge steel, galvanized) or equivalent set in concrete or grouted cell, 1'-0" maximum from corners and spaced at a maximum of 6' o.c. and in the middle third of the width of the plate. For walls connecting offset braced wall panels, those 24" in length or shorter shall have min. (1) anchor strap and those 12" or shorter can be installed without anchor straps. Townhouses in seismic design category "C" shall require a .224" x 3" x 3" plate washer per **R403.1.6.1** and maximum anchor bolt spacing for buildings over two stories shall be 4'.
16. Steel columns and bases shall be given a shop coating of rust-inhibitive paint or equivalent to provide corrosion resistance per **R407.2.**
17. For masonry veneers:

    Per **R703.8.4.1** - Corrugated sheet metal veneer ties shall be a minimum of No. 22 U.S. gauge by 7/8 inch. Each tie shall be spaced not more than 32" o.c. horizontally and 24" o.c. vertically and shall support not more than 2.67 square feet of wall area. For townhouses in Seismic Design Category C and in wind areas of more than 30 pounds per square foot pressure, each tie shall support not more than 2 square feet of wall area.

    Additional metal ties shall be provided around all wall openings greater than 16 inches (406 mm) in either dimension. Metal ties around the perimeter of openings shall be spaced not more than 3 feet (9144 mm) on center and placed within 12 inches (305 mm) of the wall opening.

    Per **R703.2** - One layer of No. 15 asphalt felt or other approved water-resistive barrier shall be provided behind brick.

    Per **Table R703.8.4** - Provide minimum 1-inch air space between brick veneer and sheathing.

    Per **R703.8.6** - Provide minimum 3/16" diameter weep holes at 33" on center maximum, located immediately above the flashing.

    Per **R703.8.5** - When veneer of brick, clay tile, concrete, or natural or artificial stone are used, 6 mil plastic flashing shall be attached to the sheathing wherever necessary to prevent moisture penetration behind the veneer. See NVR Flashing Details.

18. Reserved for future use.
19. Foundation wall strip footing thickness to be 8" (or 6" with a single story) unless otherwise noted as specified by engineering. Strip footing projections beyond the face of the foundation wall shall not to exceed the footing thickness. Bump out footings, pier pads, and any other footing identified as being greater than 8" in thickness shall not be reduced.
20. Block foundation walls may be substituted for poured foundation walls shown on foundation plans provided all requirements of **Section R404** are met.
21. Termite treatment provided below slabs or to framing members per **R318.1**

FOUNDATION WALL DESIGN(c)

NCRBC PRESCRIPTIVE CODE OR ENGINEERED DESIGN PER ACI 332

WALL HEIGHT	WALL THICKNESS	LATERAL SOIL LOAD (a)	UNBALANCED FILL	VERTICAL REINFORCING (b)	HORIZONTAL REINFORCING (b)
8'-0"	8"	45	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED (a)	3- #4 BARS (d,e)
		60	6'-0"	NOT REQUIRED (a)	3- #4 BARS (d,e)
			7'-0"	#4 @ 22" O.C. (a)	3- #4 BARS (d,e)
	10"	45	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED	2- #4 BARS (f)
		60	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED	2- #4 BARS (f)
9'-0"	8"	45	7'-0"	NOT REQUIRED (d)	4- #4 BARS (d,e)
			8'-0"	#4 @ 19" O.C. (d)	4- #4 BARS (d,e)
		60	7'-0"	#4 @ 19" O.C. (d)	4- #4 BARS (d,e)
			8'-0"	#4 @ 15" O.C. (d)	4- #4 BARS (d,e)
	10"	45	7'-0"	NOT REQUIRED	3- #4 BARS (g)
			8'-0"	NOT REQUIRED (d)	4- #4 BARS (d,e)
		60	7'-0"	NOT REQUIRED (d)	4- #4 BARS (d,e)
			8'-0"	#4 @ 19" O.C. (d)	4- #4 BARS (d,e)

NOTE: BACKFILLING OF THE FOUNDATION SHALL NOT TAKE PLACE BEFORE THE BASEMENT SLAB IS IN PLACE AND THE FLOOR FRAMING IS ERECTED OR UNLESS WALLS ARE ADEQUATELY BRACED.

a. SOIL CLASSES GM, GC, SM, SM-SC AND ML - 45 PSF
   SOIL CLASSES SC, MH, ML-CL AND CL - 60 PSF
b. SPACING SHOWN IS BASED UPON Fy = 60,000 PSI
   STEEL FOR Fy = 40,000 PSI STEEL, REDUCE SPACING BY 0.67
c. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI
d. ENGINEERED DESIGN PER ACI 332-14, REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION
e. FOR ALL WALL HEIGHTS, ONE HORIZONTAL BAR SHALL BE LOCATED WITHIN THE TOP 24", ONE IN THE BOTTOM 24" WITH THE REMAINING BARS EQUALLY SPACED. MAINTAIN 2" OF CONCRETE COVER BETWEEN INSIDE FACE OF WALL AND FACE OF HORIZONTAL BARS.
f. ONE BAR WITHIN 12" OF TOP AND AT MID-HEIGHT OF WALL PER TABLE R404.1.2(1).
g. ONE BAR WITHIN 12" OF TOP AND ONE EACH AT THIRD POINT OF WALL HEIGHT PER TABLE 404.1.2(1).

PLANS

1. Habitable attics and sleeping rooms shall have a window or door as a second means of egress that shall be minimum 5.7 sq. ft. openable area (5.0 sq. ft. if at grade level) with maximum sill height 44" above finish floor (min. hgt. 24", min. width 20") per **R310.1.**
2. All emergency escape and rescue openings shall have a minimum net clear openable area of 4 sq ft. The minimum net clear opening height shall be 22" and a minimum net clear opening width of 20". Emergency escape and rescue openings must have a minimum total glazing area of not less than 5 sq ft in the case of a ground window and not less than 5.7 sq ft in the case of an upper story window per **R310.2.1.** Window wells where required, shall be installed per **R310.2.3** with a minimum of 9 sq ft and a minimum horizontal projection and width of 36". Wells with a greater depth of 44" shall have permanently affixed ladder or steps per **R310.2.3.1.**
3. Clear opening heights for exterior doors to be 6'-6" minimum per **R311.2.** All interior doors providing egress from habitable rooms shall have nominal minimum dimensions of 2'-6" by 6'-8" per **R311.6.1.** Habitable rooms with double doors less than 5'-0" in total width (less than 2'-6" per door slab) shall have a total opening width of at least 2'-6" with no slide bolts or locking devices installed on either door.
4. Sliding glass drs/patio drs/wdws must be safety glazed per **R308.4.**
5. Interior stairway shall have minimum head room of 6'-8" per **311.7.2** and minimum tread depth of 9" and maximum riser height of 8 1/4". Handrails are required for stairs with four or more risers and shall have minimum height of 34" and maximum height of 38" above treads and landings. Handrail to have maximum 4 1/2" projection into width of stair per **Section R311.7.** Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2" gypsum board per **R302.7.**
6. Guard rails to have minimum height of 36" and shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches in diameter per **R312.**
7. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter per **R312.1.3.**
8. Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a a stairway in accordance with **Section R311.7** (see item #5 above) or a ramp in accordance with **Section R311.8.**
9. Handrails shall be installed on exterior stairs having (4) or more risers per **R311.7.8.** Guards shall be installed at exterior porches / decks that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.
10. All flashing used (including at windows, doors, and with stone or masonry veneer) shall be corrosion-resistive per **R703.4.** See NVR Flashing Details.
11. Wood framed bearing walls shall 2 x 6 at 24" o.c. maximum or 2 x 4 at 16" o.c. maximum per **Table R602.3(3)** and **Table R602.3(5)** unless otherwise noted on plans.
12. All exterior sheathing to be structural sheathing designed in accordance with **R602.10.**
13. An approved water-resistive barrier shall be applied over sheathing of exterior walls per **Section R703.2.**
14. Interior sheathing shall be 1/2" gypsum wall board unless otherwise noted. Exceptions may include, but are not limited to, special requirements for wall bracing and fire separation.
15. Screw fastening is typical for gypsum installation and nailing will only be permitted at the perimeter of the board.
    - All screws shall be corrosion-resistant Type W 1-1/4" drywall screws.

SCREW FASTENING SCHEDULE			
	WITH ADHESIVE		
Framing Spacing	Ceilings	Load-brg. walls	Non-load-brg. walls
16	16	24	24
24	16	16	24
	WITHOUT ADHESIVE		
Framing Spacing	Ceilings	Load-brg. walls	Non-load-brg. walls
16	12	16	16
24	12	12	12

    - For 1/2" wallboard, nails shall be 1-1/4" long, 1/4" head and .098 diameter shanks with annular ring or acceptable equivalent and comply with ASTM C514.
    - For 5/8" wallboard, nails shall be 1-3/8" long, 1/4" head and .098 diameter shanks.
16. Garages shall be completely separated from the residence and attic area by not less than 1/2" gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" type X gyp. board. Where a structure is supporting a floor-ceiling assembly due to living space above the garage, the structure shall also be protected by not less than 1/2" gypsum board per **Section R302.6.**. Openings and penetrations through the separation shall be protected by sealing the area around the penetration per **Section R302.5.** The garage door shall be a 20-minute fire-rated door and be equipped with a self-closing device installed per **Section R302.5.1.**
17. Asphalt shingles shall be installed per **section R905.2.** For roof slopes of 2:12 through 4:12, in lieu of two layers of underlayment, a self-adhering polymer-modified bitumen underlayment shall be used per **section R905.1.1 Exception #1.**
18. Attic spaces shall be ventilated w/ ridge and soffit vents unless otherwise noted. Venting provided per **R806.2.**
19. Fireblocking shall be installed between ceiling and floor openings per **R302.11.** Draftstopping to be installed in accordance with **R302.12.**
20. Water closet, lavatory or bidet shall not be set closer than 15 inches from its center to any side wall, partition or vanity or closet than 30 inches center-to center- between adjacent fixtures. There shall be a clearance of not less than 21 inches in front of the water closet, lavatory or bidet to any wall, fixture or door per **P2705.1**
21. Heating and cooling equipment installation shall be in accordance with **IRC Chapter 14** and the **International Mechanical Code.**
22. Mechanical fireplaces shall be installed per **Section R1004** and **1005.**
23. Single family attached structures to have 2-hour dwelling unit separation wall continuous to roof deck. Roofing material to be minimum class "C" over approved fire retardant wood decking extending 4' each side of dwelling unit separation wall per **R302.2** and **R302.3.**
24. Untreated wood shall be minimum 8" above finish grade per **R317.1 Item #2.**
25. Bottom plates on slabs and any wood in contact w/ concrete or masonry to be pressure treated material per Section **R317.**
26. Exterior egress swing doors shall open onto a landing not more than 8 1/4" below the top of the threshold when door swings in and 1 1/2" below the top of the threshold when the door swings out. The landing shall extend a minimum of 36" in the direction of travel and be at least the width of the doorway served per **R311.3.**
27. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screen, louvers, or grills having a min. opening size of 1/4" and maximum of 1/2" in any dimension per **R303.6.**
28. Fasteners and connectors for pressure preservative-treated wood shall be hot-dipped galvanized steel.
29. Windows that have an operable opening more than 72" above finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24" above the finished floor of the room in which the window is located. Glazing between the floor and 24" shall be fixed or have openings through which a 4" dia. sphere cannot pass per **Section R312.2.**
30. The final grade shall fall a minimum of 6 inches within the first 10 feet of the foundation per **R401.3.**
31. **One- and two-family dwelling construction (R302.1.1):**
    Vinyl or aluminum soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant wood sheathing or 5/8-inch wood sheathing or 5/8-inch gypsum board. Venting requirements shall apply to both soffit and underlayment and shall be per **Section R806.** Where the property line is 10 feet or more from the building face, the provisions of this code section shall not apply.
    Townhouse construction (R302.2.5):
    Projections extending into the fire-separation distance shall have not less than 1-hour fire-resistive construction on the underside. Vinyl or aluminum soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant treated wood, 3/4-inch wood sheathing or 5/8-inch gypsum board. Venting requirements shall apply to both soffit and underlayment. Vents shall be nominal 2-inch continuous or equivalent intermittent and shall not exceed the minimum net free air requirements of **Section R806.2** by more than 50%. Vents in soffit are not allowed within 4 feet of fire walls or property lines per **R302.2.5 and R302.2.6.**
32. 1-hour fire-rated construction required on projections within 2' to 3' of lot line per **R302.1.** No projections allowed within 2' of property line.

    1-hour fire-rated construction required on townhouse eaves within 3' of the property line.
    Note: Single Family Detached product will NOT be built within 3' of the property line.
33. Wall bracing is designed in compliance with **Section R602.10.** When wall bracing is beyond the criteria for a prescriptive approach, the structure is analyzed utilizing engineering in compliance with the North Carolina Building Code (NCBC). Refer to house-specific wall bracing detail sheets and wall bracing standard details. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Category C.
34. Minimum floor sheathing shall be 5/8" tongue & groove decking underlayment grade plugged and sanded, exterior glue, glued and nailed on joists to meet. "American Plywood Association" approved glued floor system, unless otherwise specified.

ELECTRICAL

1. Ground-fault and arc-fault circuit interrupter protection is provided per **NFPA 70** (National Electric Code).
2. Electric panel box installation to be in accordance with **NFPA 70, Article 408 Section III.** Location may vary by design.
3. Approved smoke detectors shall be installed in each sleeping room, outside each separate sleeping area, in the immediate vicinity of the bedrooms, and on each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. Where more than one smoke detector is required, the devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. All smoke detectors shall receive their primary power from the building wiring and be equipped with a battery backup.
4. Unless listed for installation in such locations, smoke detectors shall be installed at least 10 feet from a cooking appliance, at least 3 feet from the door to a bathroom containing a tub or shower, at least 3 feet from forced air supply registers, and at least 3 feet from the tip of a ceiling fan blade. In sleeping rooms, smoke detectors should be located in the vicinity of the room entrance. They shall be installed at the highest portion of the ceiling (including tray or coffered ceilings) or within 12 inches vertically from the highest point in rooms with sloped ceilings.
5. Interior stairs shall be provided with an artificial light source in the vicinity of each landing or directly over each stair section and capable of illuminating treads and landings to a level not less than 1fc measured at the center of the tread or landing per **R303.7.**
6. Outlets within 6' of a sink must be GFI protected.
7. An approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. **R315.3.**
8. Outlets installed in laundry areas must be GFI protected.

DAVID MEYZER ZACHARY NORTH CAROLINA REGISTERED ARCHITECT NO. 26063

AUGUST 7, 2023

REV. NO.	DATE	REMARKS
1	1/8/24	MBT - CODE UPDATES FOR 2018 NCRBC
2	3/1/24	MBT - UPDATED ENGERY NOTES
3	12/16/22	CAP - REVISE NOTE FOR 2X4 OR 2X6 EXTERIOR WALLS

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SET NO.
VERSION
DRAWN BY
DATE:
OPTION

MODEL
NCRC 2018 SPEC SHEET

DRAWING TITLE
SINGLE FAMILY ATTACHED
SINGLE FAMILY DETACHED

OPTION DESCRIPTION
No Slab Building Code - Residential Code 2018

SHEET NO.
SS-1

1.1

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NVR

Version 4.0
(Last Revised 04/26/19)

ROOF VENTILATION CALCULATIONS

HOUSE NAME	HAZEL
HOUSE VERSION	HZL00_00
PRODUCT LINE	RYANHOMES
VENTILATION VALUES	
SOFFIT:	9.9 sq in of vent per lf
RIDGE:	18 sq in of vent per lf
BOX / GABLE VENT:	45 sq in of vent per unit

USER GUIDE						
	YES	*(any)*		*(any)*	**VENT OK**	No action req'd.
	NO	YES		OK	**VENT OK**	No action req'd.
	NO	YES		LOW	**FAIL**	Increase ridge
	NO	NO		*(any)*	**FAIL**	Increase total vent

ELEVATION "F" & "K"

Location / Options	Area (A) *(sq in)*	Required: A/150 *(sq in)*	Required: A/300 *(sq in)*	Soffit *(lf)*	Soffit Vent *(sq in)*	Ridge *(lf)*	Ridge Vent *(sq in)*	Upper Box / Gable Vent *(qty)*	Lower Box Vent *(qty)*	TOTAL *(sq in)*	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40%-50% OK?	Notes
BASE HOUSE W/ ELE,ELK	204516	1363.44	681.72	67	663.30	16	288.00			951.30	NO	YES	42.25%	OK	

ELEVATION "L"

Location / Options	Area (A) *(sq in)*	Required: A/150 *(sq in)*	Required: A/300 *(sq in)*	Soffit *(lf)*	Soffit Vent *(sq in)*	Ridge *(lf)*	Ridge Vent *(sq in)*	Upper Box / Gable Vent *(qty)*	Lower Box Vent *(qty)*	TOTAL *(sq in)*	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40%-50% OK?	Notes
BASE HOUSE W/ ELL	204516	1363.44	681.72	53	524.70	16	288.00			812.70	NO	YES	42.25%	OK	

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Version 2.0
(Last Revised 04/26/19)

HOUSE VOLUME CALCULATIONS

HOUSE NAME	HAZEL
HOUSE VERSION	HZL00_00
PRODUCT LINE	RYANHOMES

Note: *The volume of the structure has been computed in acordance with "Title 5. of the Community Affairs, Chapter 23. Uniform Construction Code, Subchapter 2. Administration and enforcement: Process." (5;23-2.28. Volume computation)*

ALL ELEVATIONS

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house (main roof)	1360.00	21.80	***29648***
Main section of the house (gable)	59.00	20.00	***1180***
Garage bump out from main house	101.00	10.70	***1081***
Porch on front of house	29.00	9.00	***261***
		Total House Volume	**32170**

Additional areas of volume to be added to total house volume as needed

Location / Area of house / option	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
BASEMENT "FBA"	1133.00	8.60	***9744***

DAVID MENTZER ZACHARY NORTH CAROLINA NO. 46061 REGISTERED ARCHITECT

AUGUST 7, 2023

DIV--COMM--LOT--UNIT ---

COMM--LOT ---- - ----

STREET ADDRESS ---- ----

APT. NO. ----

CITY ----

STATE ----

ZIP ----

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SHEET NO. CA-1

MODEL HAZEL

DRAWING TITLE CALCULATIONS
VOLUME CALCULATIONS

OPTION DESCRIPTION

SET NO. HZL00
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

2

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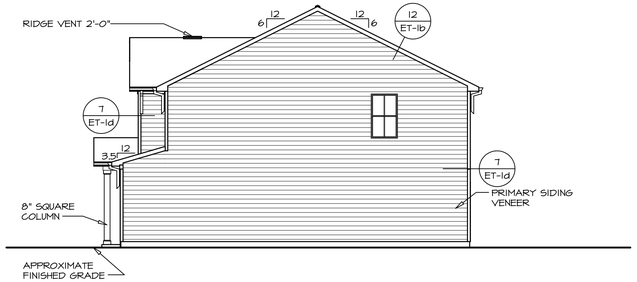
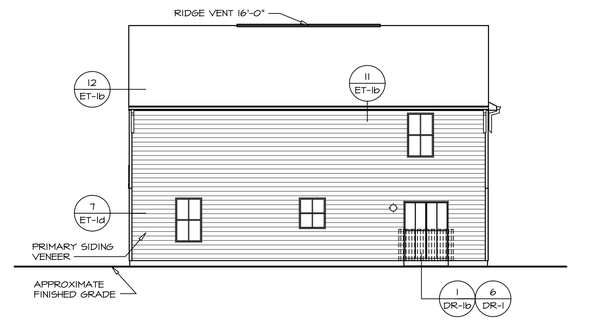


2 A-1 **RIGHT ELEVATION**

SCALE: 1/8" = 1'-0"

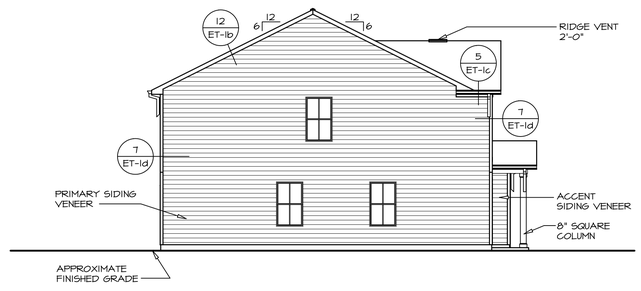
1 A-1 **FRONT ELEVATION "K"**

SCALE: 1/4" = 1'-0"



3 A-1 **REAR ELEVATION**

SCALE: 1/8" = 1'-0"



4 A-1 **LEFT ELEVATION**

SCALE: 1/8" = 1'-0"

NOTE:
GARAGE DOOR GLASS DESIGN MAY VARY BY MANUFACTURER

NOTE:
GRILLES IN GLAZING OF ALL EXTERIOR DOORS AND SIDELIGHTS TO BE OMITTED WITH BRONZE WINDOWS

DAVID MEYERZACHARY NO. 46063 REGISTERED ARCHITECT NORTH CAROLINA

AUGUST 7, 2023

DIV-COMM-LOT-UNIT ----
COMM-LOT ---- - ----
STREET ADDRESS ---- ----
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DATE
OPTION

MODEL HAZEL
DRAWING TITLE ELEVATIONS
SHEET NO. A-1

OPTION DESCRIPTION

4

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FOOTING/THICKENED SLAB SCHEDULE					
IDENTIFIER	LENGTH	WIDTH	HEIGHT	ENG. NUM.	REMARKS
F001	2'-3"	2'-3"	1'-0"	50001	
F002	2'-6"	2'-6"	1'-0"	1029	
F010	3'-6"	3'-6"	1'-6"	1029	

FOUNDATION DIAGONALS			
A		B	
A	0"	A	40'-0 5/8"
B	40'-0 5/8"	B	0"
C	54'-5 7/8"	C	34'-0"
D	37'-0"	D	55'-10 3/8"
E	19'-9 11/16"	E	20'-3 1/2"

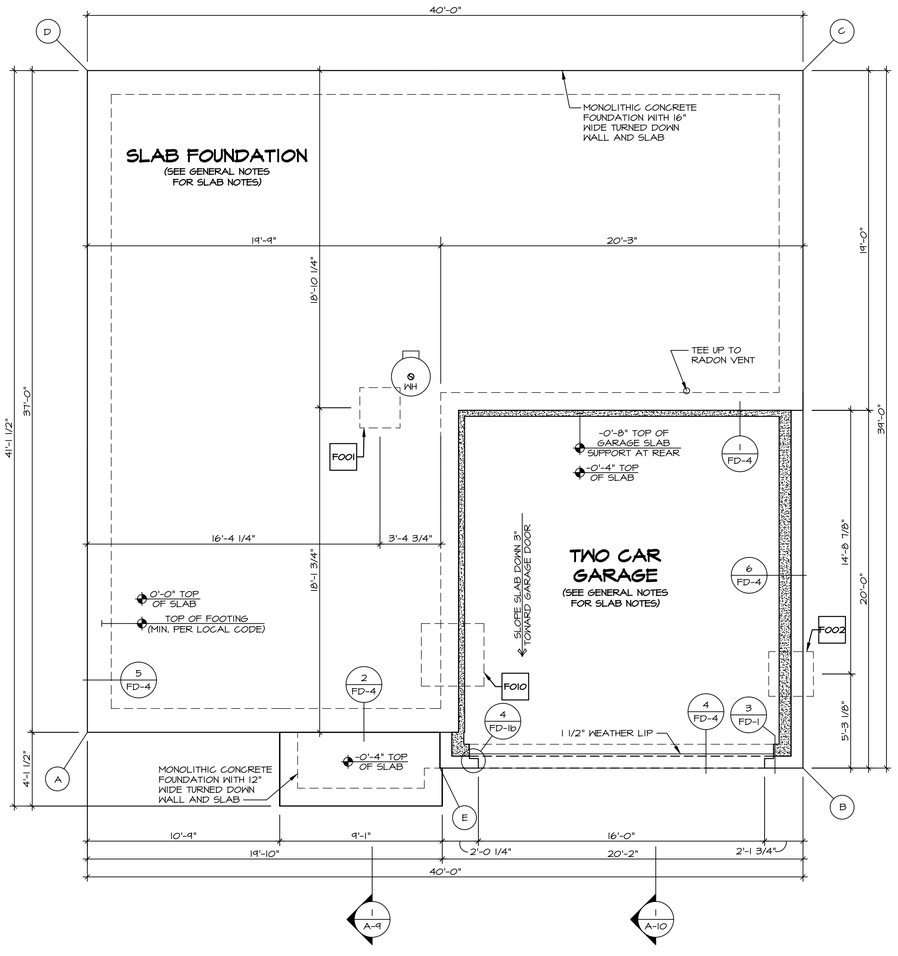
FOUNDATION NOTES - SLAB

1. SEE STANDARD DETAIL CATEGORY "FD" SHEET(S).
   1.1. CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
2. FOUNDATION UNDER GARAGE:
   2.1. UNEXCAVATED WITH CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES) OR
   2.2. STRUCTURAL CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
3. SEE FOUNDATION HOLD DOWN SHEET FOR CONNECTION INFORMATION.
4. SLAB LEDGE LOCATIONS VARY W/ GRADE BEAM(S) ORIENTATION, SEE GB-1 FOR DETAILS.
5. THE DIRECTION OF THE ARROW IS THE DIRECTION OF REBAR, AS REQUIRED.
6. ALL FOOTINGS ARE PLAIN, NON-REINFORCED CONCRETE UNLESS NOTES OTHERWISE.
7. REFER TO WS-1 FOR FOOTER SLEEVE INFORMATION.

LEGEND

- BEARING WALL
- NON BEARING WALL
- ⊗ INDICATES BEARING FROM POINT-LOAD ABOVE
- JL_ JACKS
- B_ BEAM/HEADER
- T_ / F_ FOOTING/THICKENED SLAB
- C_ STEEL COLUMN
- X TRUSS TIE DOWN
- X PORTAL FRAME
- X JOIST/TRUSS
- L___ LVL
- X ENGINEERING PAGE NUMBER

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS



FOUNDATION PLAN

1 / A-3

SCALE: 1/4" = 1'-0"

DAVID MEYERZER NO. 46063 REGISTERED ARCHITECT ZACHARY NORTH CAROLINA

AUGUST 7, 2023

DIV-COMM-LOT-UNIT ----
COMM-LOT ---- -- ----
STREET ADDRESS ---- ----
APT. NO. ----
CITY ----
STATE ----
ZIP ----

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SET NO. HZL00
VERSION 01
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DATE

OPTION
FSA

SHEET NO. A-3

MODEL HAZEL
DRAWING TITLE FOUNDATIONS

OPTION DESCRIPTION SLAB FOUNDATION

7

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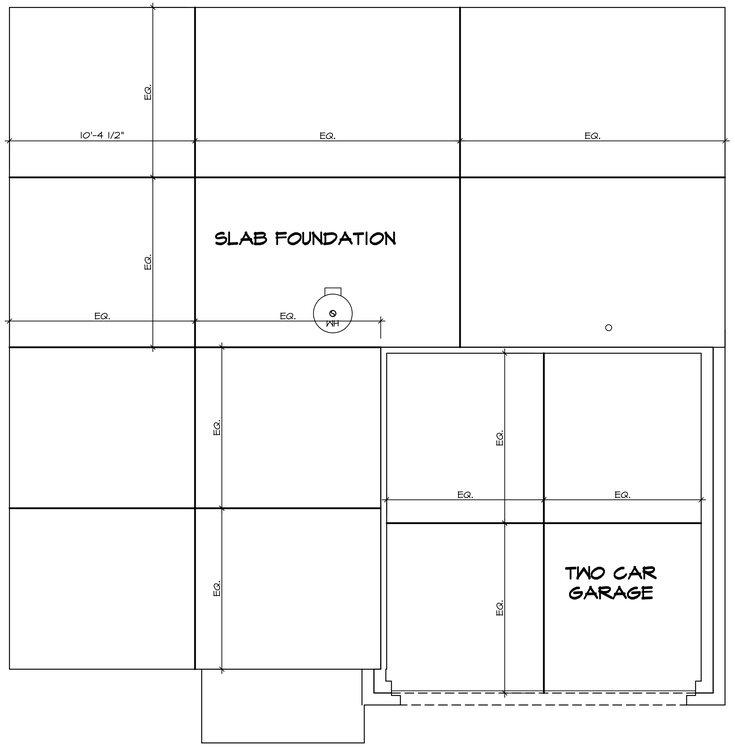
NOTES:

1. THE STARTING POINT FOR LAYING OUT JOINTS SHOULD INCLUDE A FRONT-TO-BACK LINE AND A SIDE-TO-SIDE LINE (A "T") OFF EACH COLUMN AND MAJOR FOUNDATION CORNER.
2. IF THAT PUTS MULTIPLE LINES TOO CLOSE TOGETHER (<10' APART), CONSIDER GROUPING NEARBY LINES WHILE ENSURING EACH COLUMN AND HOUSE CORNER HAS AT LEAST ONE JOINT (FRONT-TO-BACK OR SIDE-TO-SIDE) EXTENDING FROM IT.
3. JOINT SPACING NOT TO EXCEED 15'
4. CONTROL JOINT LOCATIONS AND QUANTITY MAY VARY DEPENDING ON ADDITIONAL CONCRETE REINFORCEMENT (INCLUDING BUT NOT LIMITED TO WELDED WIRE MESH OR FIBER MESH).
5. THIS SHEET DEPICTS GENERIC GUIDELINES AND EXAMPLES, SO EXACT LAYOUT MAY DIFFER FROM WHAT'S SHOWN HERE.
6. CONTROL JOINTS AT GARAGE SHALL BE "TOOLED" (1/4 DEPTH OF THE SLAB OR 1" MINIMUM) AND INSTALLED TO THE FOLLOWING STANDARDS



1 / A-3c CONCRETE CONTROL JOINTS

SCALE: 1/4" = 1'-0"

DAVID MENTZER ZACHARY NORTH CAROLINA
NO. 46061
REGISTERED ARCHITECT

AUGUST 7, 2023

DIV-COMM-LOT-UNIT: ---

COMM-LOT	APT. NO.
--- - ----	---
STREET ADDRESS	ZIP
--- ---	---
CITY	STATE
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SET NO. HZL00
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

MODEL HAZEL
DRAWING TITLE
CONCRETE SLAB CONTROL JOINTS
CONCRETE CONTROL JOINTS
OPTION DESCRIPTION

SHEET NO. A-3c

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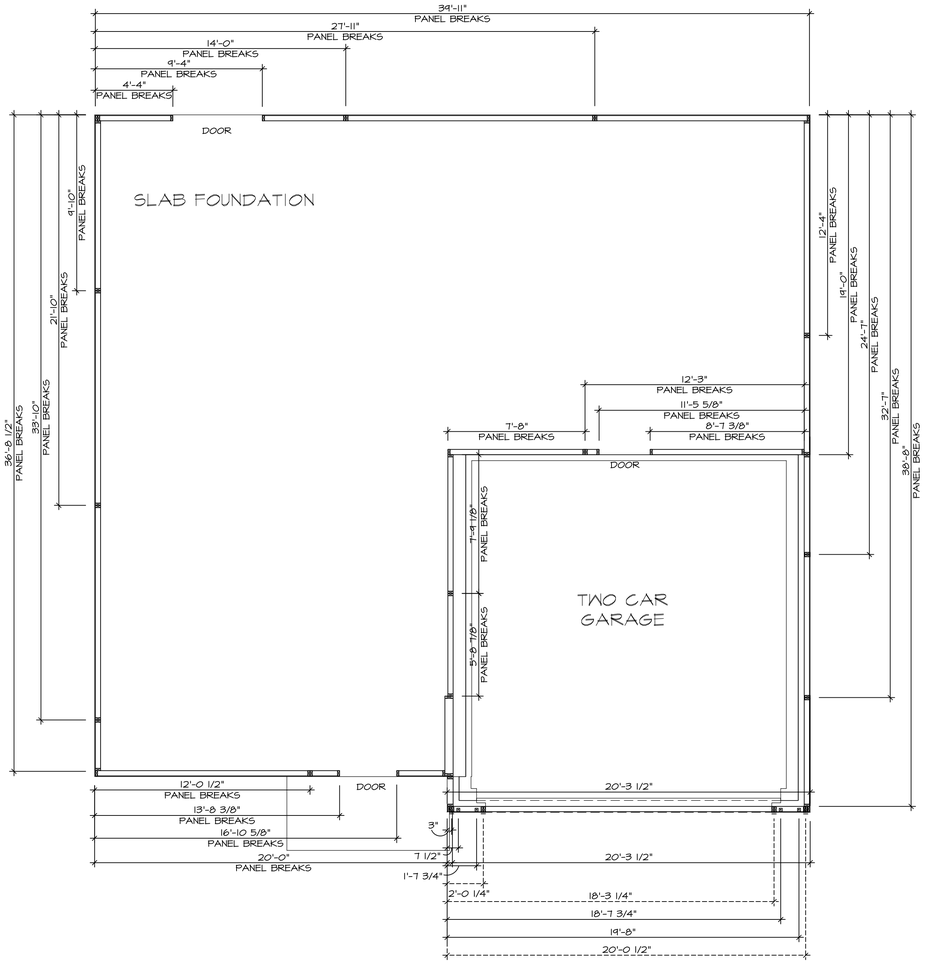

1 / A-4 **FOUNDATION HOLD DOWN DETAIL**

SCALE: 1/4" = 1'-0"

HOLD DOWN NOTES

REFER TO DETAIL (9/FD-1) FOR HOLD DOWN OFFSET DIMENSIONS.
REFER TO DETAIL (12/FD-1) FOR HOLD DOWNS ON CMU BLOCK.

≤ 12"	1. ALL PANELS GREATER THAN 24" SHALL HAVE AN ANCHOR WITHIN 12" OF THE PANEL BREAKS / ENDS. (SEE DETAIL SHEET FC-1 FOR MORE INFORMATION ON ANCHOR DETAILS)
STRAP	1. STRAP, a. ON FOUNDATION USE (STHD14) b. ON FLOOR SYSTEM USE (STHD14RJ) 2. ALL OTHER HOLD DOWN SEE DETAIL (HB-1, 2, 4) FOR MORE INFORMATION. 3. STRAP LOCATION ON PLANS SHOWN BY DASHED DIMENSION TO CENTER OF STUDS OR
BOLT	1. 5/8"Ø THREADED ROD 2. ALL OTHER HOLD DOWN SEE DETAIL (HB-1, 2, 4) FOR MORE INFORMATION. 3. BOLT LOCATION ON PLANS SHOWN BY SOLID DIMENSION TO CENTER OF BOLT

DAVID MENTZER ZACHARY
NO. 46061
REGISTERED ARCHITECT
NORTH CAROLINA

AUGUST 7, 2023

DIV--COMM--LOT--UNIT

COMM-LOT	APT. NO.
---- - ----	----
STREET ADDRESS	ZIP
---- ----	----
CITY	STATE
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SET NO. HZL00
VERSION 01
RELEASE NO. ----
DRAWN BY CMM
DATE:
OPTION

SHEET NO. A-4
MODEL HAZEL
DRAWING TITLE FOUNDATION HOLD DOWNS

OPTION DESCRIPTION

9

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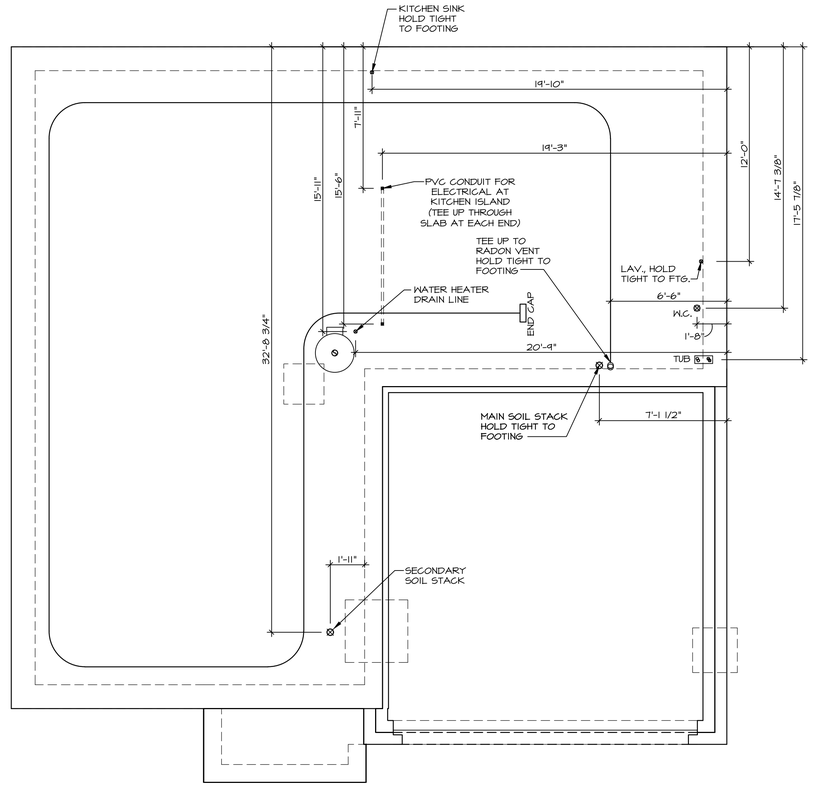
NOTE

RADON REMEDIATION

RADON LOOP:
- (4") PERFORATED HDPE "LOOP"
- MUST BE PLACED IN STONE BED SLIGHTLY HIGHER THAN ANY INTERIOR DRAINTILE
- LOOP TO BE SEPARATE FROM ANY DRAINTILE ELEMENTS
- TO BE CORRUGATED HDPE PIPE
- SCREWS TO BE INSTALLED THROUGH LOOP AT TEE UP INTO STACK

STACK REQUIREMENTS:
- 3" PVC STACK (4" IF BASEMENT IS GREATER THAN 2200 SQFT.)
- NO PART OF STACK IS TO BE HORIZONTAL (45° ELBOWS PERMITTED AS REQUIRED)
- PIPE TO BE PHYSICALLY LABELED IN THE FIELD AS "RADON VENT" OR OTHER JURISDICTIONALLY REQUIRED LANGUAGE (ON EVERY LEVEL OF HOUSE)
- ROOF TERMINATION TO BE IN TOP 1/3 OF ROOF
- SCREEN OR VENT CAP INSTALLED TO KEEP PESTS OUT OF RADON VENT AT ROOF TERMINATION.

INSTALLATION OF RADON STACK AND LOOP TO BE DETERMINED BY DIVISION



1 / A-5 PLUMBING PLAN

SCALE: 1/4" = 1'-0"

DAVID MENTZER ANTOLINA ZACHARY NORTH CARO. NO. 46061 REGISTERED ARCHITECT

AUGUST 7, 2023

DIV--COMM--LOT--UNIT: ---

COMM--LOT: --- - ----

STREET ADDRESS: --- ---

APT. NO.: ---

CITY: ---

STATE: ----

ZIP: ----

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SET NO. HZL00
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

SHEET NO. A-5

MODEL HAZEL
DRAWING TITLE PLUMBING

OPTION DESCRIPTION

10

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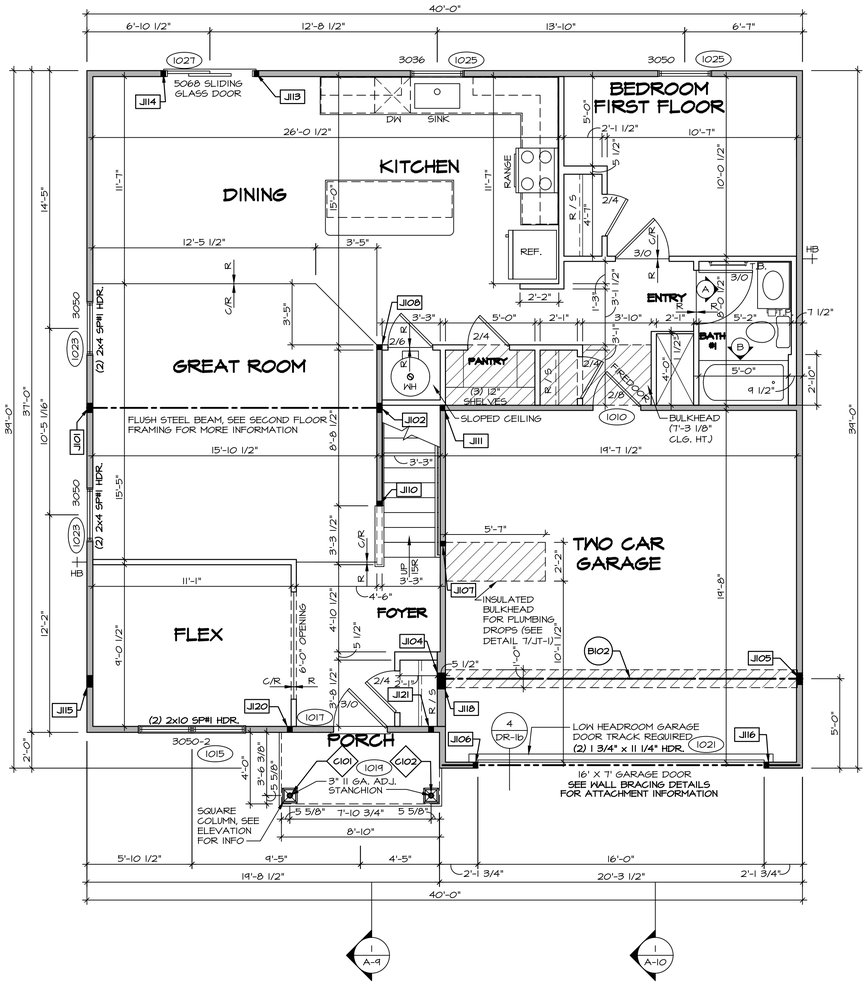
FIRST FLOOR JACK SCHEDULE			
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS
J101	JACK - (4) 2X4 SPFI1	1014	
J102	JACK - (4) 2X4 SPFI1	1014	
J104	JACK - (5) 2X6 SPFI1	1012	
J105	JACK - (5) 2X4 SPFI1	1012	
J106	JACK - (2) 2X4 SPF STUD GRADE	1021	
J107	JACK - (2) 2X4 SPF STUD GRADE	1002	
J108	JACK - (2) 2X4 SPF STUD GRADE	1004	
J110	JACK - (2) 2X4 SPF STUD GRADE	1006	
J111	JACK - (2) 2X4 SPF STUD GRADE	1008	
J113	JACK - (2) 2X4 SPF STUD GRADE	1027	
J114	JACK - (2) 2X4 SPF STUD GRADE	1027	
J115	JACK - (5) 2X4 SPF STUD GRADE	2004	
J116	JACK - (2) 2X4 SPF STUD GRADE	1021	
J118	JACK - (2) 2X6 SPFI1	2004	
J120	JACK - (2) 2X4 SPF STUD GRADE	1019	
J121	JACK - (2) 2X4 SPF STUD GRADE	1019	

FIELD INSTALLED FIRST FLOOR BEAM/HEADER SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
B102	BEAM STEEL - W12X26	20'-3"	1012	2x6 BEAM SILL

STEEL COLUMN SCHEDULE				
IDENTIFIER	STYLE	HEIGHT	ENG. NUM.	REMARKS
C101	STANCHION PORCH - 3 IN DIA 116A ADJ	8'-4 3/8"	1019	
C102	STANCHION PORCH - 3 IN DIA 116A ADJ	8'-4 3/8"	1019	



1 A-7 **FIRST FLOOR PLAN**

SCALE: 1/4" = 1'-0"

LEGEND

- BEARING WALL
- NON BEARING WALL
- ⊗ INDICATES BEARING POINT-LOAD ABOVE
- J_ JACKS
- B_ BEAM/HEADER
- T_ / F_ FOOTING/THICKENED SLAB
- C_ STEEL COLUMN
- TRUSS TIE DOWN
- PORTAL FRAME
- JOIST/TRUSS
- L_ _ LVL
- ENGINEERING PAGE NUMBER

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS

ALL WINDOWS HAVE 7'-0 1/2" HEADER HEIGHT UNLESS OTHERWISE NOTED

FLOOR PLAN NOTES

1. ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
2. ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK AND KING STUD EACH END, UNLESS OTHERWISE NOTED. MULTI-OPENING HEADERS TO HAVE (2) JACKS AT INTERMEDIATE BEARING, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
3. ALL EXTERIOR WALLS TO BE 4" w/ OSB OR 3 1/2" w/ LAMINATED FIBROUS STRUCTURAL SHEATHING, ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
4. HATCHED AREAS INDICATE DROPPED CEILINGS. ALL DROPPED CEILINGS ARE 12" UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DETAIL 8/IT-1B FOR 3/4" FIRE STOPPING AT BULKHEAD / CEILING PANELS
5. SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
6. SEE STANDARD DETAIL CATEGORY "IT" SHEET(S) FOR INTERIOR TRIM DETAILS.
7. SEE ARCHITECTURAL DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
8. ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
9. TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.
10. INTERIOR HEADER HEIGHT TO BE 6'-11" W/ 8'-0" CEILINGS AND 7'-11" W/ 9'-0" CEILINGS UNLESS OTHERWISE NOTED.
12. ALL INTERIOR BEARING WALLS SHALL HAVE GYPSUM APPLIED TO AT LEAST ONE SIDE OR HAVE MID-HEIGHT BLOCKING INSTALLED.

GYPSUM NOTES

AT GARAGE:

GYPSUM BOARD AT COMMON WALLS, CEILINGS, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL **FA-1(b)** FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

AT STAIRS:

1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS IN CLOSET

NORTH CAROLINA REGISTERED ARCHITECT ZACHARY DAVID MEYERZER NO. 46063

AUGUST 7, 2023

DIV-COMM-LOT-UNIT ----
COMM-LOT ---- ---- ----
STREET ADDRESS ---- ----
APT. NO. ----
CITY ----
STATE ----
ZIP ----

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SET NO. HZL00
VERSION 01
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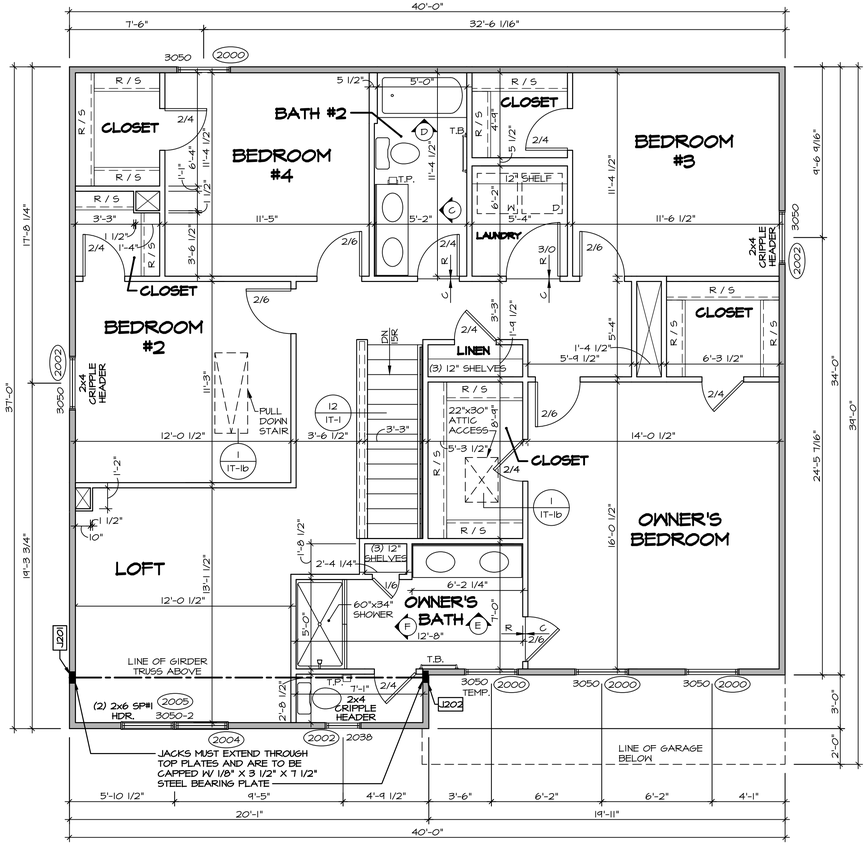
DATE:
OPTION

SHEET NO. A-7
MODEL HAZEL
DRAWING TITLE FIRST FLOOR PLAN
OPTION DESCRIPTION
12

SECOND FLOOR JACK SCHEDULE			
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS
J201	JACK - (5) 2X4 SPF STUD GRADE	2004	EXTEND THROUGH TOP PLATE
J202	JACK - (5) 2X4 SPF STUD GRADE	2004	EXTEND THROUGH TOP PLATE



SECOND FLOOR PLAN

1 / A-8

SCALE: 1/4" = 1'-0"

LEGEND

- BEARING WALL
- NON BEARING WALL
- ⊗ INDICATES BEARING POINT-LOAD ABOVE
- J_ JACKS
- B_ BEAM/HEADER
- T_ / F_ FOOTING/THICKENED SLAB
- C_ STEEL COLUMN
- X TRUSS TIE DOWN
- X PORTAL FRAME
- X JOIST/TRUSS
- L_ _-_ LVL
- X ENGINEERING PAGE NUMBER

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS

ALL WINDOWS HAVE 7'-4 5/8" HEADER HEIGHT UNLESS OTHERWISE NOTED

FLOOR PLAN NOTES

1. ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
2. ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK AND KING STUD EACH END, UNLESS OTHERWISE NOTED. MULTI-OPENING HEADERS TO HAVE (2) JACKS AT INTERMEDIATE BEARING, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
3. ALL EXTERIOR WALLS TO BE 4" w/ OSB OR 3 1/2" w/ LAMINATED FIBROUS STRUCTURAL SHEATHING, ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
4. HATCHED AREAS INDICATE DROPPED CEILINGS. ALL DROPPED CEILINGS ARE 12" UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DETAIL B/IT-1B FOR 3/4" FIRE STOPPING AT BULKHEAD / CEILING PANELS
5. SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
6. SEE STANDARD DETAIL CATEGORY "IT" SHEET(S) FOR INTERIOR TRIM DETAILS.
7. SEE ARCHITECTURAL DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
8. ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
9. TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.
10. INTERIOR HEADER HEIGHT TO BE 6'-11" W/ 8'-0" CEILINGS AND 7'-11" W/ 9'-0" CEILINGS UNLESS OTHERWISE NOTED.
12. ALL INTERIOR BEARING WALLS SHALL HAVE GYPSUM APPLIED TO AT LEAST ONE SIDE OR HAVE MID-HEIGHT BLOCKING INSTALLED.

GYPSUM NOTES

AT GARAGE:

GYPSUM BOARD AT COMMON WALLS, CEILINGS, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL **FA-1(b)** FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

AT STAIRS:

1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS IN CLOSET

DAVID MEYERZER NORTH CAROLINA REGISTERED ARCHITECT NO. 46063

AUGUST 7, 2023

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OPTION

SHEET NO. A-9
MODEL HAZEL
DRAWING TITLE SECOND FLOOR PLAN
OPTION DESCRIPTION

13

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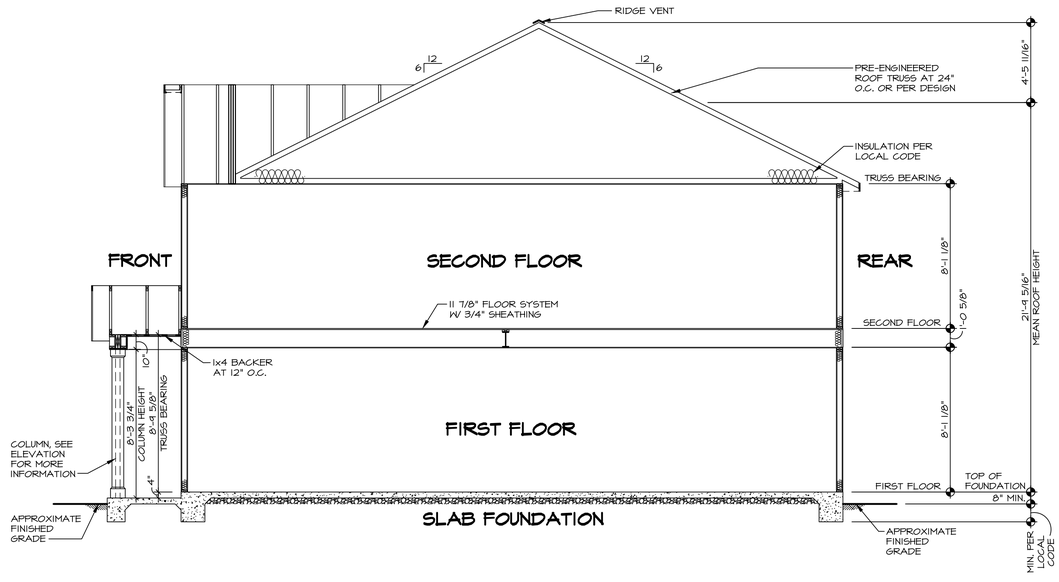

BUILDING SECTION - FOYER

1 / A-9

SCALE: 1/4" = 1'-0"

DAVID MEYERZER NORTH CAROLINA REGISTERED ARCHITECT NO. 46083

AUGUST 7, 2023

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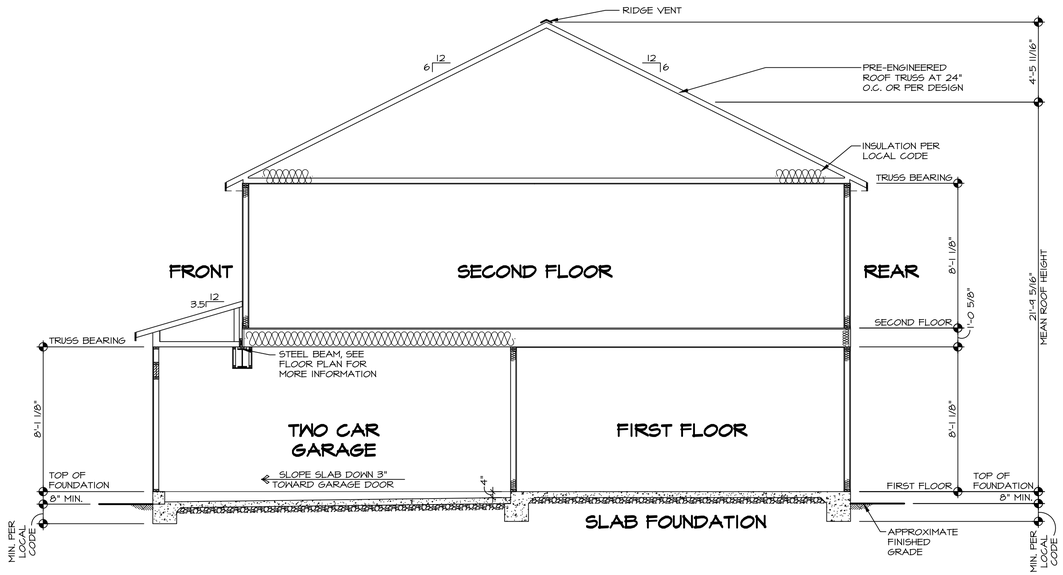
OPTION

SHEET NO. A-9

MODEL HAZEL

DRAWING TITLE BUILDING SECTION



1 / A-10

BUILDING SECTION - GARAGE

SCALE: 1/4" = 1'-0"

DAVID MEYERZACHARY NORTH CAROLINA NO. 46083 REGISTERED ARCHITECT

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VERSION: 01
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DRAWN BY:
DATE:

SHEET NO.: A-10

MODEL: HAZEL

DRAWING TITLE: BUILDING SECTION - GARAGE

OPTION DESCRIPTION: OPTION

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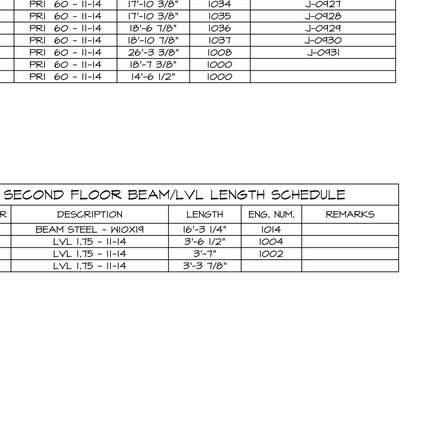
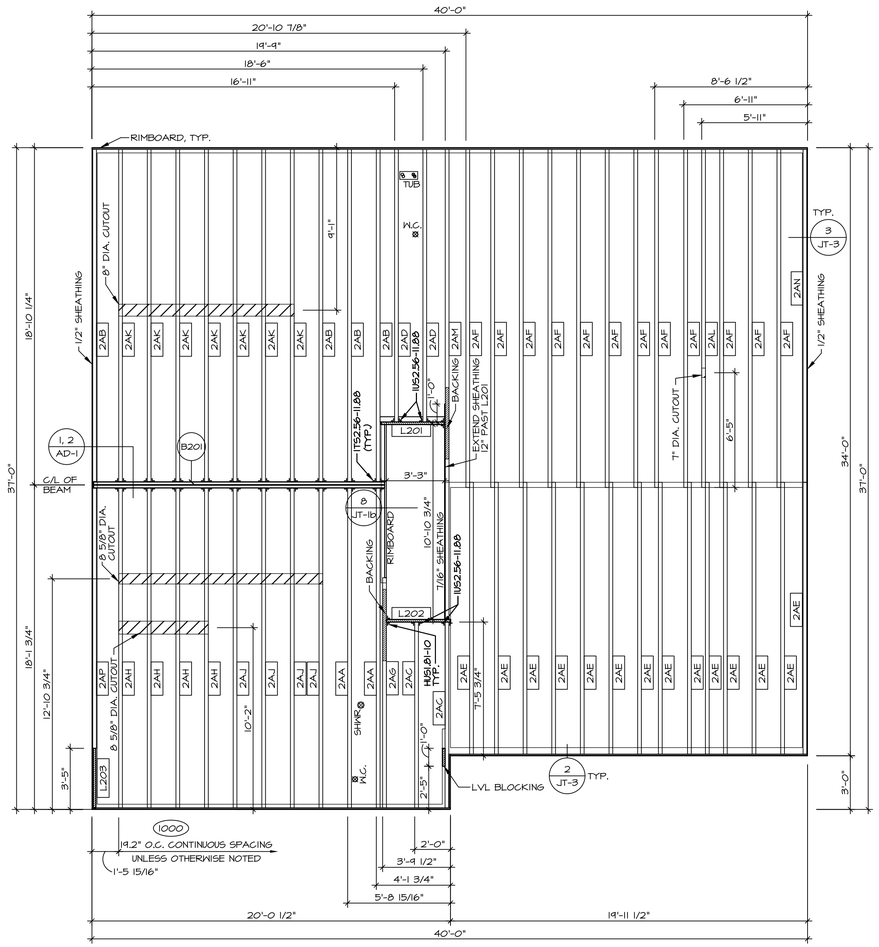
SECOND FLOOR FRAMING LENGTH SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
2AA	PRI 60 - 11-14	17'-10 3/8"	1000	
2AB	PRI 60 - 11-14	18'-6 7/8"	1000	
2AC	PRI 60 - 11-14	10'-4 5/8"	1000	
2AD	PRI 60 - 11-14	15'-2 7/8"	1000	
2AE	PRI 60 - 11-14	15'-2 3/8"	1000	
2AF	PRI 60 - 11-14	18'-10 7/8"	1000	
2AG	PRI 60 - 11-14	12'-10 3/8"	1006	J-0926
2AH	PRI 60 - 11-14	17'-10 3/8"	1034	J-0927
2AJ	PRI 60 - 11-14	17'-10 3/8"	1035	J-0928
2AK	PRI 60 - 11-14	18'-6 7/8"	1036	J-0929
2AL	PRI 60 - 11-14	18'-10 7/8"	1037	J-0930
2AM	PRI 60 - 11-14	26'-3 3/8"	1008	J-0931
2AN	PRI 60 - 11-14	18'-7 3/8"	1000	
2AP	PRI 60 - 11-14	14'-6 1/2"	1000	

SECOND FLOOR BEAM/LVL LENGTH SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
B201	BEAM STEEL - W10X19	16'-3 1/4"	1014	
L201	LVL 1.75 - 11-14	3'-6 1/2"	1004	
L202	LVL 1.75 - 11-14	3'-7"	1002	
L203	LVL 1.75 - 11-14	3'-3 7/8"		



2 / S-2 **HOLE CUTTING LAYOUT**

SCALE: 1/4" = 1'-0"



1 / A-9 1 / A-10

1 / S-2 **SECOND FLOOR FRAMING PLAN**

SCALE: 1/4" = 1'-0"

LEGEND

- BEARING WALL
- ⊗ INDICATES BEARING FROM POINT-LOAD ABOVE
- J_ JACKS
- B_ BEAM/HEADER
- T_ / F_ FOOTING/THICKENED SLAB
- C_ STEEL COLUMN
- X TRUSS TIE DOWN
- X PORTAL FRAME
- X JOIST/TRUSS
- L_ _ _ LVL
- X ENGINEERING PAGE NUMBER

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS

I-JOIST FLOOR SYSTEM

1. SUBFLOOR IS 3/4" TONGUE AND GROOVE OSB STANDARD.
2. JOIST LENGTHS SHIPPED IS THE NEXT HIGHEST LENGTH TO CUT FROM.
3. ALL RIMBOARD TO BE 1-1/8" THICK U.N.O.
4. REFER TO STANDARD DETAIL 7/JT-3 FOR HOLE CUTTING GUIDELINES.
5. PROVIDE RIMBOARD SOLID BLOCKING AT EXTERIOR WALLS AND BELOW ALL JACKS AS REQUIRED.
6. REFER TO DETAIL **8/JT-3** FOR HANGER DETAIL.
7. ALL JOISTS TO BE PRI40, PRI60 OR PRI80, REFERENCE SCHEDULE FOR SPECIFIC SERIES PER MEMBER.
   A. PRI40 SERIES ARE SHOWN AS SHADED ON FRAMING PLAN.
8. SEE CONNECTOR / NAIL CHART IN STANDARD DETAILS (FC-A) FOR TYPICAL HANGERS.
10. ALL SOLID BLOCKING CUT FROM 14'-0" MATERIAL.
11. ADHESIVE TO BE APPLIED AT THE RATE OF (1) TUBE PER TWO AND ONE-HALF SHEETS; SHEETS ARE TO BE GLUED AND PLACED ONE AT A TIME. **APPLY GLUE TO TONGUE AND GROOVE.**
12. I-JOIST BLOCKING CUT FROM 2'-0" MATERIAL.
13. ADHESIVE TO BE ADDED TO ALL JOIST HANGERS PRIOR TO SETTING JOISTS.
14. J-XXXX SHOP DRAWINGS ARE ASSOCIATED WITH PLANT MODIFIED I-JOISTS OR PLANT BUILT JOIST COMPONENTS.

LVL PLY TO PLY FASTENING SCHEDULE: (WHERE APPLICABLE BASED ON LVL USAGE)

1.A - (2) PLY UP TO AND INCLUDING 11 7/8" TALL: FASTEN PLIES W/ (2) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (3) ROWS 12D NAILS AT 12"O.C.
2.A - (2) PLY 14" TO AND 18" TALL (INCLUSIVE): FASTEN PLIES W/ (3) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (4) ROWS 12D NAILS AT 12"O.C.
3.A - (2) PLY 20" TALL AND OVER: FASTEN PLIES W/ (4) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (5) ROWS 12D NAILS AT 12"O.C.
4.A - (3) PLY UP TO AND INCLUDING 11 7/8" TALL: FASTEN PLIES W/ (2) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (3) ROWS 12D NAILS AT 12"O.C. FROM EACH SIDE.
5.A - (3) PLY 14" TO AND 18" TALL (INCLUSIVE): FASTEN PLIES W/ (3) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (4) ROWS 12D NAILS AT 12"O.C. FROM EACH SIDE.
6.A - (3) PLY 20" TALL AND OVER: FASTEN PLIES W/ (4) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLIES W/ (5) ROWS 12D NAILS AT 12"O.C. FROM EACH SIDE.
7.A - (4) PLY (ALL SIZES): FASTEN PLIES W/ (2) ROWS 1/2" DIAMETER A307 BOLTS AT 24" O.C. SEE SHOP DRAWING FOR ADDITIONAL INFORMATION.

DAVID MEYERZER ZACHARY NORTH CAROLINA REGISTERED ARCHITECT NO. 46063

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SET NO. HZL00
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

SHEET NO. S-2
MODEL HAZEL
DRAWING TITLE SECOND FLOOR FRAMING
OPTION DESCRIPTION

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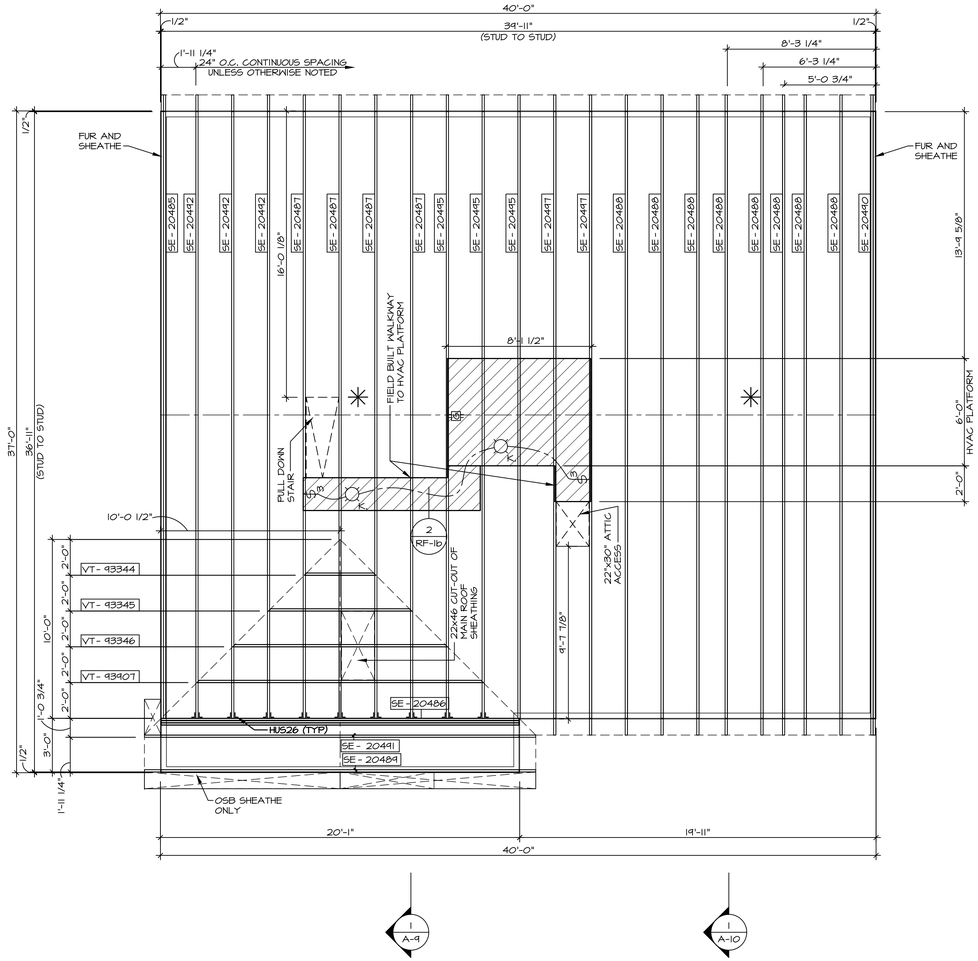
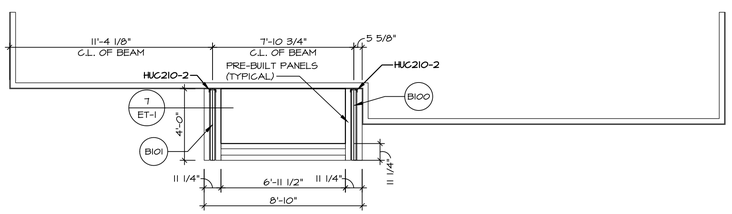
TRUSS SCHEDULE					
QUANTITY	SPECS	TRUSS NUMBER	LENGTH	ROOF PITCH (X/12)	REMARKS
1	SE	20485	33'-11"	6/12	-
1	SE	20486	20'-0"	6/12	GIRDER (3 PLY)
4	SE	20487	33'-11"	6/12	-
8	SE	20488	33'-11"	6/12	-
1	SE	20489	20'-0"	6/12	-
1	SE	20490	33'-11"	6/12	-
1	SE	20491	20'-0"	6/12	-
3	SE	20492	33'-11"	6/12	-
11	SE	20493	4'-10"	3.5/12	-
3	SE	20495	33'-11"	6/12	-
2	SE	20497	33'-11"	6/12	-
2	SE	21243	8'-10"	6/12	-
1	SE	21244	8'-10"	6/12	-
1	VT	93344	4'-0"	6-6/12	-
1	VT	93345	8'-0"	6-6/12	-
1	VT	93346	12'-0"	6-6/12	-
1	VT	93907	16'-0"	6-6/12	-

FIELD INSTALLED ROOF FRAMING BEAM/HEADER SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
B100	BEAM BUILT 2X10 - 2 PLY RFF	4'-0"	1019	
B101	BEAM BUILT 2X10 - 2 PLY RFF	4'-0"	1019	



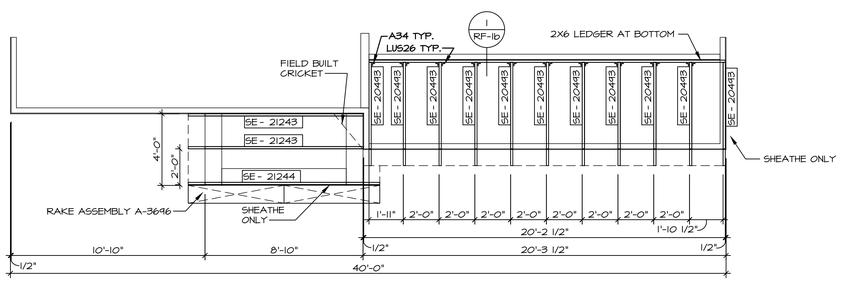
ROOF FRAMING

1 / S-3 SCALE: 1/4" = 1'-0"



PORCH BEAM LAYOUT

3 / S-3 SCALE: 1/4" = 1'-0"



PORCH ROOF FRAMING

2 / S-3 SCALE: 1/4" = 1'-0"

ROOF FRAMING NOTES

1. REFER TO THE STANDARD DETAILS FOR THE FOLLOWING:
   - 1.1. TRUSS TIE-DOWNS (1/RF-1)
   - 1.2. PIGGYBACK TRUSS ATTACHMENT (2/RF-1)
   - 1.3. VALLEY GABLE TRUSS BRACING (3/RF-1)
   - 1.4. GABLE BRACING (1/RF-1c)
   - 1.5. TURN GABLE BRACING (1/RF-1)
   - 1.6. TRUSS LATERAL BRACING (2/RF-1c)
   - 1.7. LIFELINE ATTACHMENT (5/RF-1)
   - 1.8. FALL PROTECTION ON PLATFORM TRUSS (11/RF-1)
2. IF TRUSS DOES NOT APPEAR ON THE TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING REQUIRED.

LEGEND

- BEARING WALL
- ⊗ INDICATES BEARING FOR POINT-LOAD ABOVE
- J_ JACKS
- B_ BEAM/HEADER
- T_ / F_ FOOTINGS/THICKENED SLAB
- C_ STEEL COLUMN
- X TRUSS TIE DOWN
- X PORTAL FRAME
- X JOIST/TRUSS
- L_ _ LVL
- X ENGINEERING PAGE NUMBER

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS

DAVID MEYERZER NORTH CAROLINA REGISTERED ARCHITECT NO. 46063

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OPTION

SHEET NO. S-3

MODEL HAZEL
DRAWING TITLE ROOF FRAMING

OPTION DESCRIPTION

25

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TRUSS BRACING NOTES

1. IF TRUSS DOES NOT APPEAR ON THIS TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING IS REQUIRED.
2. 2X4 SPF#2 LATERAL BRACES SHALL BE NAILED TO MINIMUM (3) TRUSS MEMBERS WITH MINIMUM (2) 10D NAILS. PROVISIONS MUST BE MADE AT ENDS OR SPECIFIED INTERVALS TO RESTRAIN OR ANCHOR LATERAL BRACING.
3. WEB "T" BRACE, DETAIL 3/RF-1c, IS REQUIRED WHERE LATERAL BRACING IS NOT CONTINUOUS ACROSS THREE (3) OR MORE TRUSSES AND MAY BE USED IN LIEU OF 2X4 LATERAL BRACING.
4. DIAGONAL BRACING REQUIRED WHEN LATERAL BRACING IS REQUIRED (4/RF-1c)
5. STUDDED GABLE BRACING DETAIL 1/RF-1c TO BE UTILIZED FOR TRUSSES 6'-9" IN HEIGHT OR GREATER.
6. PARTIALLY SHEATHED GABLES, SEE 5/RF-1c FOR "L" BRACING WHEN REQUIRED.
7. LATERAL BRACING CAN BE APPLIED TO EITHER SIDE OF THE WEB MEMBER IDENTIFIED IN THE DRAWING.
8. SHEATHING (OSB OR GYPSUM) REPLACES LATERAL AND DIAGONAL TRUSS BRACING.

NO ADDITIONAL TRUSS BRACING REQUIREMENTS FOR SOUTHEAST SPECIFICATIONS

1 / S-4

TRUSS BRACING DETAILS

SCALE: 1/4" = 1'-0"

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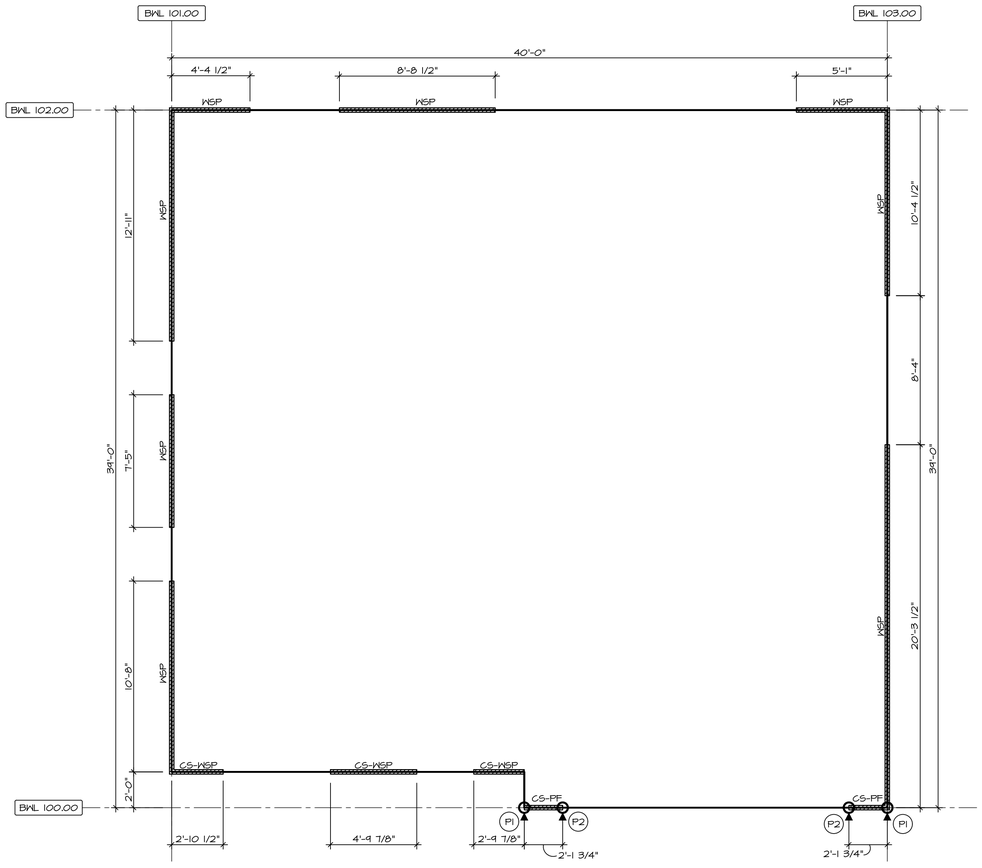
SHEET NO. S-4
MODEL HAZEL
DRAWING TITLE TRUSS BRACING
OPTION DESCRIPTION



1 / S-5 FIRST FLOOR WALL BRACING DETAIL

SCALE: 1/4" = 1'-0"

BRACED WALL LINE SCHEDULE

WIND SPEED (ULT)	IDENTIFIER	REQUIRED (FT)	ACTUAL (FT)	METHOD
130 MPH	BWL 100.00	13.27'	16.75'	WSP (WITH GWB)
130 MPH	BWL 101.00	21.77'	31.01'	WSP (WITHOUT GWB)
130 MPH	BWL 102.00	15.14'	18.11'	WSP (WITH GWB)
130 MPH	BWL 103.00	22.21'	30.69	WSP (WITHOUT GWB)
130 MPH	BWL 200.00	8.62'	22.94	CONTINUOUS (WITHOUT GWB)
130 MPH	BWL 201.00	11.00'	27.25	WSP (WITHOUT GWB)
130 MPH	BWL 202.00	10.27'	23.75'	WSP (WITHOUT GWB)
130 MPH	BWL 203.00	11.00'	31.00	WSP (WITHOUT GWB)

LEGEND

BWL XXX.XX	BRACED WALL LINE I.D.
	BRACED WALL LINE
	HOUSE WALL
	BRACED WALL PANEL
WSP	WOOD STRUCTURAL PANEL
GB	GYPSUM BOARD (1) SIDED OR (2) SIDED
GB-BW	GYPSUM BOARD BLOCKED WALL CONSTRUCTION (1) SIDED OR (2) SIDED (SEE STANDARD DETAIL 6/WB-2)
LIB	LET-IN BRACING (SEE STANDARD DETAIL F / WB-2)
CS-WSP	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL
CS-PF	CONTINUOUS SHEATHING - PORTAL FRAME, SEE FLOOR PLANS FOR PORTAL FRAME HEADER INFORMATION (SEE STANDARD DETAIL A, C/ WB-2)
CS-G	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL ADJACENT TO GARAGE OPENINGS
	HOLD-DOWN 1. SEE SHEET WB-2 "P__" INDICATOR SCHEDULE AND DETAILS 2. ARROW INDICATES LOCATION

NOTES:

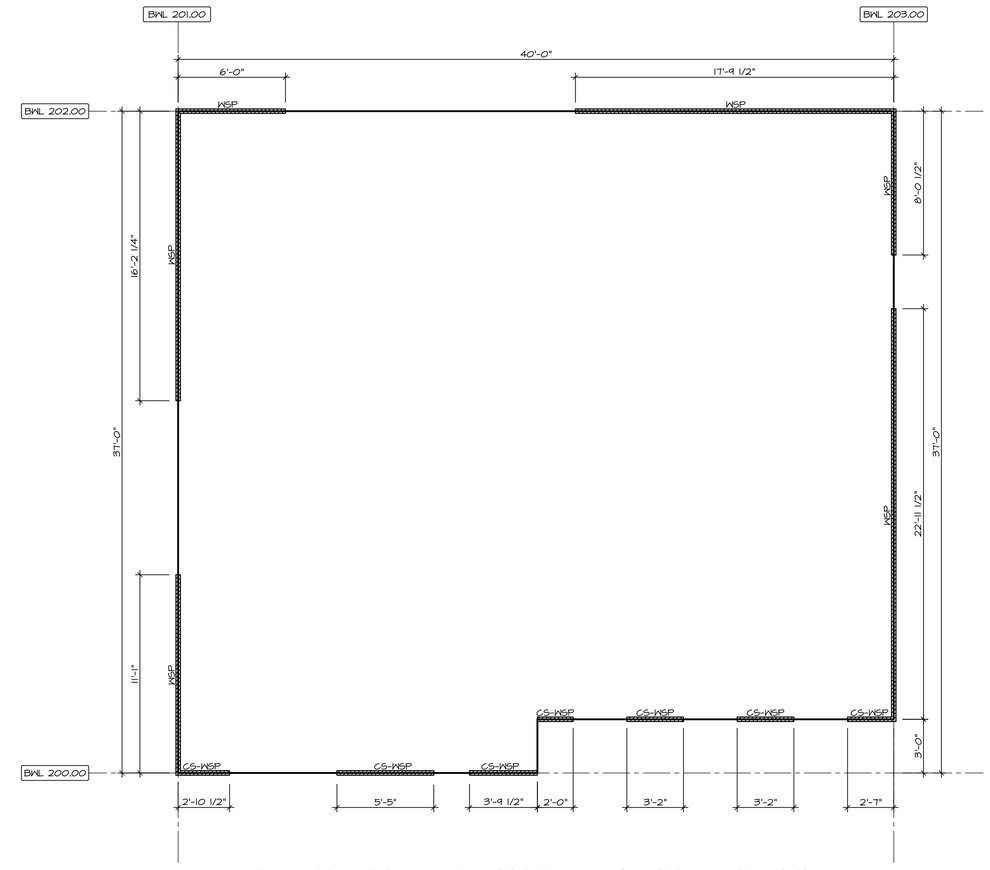
HOUSE HAS BEEN ANALYZED UTILIZING A PRESCRIPTIVE METHOD IN COMPLIANCE WITH INTERNATIONAL RESIDENTIAL CODES (IRC) UNLESS OTHERWISE NOTED.

FASTENING SCHEDULE

SHEATHING	FASTENER	SPACING EDGES	SPACING FIELD
7/16" WOOD STRUCTURAL PANELS OR EQUIVALENT (W/ METHOD WSP, CS-WSP, CS-G)	8d COMMON NAILS	6" O.C.	12" O.C.
	ALTERNATIVE FASTENER I-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	12" O.C.
1/2" GYPSUM WALLBOARD (W/ METHOD GB-1, GB-2)	1-1/4" LONG, 1/4" HEAD, .098" DIA. ANNULAR-RINGED NAILS	7" O.C.	7" O.C.
	CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	7" O.C.	7" O.C.
LAMINATED FIBROUS STRUCTURAL SHEATHING	10d X 1 1/4" GALVANIZED ROOFING NAILS	3" O.C.	3" O.C.
	1-1/4" 16-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	3" O.C.
1/2" GYPSUM WALL BOARD BLOCKED AT THE EDGES (W/ METHOD GB-BW-1, GB-BW-2, ENG-BW)	BLOCKING REQUIRED AT ALL GYPSUM EDGES. USED CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	4" O.C.	12" O.C.

NOTES:

1. MINIMUM 7/16" CROWN WIDTH FOR STAPLES IN WOOD STRUCTURAL PANEL.
2. SPECIFIED GYPSUM FASTENING REQUIRED ONLY WHERE METHOD GB IS IDENTIFIED. SEE PHASE SPECS FOR TYPICAL GYPSUM FASTENER SPACING.
3. USE OF STAPLES IN WOOD STRUCTURAL PANEL AS FASTENING METHOD ON WALLS PER ENGINEERED ALTERNATIVE.



2 / S-5 SECOND FLOOR WALL BRACING DETAIL

SCALE: 1/4" = 1'-0"

DAVID MEYERZER ZACHARY
NO. 46065
REGISTERED ARCHITECT
NORTH CAROLINA

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DATE: 08/09/23 - 4:39 pm

MODEL HAZEL
DRAWING TITLE WALL BRACING

OPTION DESCRIPTION
OPTION ----

SHEET NO. S-5

27

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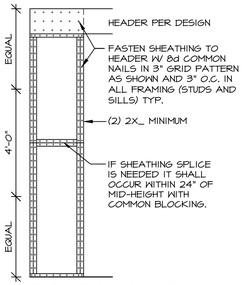
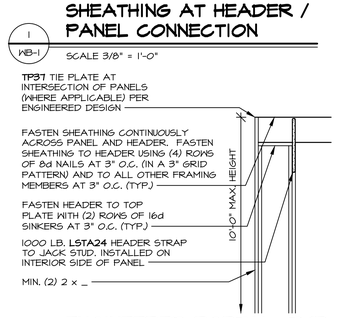


SHEATHING AT HEADER / PANEL CONNECTION

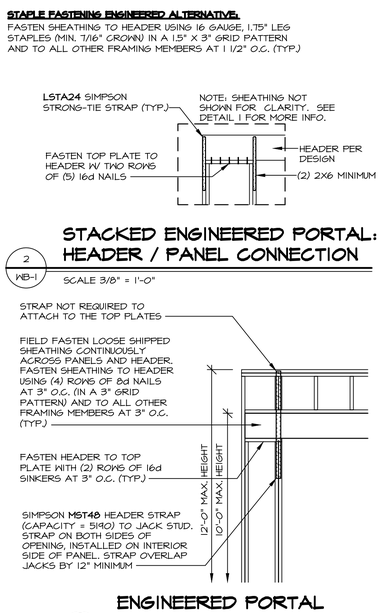
1 / WB-1 — SCALE 3/8" = 1'-0"

STAPLE FASTENING ENGINEERED ALTERNATIVE:
FASTEN SHEATHING TO HEADER USING 16 GAUGE, 1.175" LEG STAPLES (MIN. 7/16" CROWN) IN A 1.5" X 3" GRID PATTERN AND TO ALL OTHER FRAMING MEMBERS AT 1 1/2" O.C. (TYP.)



ENGINEERED PORTAL: TYP. HEADER / PANEL CONNECTION

3 / WB-1 — SCALE 3/8" = 1'-0"

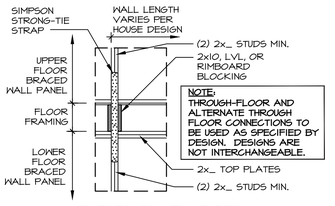


STACKED ENGINEERED PORTAL: HEADER / PANEL CONNECTION

2 / WB-1 — SCALE 3/8" = 1'-0"

ENGINEERED PORTAL WITH PONY WALL

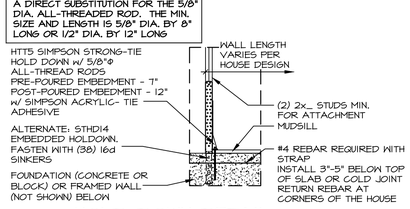
4 / WB-1 — SCALE 3/8" = 1'-0"



THROUGH-FLOOR CONNECTION

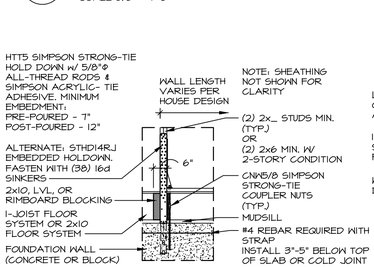
5 / WB-1 — SCALE 3/8" = 1'-0"

NOTE:
TITEN HD ANCHOR MAY BE USED AS A DIRECT SUBSTITUTION FOR THE 5/8" DIA. ALL-THREADED ROD. THE MIN. SIZE AND LENGTH IS 5/8" DIA. BY 8" LONG OR 1/2" DIA. BY 12" LONG



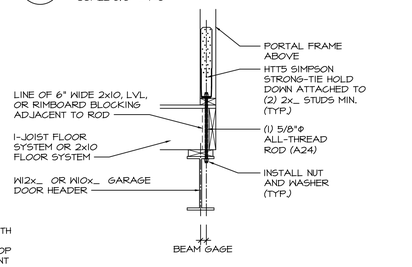
HOLD-DOWN DETAIL: FOUNDATION

6 / WB-1 — SCALE 3/8" = 1'-0"



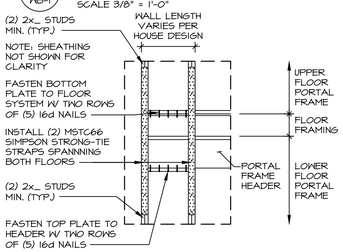
BRACED WALL PANEL TO STEEL BEAM CONNECTION

8 / WB-1 — SCALE 3/8" = 1'-0"



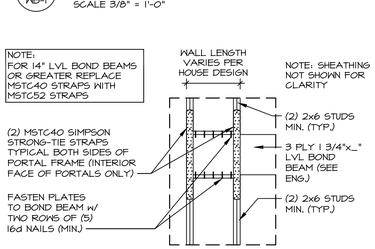
HOLD-DOWN DETAIL: FRAMED FLOOR

7 / WB-1 — SCALE 3/8" = 1'-0"



CONNECTING PORTALS BETWEEN FLOORS

9 / WB-1 — SCALE 3/8" = 1'-0"



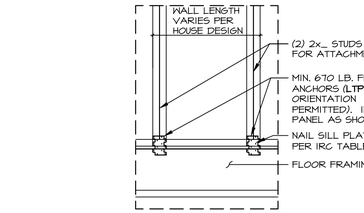
STACKED PORTAL: MIDDLE CONNECTION

10 / WB-1 — SCALE 3/8" = 1'-0"

NOTE:
THROUGH-FLOOR AND ALTERNATE THROUGH FLOOR CONNECTIONS TO BE USED AS SPECIFIED BY DESIGN. DESIGNS ARE NOT INTERCHANGEABLE.

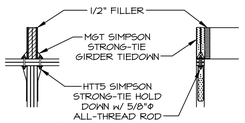
ALT. THROUGH-FLOOR CONNECTION

11 / WB-1 — SCALE 3/8" = 1'-0"



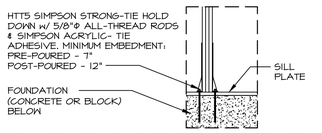
FRAMED FLOOR CONNECTION

19 / WB-1 — SCALE: 3/8" = 1'-0"



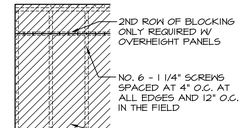
UPLIFT AT LVL CONNECTION

15 / WB-1 — SCALE 3/8" = 1'-0"



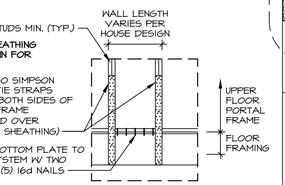
FOUNDATION CONNECTION

16 / WB-1 — SCALE 3/8" = 1'-0"



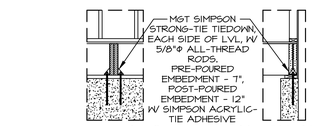
BLOCKED WALL CONSTRUCTION

17 / WB-1 — NOT TO SCALE



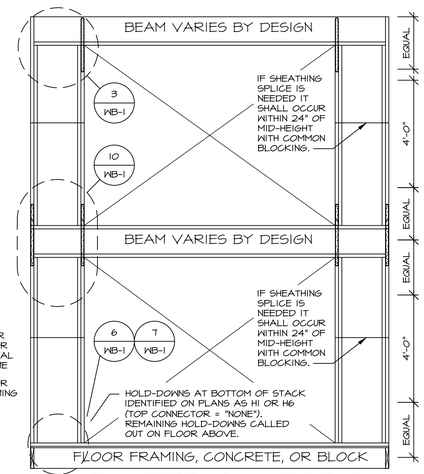
FLUSH LVL BEAM CONNECTION

14 / WB-1 — SCALE 3/8" = 1'-0"



LVL TO CONCRETE WALL CONNECTION

18 / WB-1 — SCALE 3/8" = 1'-0"



ENGINEERED STACKED PORTAL

12 / WB-1 — NOT TO SCALE

ID	BOTTOM CONNECTOR	QTY.	PART NUMBER	DETAIL	QTY.	TOP CONNECTOR	PART NUMBER	DETAIL
H1	HTT5	1	A0310810	6 / WB-1		NONE	N / A	N / A
H2	HTT5	1	A0310810	6 / WB-1	1	LSTA24	A0242198	2 / WB-1
H3	HTT5	1	A0310810	6 / WB-1	1	LSTA24	A0242198	3 / WB-1
H4	HTT5	1	A0310810	6 / WB-1	1	MST48	A0418685	4 / WB-1
H5	HTT5	1	A0310810	6 / WB-1	1	MSTC40	A0279759	5 / WB-1
H6	HTT5 5/8" A24 THR. ROD CNW5/8 COUPLER	1 1 1	A0310810 A0092975 A0252646	7 / WB-1		NONE	N / A	N / A
H7	HTT5 5/8" A24 THR. ROD CNW5/8 COUPLER	1 1 1	A0310810 A0092975 A0252646	7 / WB-1	1	LSTA24	A0242198	2 / WB-1
H8	HTT5 5/8" A24 THR. ROD CNW5/8 COUPLER	1 1 1	A0310810 A0092975 A0252646	7 / WB-1	1	LSTA24	A0242198	3 / WB-1
H9	HTT5 5/8" A24 THR. ROD CNW5/8 COUPLER	1 1 1	A0310810 A0092975 A0252646	7 / WB-1	1	MST48	A0418685	4 / WB-1
H10	HTT5 5/8" A24 THR. ROD CNW5/8 COUPLER	1 1 1	A0310810 A0092975 A0252646	7 / WB-1	1	MSTC40	A0279759	5 / WB-1
H11	HTT5 5/8" A24 THR. ROD	1 1	A0310810 A0092975	8 / WB-1		NONE	N / A	N / A
H12	HTT5 5/8" A24 THR. ROD	1 1	A0310810 A0092975	8 / WB-1	1	LSTA24	A0242198	2 / WB-1
H13	HTT5 5/8" A24 THR. ROD	1 1	A0310810 A0092975	8 / WB-1	1	LSTA24	A0242198	3 / WB-1
H14	HTT5 5/8" A24 THR. ROD	1 1	A0310810 A0092975	8 / WB-1	1	MST48	A0418685	4 / WB-1
H15	HTT5 5/8" A24 THR. ROD	1 1	A0310810 A0092975	8 / WB-1	1	MSTC40	A0279759	5 / WB-1
H16	MSTC66	1	A0293682	9 / WB-1		NONE	N / A	N / A
H17	MSTC66	1	A0293682	9 / WB-1	1	LSTA24	A0242198	2 / WB-1
H18	MSTC66	1	A0293682	9 / WB-1	1	LSTA24	A0242198	3 / WB-1
H19	MSTC66	1	A0293682	9 / WB-1	1	MST48	A0418685	4 / WB-1

ID	BOTTOM CONNECTOR	QTY.	PART NUMBER	DETAIL	QTY.	TOP CONNECTOR	PART NUMBER	DETAIL
H20	MSTC52	1	A0320180	10 / WB-1		NONE	N / A	N / A
H21	MSTC52	1	A0320180	10 / WB-1	1	LSTA24	A0242198	2 / WB-1
H22	MSTC52	1	A0320180	10 / WB-1	1	LSTA24	A0242198	3 / WB-1
H23	MSTC52	1	A0320180	10 / WB-1	1	MST48	A0418685	4 / WB-1
H24	MSTC40	1	A0279759	10 / WB-1	1	LSTA24	A0242198	2 / WB-1
H25	MSTC40	1	A0279759	10 / WB-1	1	LSTA24	A0242198	3 / WB-1
H26	MSTC40	1	A0279759	10 / WB-1	1	MST48	A0418685	4 / WB-1
H27	LSTA36	1	A0295184	11 / WB-1		NONE	N / A	N / A
H28	MSTC40	1	A0279759	14 / WB-1		NONE	N / A	N / A
H29	MSTC40	1	A0279759	14 / WB-1	1	LSTA24	A0242198	3 / WB-1
H30	HTT5	2	A0310810	16 / WB-1	2 2 2	MGT HTT5 5/8" A24 THR. ROD	A0245832 A0310810 A0092975	15 / WB-1
H31	MSTC40	1	A0279759	5 / WB-1		NONE	N / A	N / A
H32	MSTC40	1	A0279759	5 / WB-1	1	LSTA24	A0242198	3 / WB-1
H33	NONE		N / A	N / A	2	MGT	A0245832	18 / WB-1
H34	LTP4	1	A0252647	19 / WB-1		NONE	N / A	N / A
H35	LTP4	1	A0252647	19 / WB-1	1	LSTA24	A0242198	3 / WB-1
H36	MSTC52	1	A0320180	5 / WB-1		NONE	N / A	N / A

NOTES: THREADED ROD PART INCLUDES (2) NUTS AND (2) WASHERS FOR CMU FOUNDATIONS SEE 12/FD-1.

REV. NO.	DATE	REMARKS
14	2/8/22	NS - H36 ADDED TO TABLE, DETAIL #5 REVISED
20	2/16/22	ADM - ADDED REBAR TO DETAILS SHOWING STHD14 (GC #14409)
12	2/7/15	ARS - CLARIFIED FOUNDATION CONCRETE AND BLOCK TEXT
13	4/18/18	ARS - ADDED NOTE TO REVISH 12/FD-1 FOR BLOCK
14	9/7/15	CEL - REVISED STAPLE ALTERNATIVE NOTE
15	3/24/14	NS - ADDED DETAIL #18
16	5/4/14	SKB - ADDED DETAIL #14 AND IDs H34 AND H35
17	3/31/20	CEL - ADDED PONY WALL NOTES TO 4/WB-1 FOR STRAP
18	11/8/21	CEL - REVISED 12/WB-1 TO REFERENCE 3/WB-1

NVR
NVR, Inc.
5285 Westhall Rd., Suite 100
Frederick, MD 21703

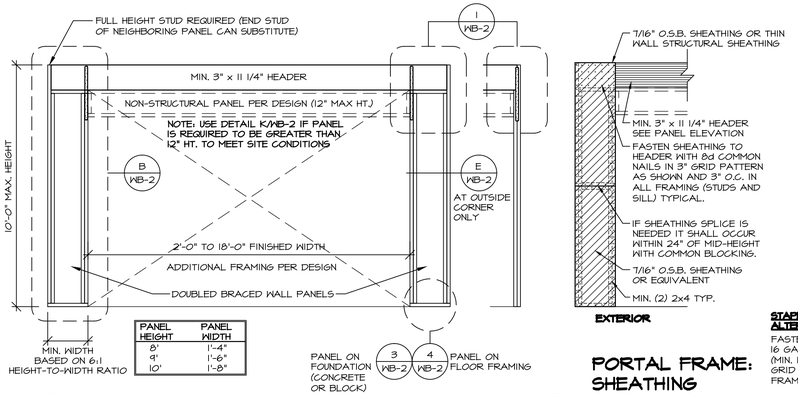
SET NO.
VERSION
DRAWN BY KFT
DATE: 2/6/12
OPTION
OPTION DESCRIPTION

SHEET NO. WB-1
MODEL WALL BRACING DETAILS
DRAWING TITLE ENGINEERED WALL BRACING DESIGN

DAVID MENTZER ZACHARY
NO. 16081
REGISTERED ARCHITECT
NORTH CAROLINA

AUGUST 7, 2023

J:\PROJECTS\DETAILS\NVR_Wall Bracing\WB1_BRACED WALL_ENG.dwg 02/17/23 - 2:28 pm



PANEL HEIGHT	PANEL WIDTH
8'	1'-4"
9'	1'-6"
10'	1'-8"

STAPLE FASTENER ENGINEERED ALTERNATIVE FOR OSB:

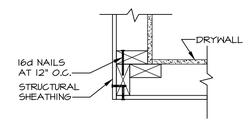
FASTEN SHEATHING TO HEADER USING 16 GAUGE, 1 1/4" LEG STAPLES (MIN. 15/16" CROWN) IN A 3" X 1 1/2" GRID PATTERN AND TO ALL OTHER FRAMING MEMBERS AT 1 1/2" O.C. (TYP.)

A WB-2 CONTINUOUSLY SHEATHED PORTAL FRAME

SCALE: 3/8" = 1'-0"

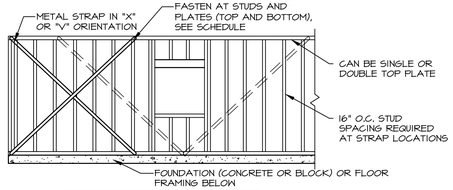
B WB-2 PORTAL FRAME: SHEATHING APPLICATION DETAIL

SCALE 3/8" = 1'-0"



E WB-2 CORNER DETAIL

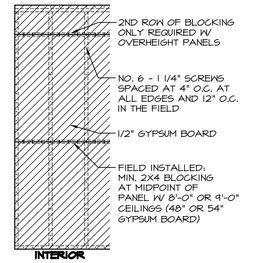
SCALE: 1 1/2" = 1'-0"



SIMPSON STRONG-TIE LIB STRAP INFO:	FASTENERS PLATES:	STUDS:
LIB-A = WB106	(3) 16d	
LIB-B = WB126	(3) 16d	(1) 8d
LIB-C = WB143C	(4) 16d	

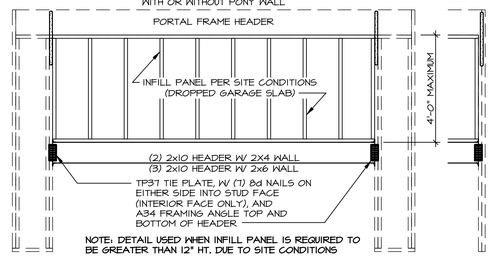
F WB-2 LET-IN BRACING

NOT TO SCALE



G WB-2 BLOCKED WALL CONSTRUCTION

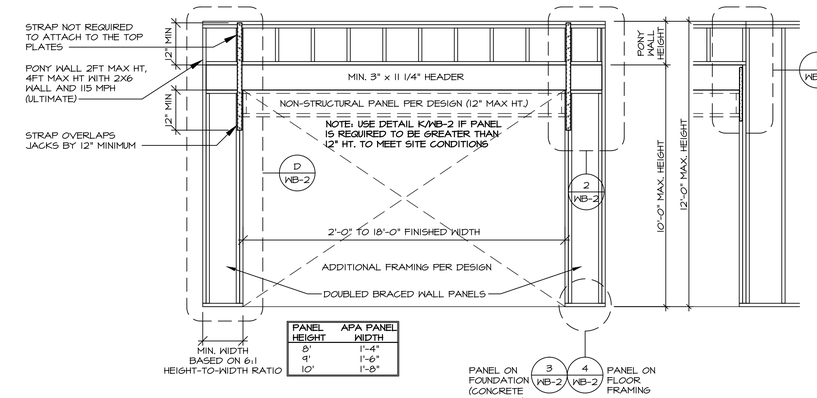
NOT TO SCALE



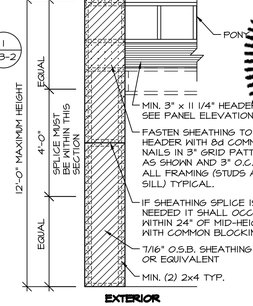
NOTE: DETAIL USED WHEN INFILL PANEL IS REQUIRED TO BE GREATER THAN 12" HT. DUE TO SITE CONDITIONS

K WB-2 INFILL PANEL DETAIL

NOT TO SCALE



PANEL HEIGHT	APA PANEL WIDTH
8'	1'-4"
9'	1'-6"
10'	1'-8"



C WB-2 ALTERNATE PORTAL FRAME

SCALE: 3/8" = 1'-0" w/ PONY WALL FRAMING

D WB-2 ALTERNATE PORTAL FRAME: SHEATHING APPLICATION DETAIL

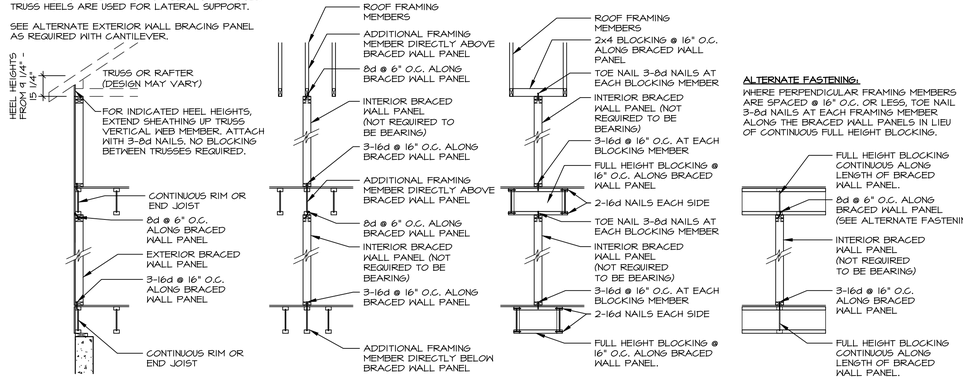
SCALE 3/8" = 1'-0"

ID	QTY.	BOTTOM CONNECTOR	PART NUMBER	DETAIL	QTY.	TOP CONNECTOR	PART NUMBER	DETAIL
P1	1	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	LO511231	3 WB-2	1	NONE	N / A	N / A
P2	1	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	LO511231	3 WB-2	1	LSTA24	AO242198	1 WB-2
P3	1	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	LO511231	3 WB-2	1	MST48	AO418685	2 WB-2
P4	1	LTP4	AO252647	4 WB-2		NONE	N / A	N / A
P5	1	LTP4	AO252647	4 WB-2	1	LSTA24	AO242198	1 WB-2
P6	1	LTP4	AO252647	4 WB-2	1	MST48	AO418685	2 WB-2
P7	1	LSTA15	AO299501	5 WB-2		NONE	N / A	N / A
P8	1 1	HTT4 5/8" A24 THR. ROD	AO312555 LO327077	6 WB-2		NONE	N / A	N / A
P9		NONE	N / A	N / A	1	LSTA24	AO242198	1 WB-2
P10		NONE	N / A	N / A	1	MST48	AO418685	2 WB-2

NOTE: THREADED ROD PART INCLUDES (2) NUTS AND (2) WASHERS

NOTE: FOR TRUSSES WITH HEEL HEIGHTS GREATER THAN 15-1/4", THE INTERIOR CEILING DIAPHRAGM AND EXTERIOR SHEATHING INSTALLED ON EXPOSED TRUSS HEELS ARE USED FOR LATERAL SUPPORT.

SEE ALTERNATE EXTERIOR WALL BRACING PANEL AS REQUIRED WITH CANTILEVER.



BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING

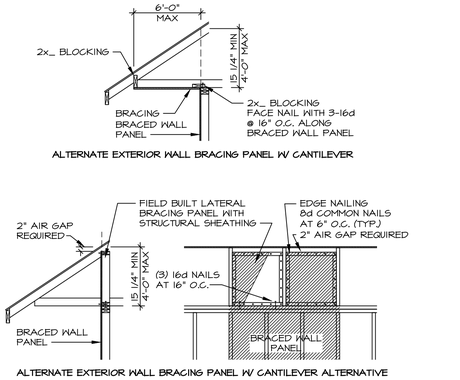
ALTERNATE FASTENING:

WHERE PERPENDICULAR FRAMING MEMBERS ARE SPACED @ 16" O.C. OR LESS, TOE NAIL 3-8d NAILS AT EACH FRAMING MEMBER ALONG THE BRACED WALL PANELS IN LIEU OF CONTINUOUS FULL HEIGHT BLOCKING.

BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING

H WB-2 WALL BRACING PANEL CONNECTION DETAILS

SCALE: 3/8" = 1'-0" APPLIES TO 1-JOIST, NOMINAL LUMBER AND FLOOR TRUSS FLOOR SYSTEMS



ALTERNATE EXTERIOR WALL BRACING PANEL W/ CANTILEVER

ALTERNATE EXTERIOR WALL BRACING PANEL W/ CANTILEVER ALTERNATIVE

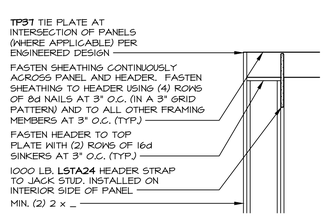
TP3T TIE PLATE AT INTERSECTION OF PANELS (WHERE APPLICABLE) PER ENGINEERED DESIGN

FASTEN SHEATHING CONTINUOUSLY ACROSS PANEL AND HEADER. FASTEN SHEATHING TO HEADER USING (4) ROWS OF 8d NAILS AT 3" O.C. (IN A 3" GRID PATTERN) AND TO ALL OTHER FRAMING MEMBERS AT 3" O.C. (TYP.)

FASTEN HEADER TO TOP PLATE WITH (2) ROWS OF 16d SINKERS AT 3" O.C. (TYP.)

1000 LB. LSTA24 HEADER STRAP TO JACK STUD. INSTALLED ON INTERIOR SIDE OF PANEL

MIN. (2) 2 x _



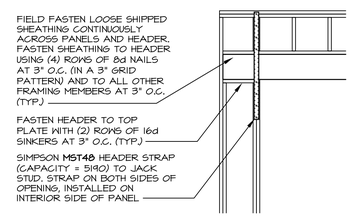
1 WB-2 CONTINUOUSLY SHEATHED PORTAL: TYP. HEADER / PANEL CONNECTION

SCALE 3/8" = 1'-0"

FIELD FASTEN LOOSE SHIPPED SHEATHING CONTINUOUSLY ACROSS PANELS AND HEADER. FASTEN SHEATHING TO HEADER USING (4) ROWS OF 8d NAILS AT 3" O.C. (IN A 3" GRID PATTERN) AND TO ALL OTHER FRAMING MEMBERS AT 3" O.C. (TYP.)

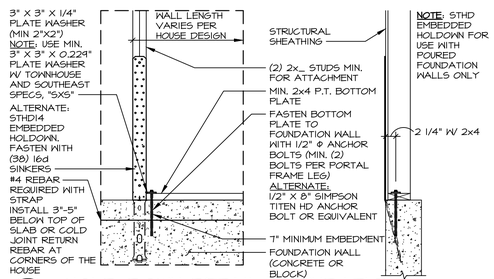
FASTEN HEADER TO TOP PLATE WITH (2) ROWS OF 16d SINKERS AT 3" O.C. (TYP.)

SIMPSON MST48 HEADER STRAP (CAPACITY = 5190) TO JACK STUD. STRAP ON BOTH SIDES OF OPENING, INSTALLED ON INTERIOR SIDE OF PANEL



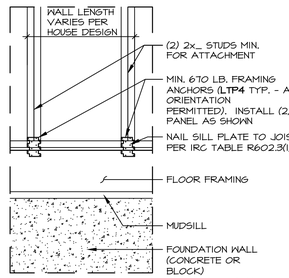
2 WB-2 ALTERNATE PORTAL FRAME: HEADER / PANEL CONNECTION

SCALE 3/8" = 1'-0"



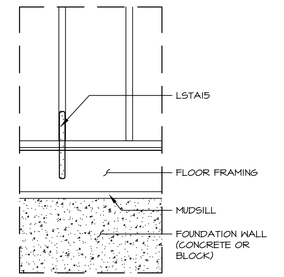
3 WB-2 HOLD-DOWN DETAIL: FOUNDATION

SCALE: 3/4" = 1'-0"



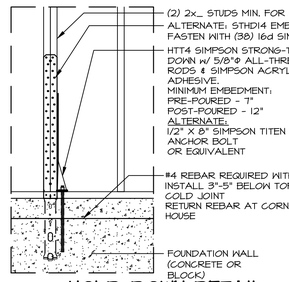
4 WB-2 HOLD-DOWN DETAIL: FRAMED FLOOR

SCALE: 3/4" = 1'-0"



5 WB-2 HOLD-DOWN DETAIL: FRAMED FLOOR

SCALE: 3/4" = 1'-0" 800# HOLD DOWN



6 WB-2 HOLD-DOWN DETAIL: FOUNDATION

SCALE: 3/4" = 1'-0" 800# HOLD DOWN

REV. NO.	DATE	REMARKS
28	9/24/20	CEL - 06#36764 - ADDED ATTACHMENT TO PARALLEL BLOCKING NOTE (TYP.)
29	9/24/20	CEL - 06#36456 - ADDED DETAIL D/WB-2, REVISED K/WB-2 LAYOUT
30	9/24/20	CEL - 06#36591 - PLATE WASHERS CHANGED TO 3"x3" WITH 1/2" THREADED ROD
31	10/15/20	CEL - REVISED K/WB-2 TO INCLUDE FLOOR TRUSSES
32	10/19/20	CEL - ADDED NOTES DETAILING WHEN TO USE K/WB-2
33	4/1/21	ARS - REV. DTL C PONY WALL NOTES
34	6/9/21	CEL - 06#39328 - REVISED HVB-2 TO REMOVE USE OF FLAT BLOCKING
35	12/9/22	DLR - 06#40261 - ADDED PERP. WALL BRACING DTL. AND ALT. FSTNG. TO HVB-2
27	5/16/20	CEL - ADDED NOTE THAT LIB-B CAN BE SINGLE OR DOUBLE TOP PLATE

NVR
NVR, Inc.
5285 Westview Drive, Suite 100
Frederick, MD 21703

SET NO. VERSION
DRAWN BY ELH
DATE: 4/8/14
OPTION DESCRIPTION

SHEET NO. WB-2
MODEL WALL BRACING DETAILS
DRAWING TITLE PRESCRIPTIVE WALL BRACING DESIGN

J:\PROJECTS_DETAILS\NVR_Wall Bracing\WB2_BRACED WALL_PRESCRIPTIVE.dwg 02/17/23 - 2:28 pm

AUGUST 7, 2023

DAVID MENTZER REGISTERED ARCHITECT NO. 16083 NORTH CAROLINA