CEDAR

DIV-COMM-LOT-UNIT	

COMM-LOT	
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STREET ADDRESS	APT. NO.
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CITY	STATE / ZIP
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	SLAB FOUNDATION	STANDARD DETAILS
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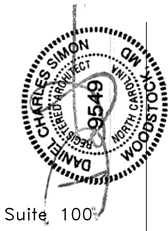
NVR



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

FIRST FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	783 SF
	783 SF

SECOND FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
2ND FLOOR (BASE SF)	1120 SF
	1120 SF

GARAGE SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
TWO CAR FRONT ENTRY GARAGE	397 SF
	397 SF

TOTAL FINISHED SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	783 SF
2ND FLOOR (BASE SF)	1120 SF
	1903 SF

SET - VERSION

CDR00 - 01

CS-1

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. Use Group: R-3
3. Constr. Type: V-B
4. 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 (WCLIB & 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**. 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 .229" 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 (914 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 (d)	3- #4 BARS (d,e)
		60	6'-0"	NOT REQUIRED (d)	3- #4 BARS (d,e)
			7'-0"	#4 @ 22" O.C. (d)	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/mdws 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 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 walls assumed to be 2 x 4 stud construction unless otherwise noted on plans. Bearing walls shall have studs spaced at 16" o.c. maximum per **Table R602.3(3)** and **Table R602.3(5)**.
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	

    - 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.
17. 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**.
18. 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**.
19. Attic spaces shall be ventilated w/ ridge and soffit vents unless otherwise noted. Venting provided per **R806.2**.
20. Fireblocking shall be installed between ceiling and floor openings per **R302.11**. Draftstopping to be installed in accordance with **R302.12**.
21. 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**
22. Heating and cooling equipment installation shall be in accordance with **IRC Chapter 14** and the **International Mechanical Code**.
23. Mechanical fireplaces shall be installed per **Section R1004** and **1005**.
24. 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**.
25. Untreated wood shall be minimum 8" above finish grade per **R317.1 Item #2**.
26. Bottom plates on slabs and any wood in contact w/ concrete or masonry to be pressure treated material per Section **R317**.
27. 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**.
28. 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**.
29. Fasteners and connectors for pressure preservative-treated wood shall be hot-dipped galvanized steel.
30. 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**.
31. The final grade shall fall a minimum of 6 inches within the first 10 feet of the foundation per **R401.3**.
32. **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 treated wood, 3/4-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**.
33. 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.
34. Wall bracing is designed in compliance with **Section R602.10**. When wall bracing is beyond the criteria for a prescriptive approach, the structure is analyized 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.
35. 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 units. 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 **R303.7.1**.
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.

DANIEL CHARLES SIMON 29549 REGISTERED PROFESSIONAL ENGINEER NORTH CAROLINA WOODSTOCK

REV. NO.	DATE	REMARKS
1	1/8/19	MBT - CODE UPDATES FOR 2018 NCRBC
2	3/1/19	MBT - UPDATED ENGERY NOTES

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

SHEET NO. SS-1
MODEL NCRC 2018 SPEC SHEET
DRAWING TITLE SINGLE FAMILY ATTACHED / SINGLE FAMILY DETACHED
OPTION DESCRIPTION NC State Building Code - Residential Code 2018
SET NO. —
VERSION
DRAWN BY
DATE:
OPTION

V:\As-Sold\2-Jobs\ASD\2021 2nd Half-Complete\RHA\DETACHED\CEDAR_CDROD_01\ELEF_R_06_0184\2015_IRC_2018_NCRC.dwg 12/01/21 - 2:43 pm

NVR - Business Use Only

NVR

Version 4.0
(Last Revised 04/26/19)

ROOF VENTILATION CALCULATIONS

HOUSE NAME	CEDAR
HOUSE VERSION	CDR00_01
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	YES		HIGH	**FAIL**	Decrease ridge
	NO	NO		*(any)*	**FAIL**	Increase total vent

ELEVATION "A or F or 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
Main House Roof	161280	1075.20	537.60	60	594.00	12	216.00			810.00	NO	YES	40.18%	OK	
Garage Roof	11880	79.20	39.60	27.5	272.25		0.00			272.25	YES	N/A	N/A	N/A	

ELEVATION "B or 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
Main House Roof	161280	1075.20	537.60	51	504.90	12	216.00			720.90	NO	YES	40.18%	OK	
Garage Roof	11880	79.20	39.60	27.5	272.25		0.00			272.25	YES	N/A	N/A	N/A	

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Version 2.0
(Last Revised 04/26/19)

HOUSE VOLUME CALCULATIONS

HOUSE NAME	CEDAR
HOUSE VERSION	CDR00-01
PRODUCT LINE	RYANHOMES

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

ELEVATION "X"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house			*0*
Garage bump out from main house			*0*
Porch on front of house			*0*
		Total House Volume	0

ELEVATION "X"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house			*0*
Garage bump out from main house			*0*
Porch on front of house			*0*
		Total House Volume	0

ELEVATION "X"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house			*0*
Garage bump out from main house			*0*
Porch on front of house			*0*
		Total House Volume	0

ELEVATION "X"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house			*0*
Garage bump out from main house			*0*
Porch on front of house			*0*
		Total House Volume	0

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.)
			0

DANIEL CHARLES SIMON
REGISTERED ARCHITECT
0540
NORTH CAROLINA
WOODSTOCK, MD

DIV—COMM—LOT—UNIT

COMM—LOT
---- - ----

STREET ADDRESS
---- ----

APT. NO.

CITY

STATE

ZIP

NVR
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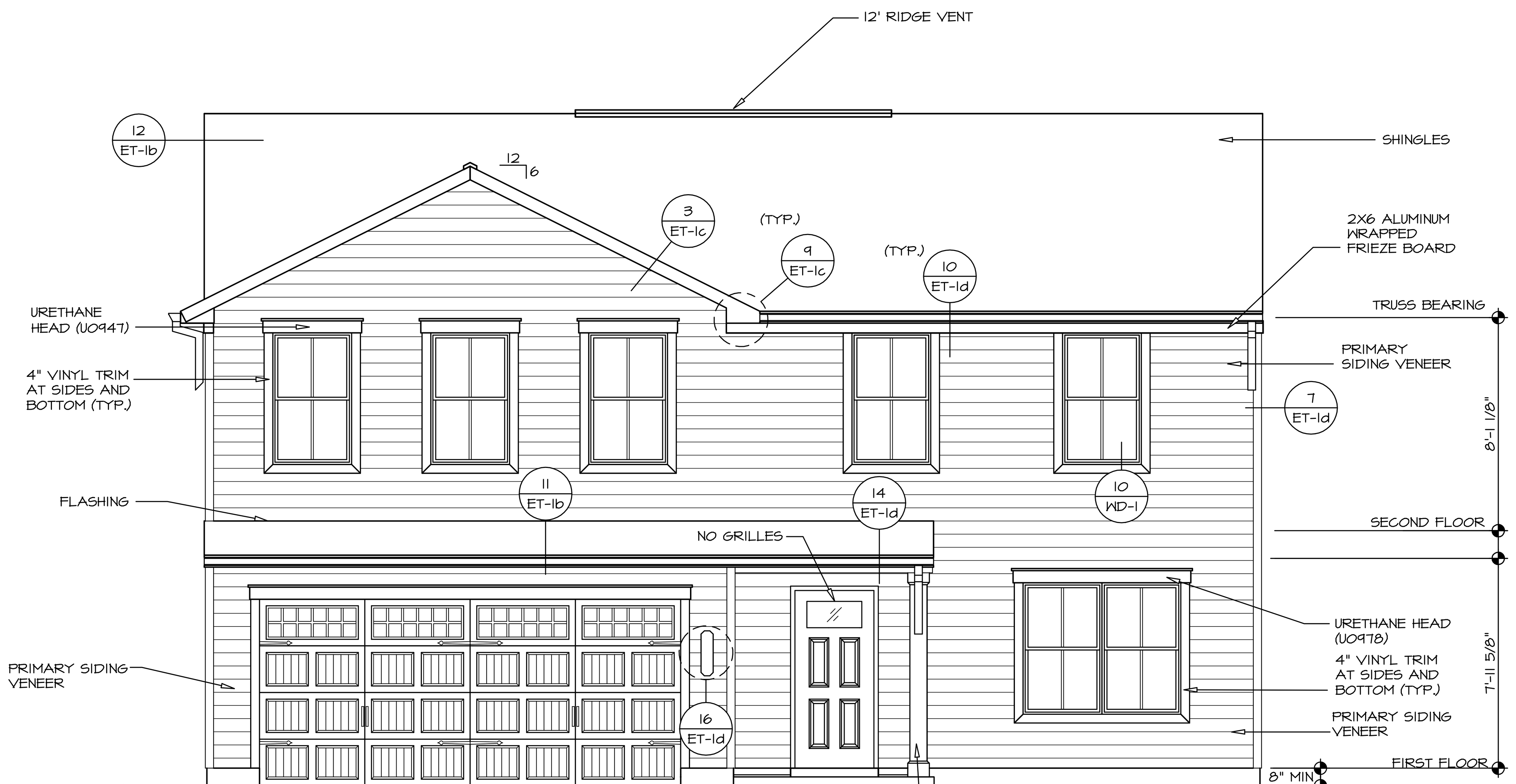
5285 Westview Drive, Suite 100
Frederick, MD 21703

SET NO. CDR00
VERSION 01
DRAWN BY
DATE:
OPTION

MODEL
CEDAR
DRAWING TITLE

OPTION DESCRIPTION

SHEET NO.
CA-1

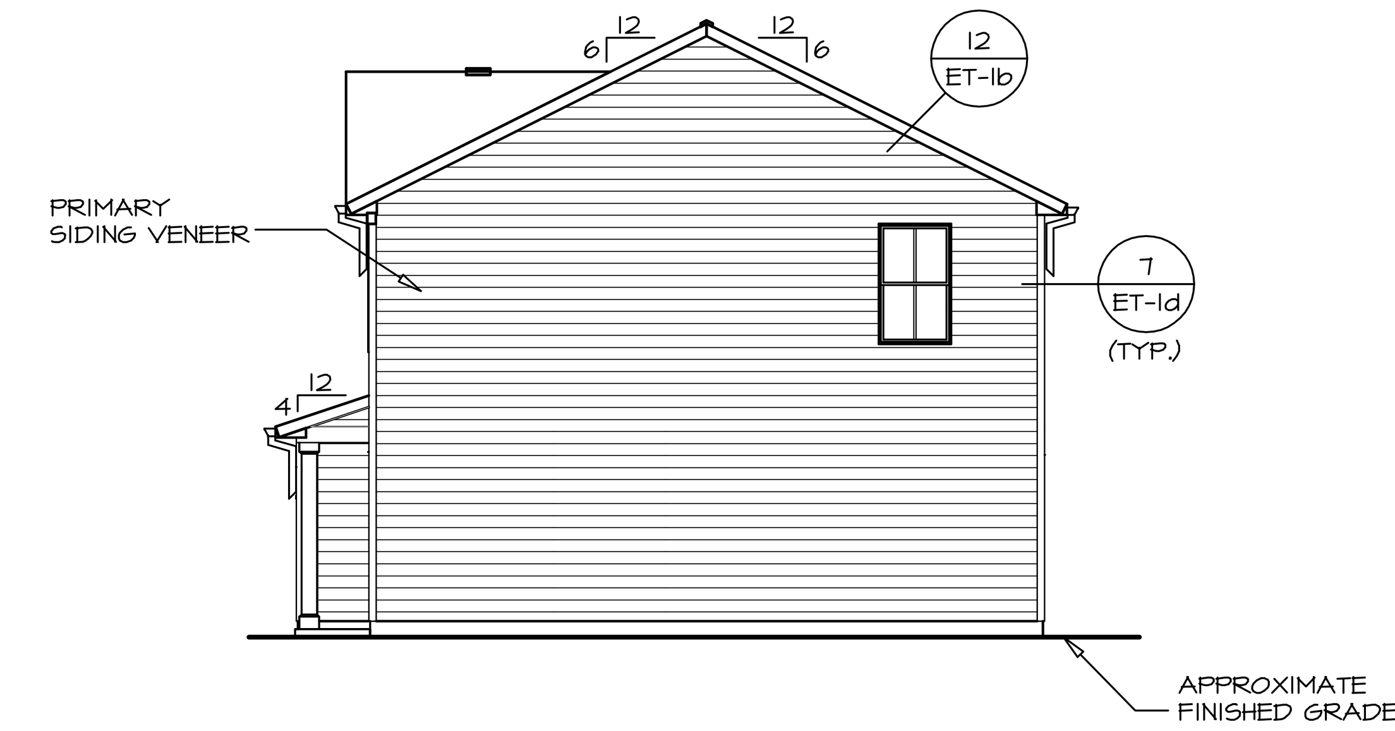


NOTES:
1. WITH BRONZE WINDOWS ALL TRIM TO BE WHITE.
2. IF BUILT IN COMMUNITIES WITH COTTAGE ELEVATIONS, PROVIDE GARAGE DOOR HARDWARE (8 STRAPS AND 2 SETS OF HANDLES.)

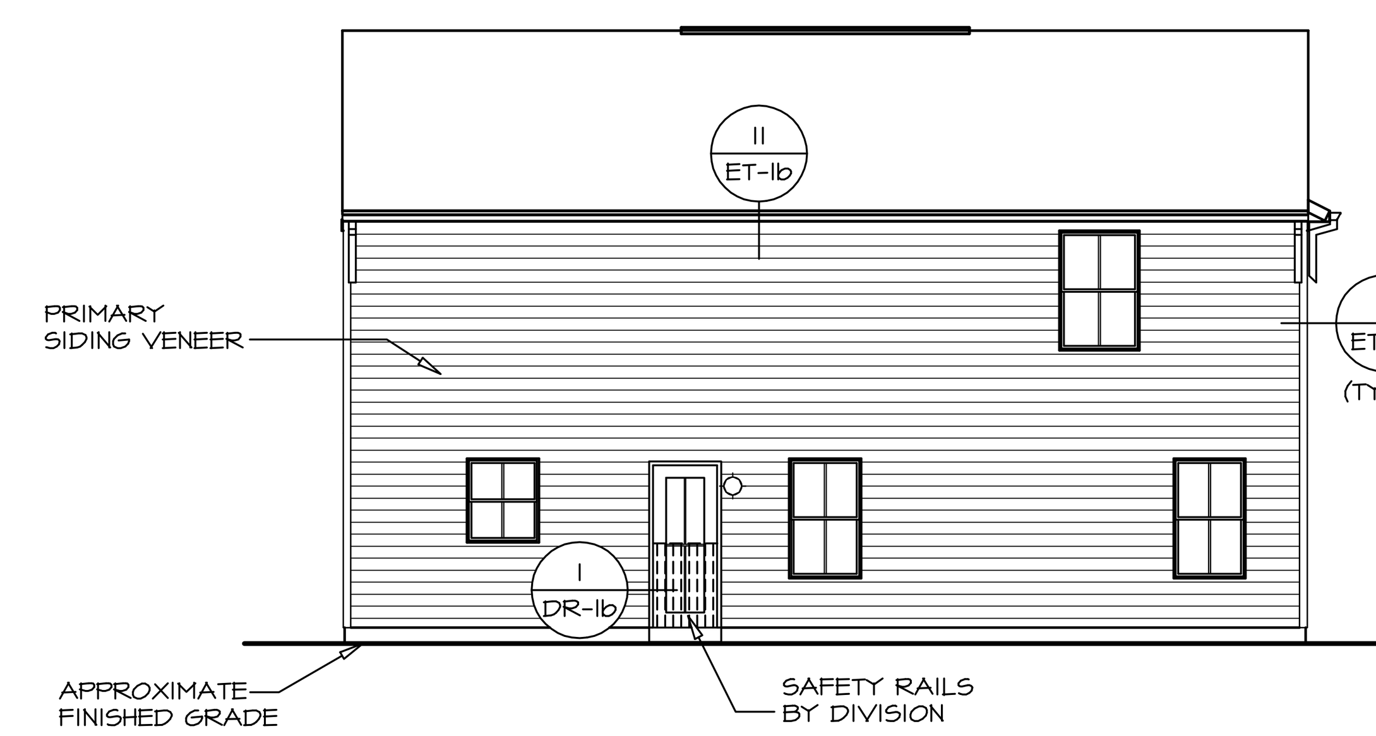
GARAGE DOOR TRIM
HEAD - URETHANE (U0955)
(7/DR-1)
SIDES - 4" VINYL TRIM (8/DR-1)

ENTRY DOOR TRIM
HEAD - BRICK MOULD (4/DR-1)
SIDES - BRICK MOULD (5/DR-1)
SILL - 5/4X8 TRIM (RIPPED)

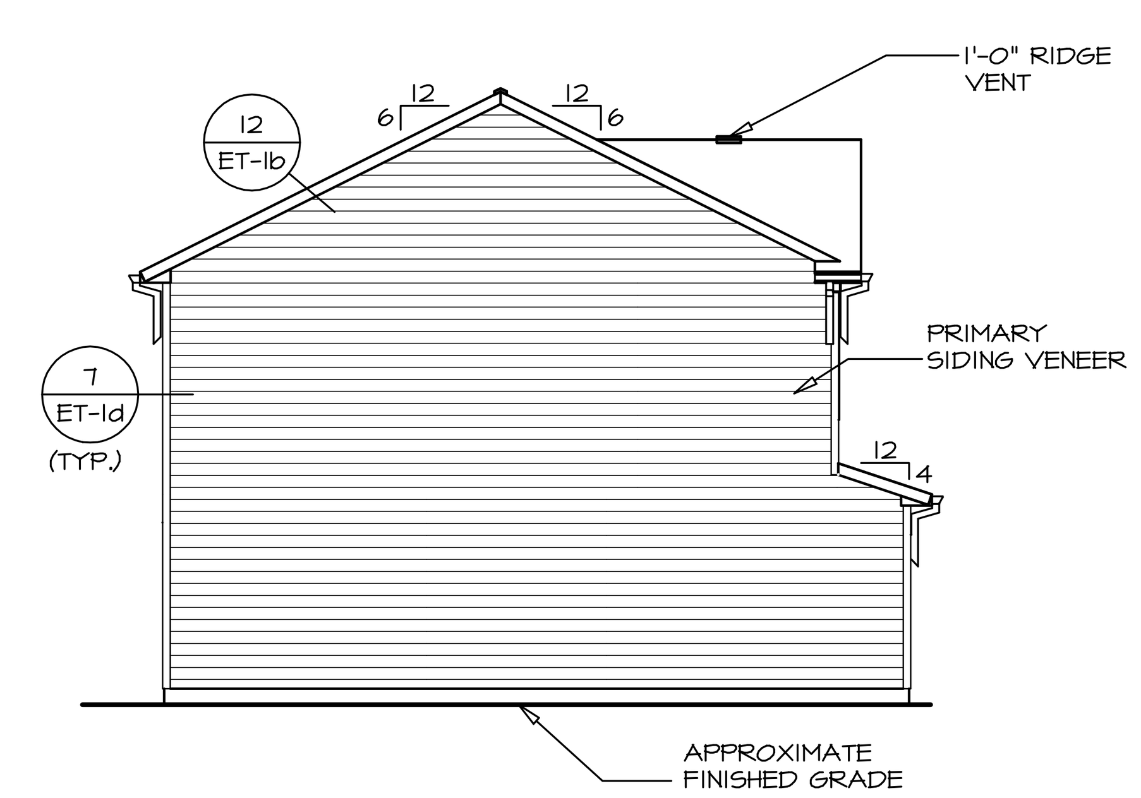
1 / A-1 **FRONT ELEVATION "F"**
SCALE: 1/4" = 1'-0"



2 / A-1 **RIGHT SIDE ELEVATION**
SCALE: 1/8" = 1'-0"



3 / A-1 **REAR ELEVATION**
SCALE: 1/8" = 1'-0"



4 / A-1 **LEFT SIDE ELEVATION**
SCALE: 1/8" = 1'-0"

DANIEL CHARLES SIMON
REGISTERED ARCHITECT
9549
WOODSTOCK

DIV-COMM-LOT-UNIT

COMM-LOT
---- - ----
STREET ADDRESS
---- ----
APT. NO.

CITY

STATE

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SET NO. CDR00
VERSION 01
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DATE:
OPTION
FSA

MODEL
CEDAR
DRAWING TITLE
ELEVATIONS
OPTION DESCRIPTION
SLAB FOUNDATION

SHEET NO.
A-1
4

V:\As-Sold\2-Jobs\ASD\2021 2nd Half-Complete\RLH\DETACHED\CEDAR\CDR00_01\ELF_R_QG_0184\4 A-1 ELV_LS (FSA).dwg 12/01/21 - 2:43 pm

PAD FOOTING SCHEDULE					
IDENTIFIER	LENGTH	WIDTH	HEIGHT	ENG. NUM.	REMARKS
F001	11'-1 1/2"	1'-4"	0'-8"	S0001	
F002	8'-7"	1'-4"	0'-8"	S0001	
F009	2'-0"	2'-0"	1'-0"	1016	

FOUNDATION DIAGONALS			
A		B	
A	0"	A	40'-1 11/32"
B	40'-1 11/32"	B	0"
C	48'-9 29/32"	C	31'-0"
D	28'-0"	D	50'-7 9/32"

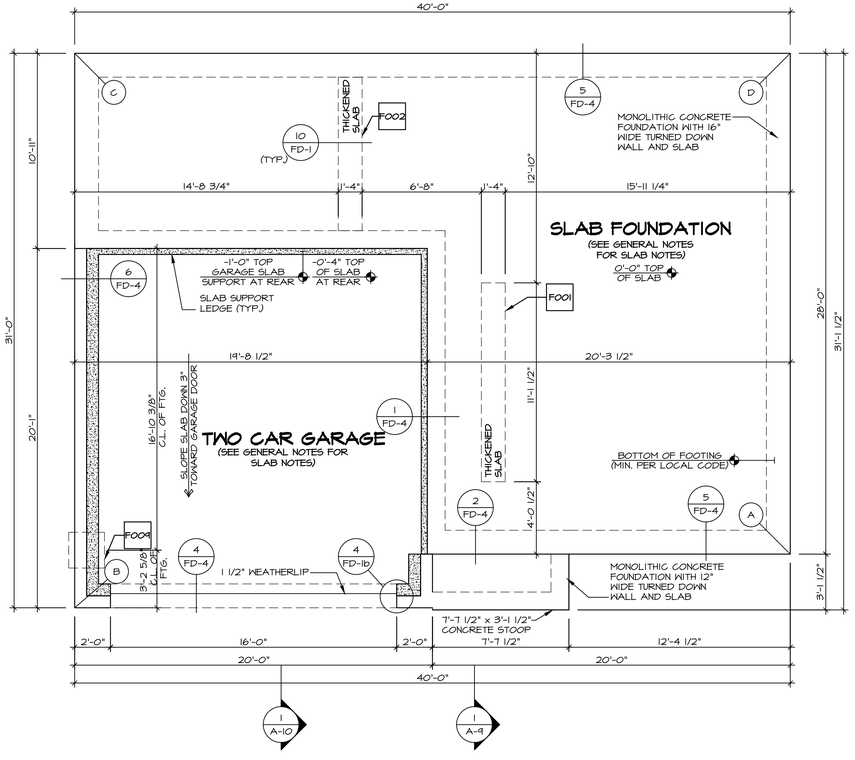
FOUNDATION NOTES - SLAB

1. FOUNDATION UNDER HABITABLE SPACE:
   1.1. CONCRETE SLAB ON 6 MIL 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, UNREINFORCED CONCRETE UNLESS NOTES OTHERWISE.

LEGEND

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

SEE FC DETAILS FOR FRAMING CONNECTORS



1 A-3 FOUNDATION PLAN

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

DANIEL CHARLES SIMON 09549 REGISTERED PROFESSIONAL ENGINEER NORTH CAROLINA WOODSTOCK

DIV-COMM-LOT-UNIT ---

COMM-LOT --- - ----

STREET ADDRESS ---- ----

CITY ----

APT. NO. ----

STATE ----

ZIP ----

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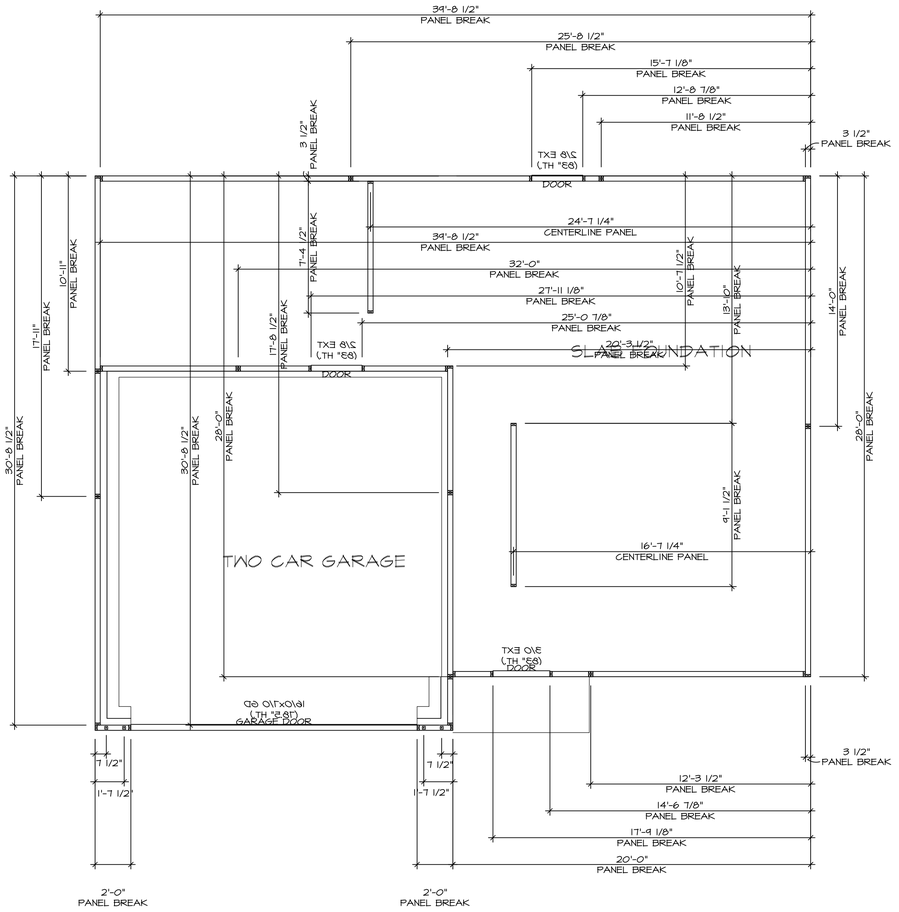
SET NO. CDR00
VERSION 01
DRAWN BY
DATE:
OPTION FSA

SHEET NO. A-3

MODEL CEDAR
DRAWING TITLE FOUNDATION PLAN
OPTION DESCRIPTION SLAB FOUNDATION

5

V:\1-Sold\2-Jobs\ASD\2021 2nd Half-Complete\RLH\DETACHED\CEDAR_CDR00_01\ELF_R_06_01841\5 A-3 FDN_LS (FSA).dwg 12/01/21 - 2:43 pm



1 / A-4 FOUNDATION HOLD DOWN DETAILS

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 FF-1 FOR MORE INFORMATION ON ANCHOR DETAILS)
STRAP	1. STRAP, a. ON FOUNDATION USE (STHD14) b. ON FLOOR SYSTEM USE (STHD14R_) 2. ALL OTHER HOLD DOWN SEE DETAIL (NB-2) FOR MORE INFORMATION. 3. STRAP LOCATION ON PLANS SHOWN BY DASHED DIMENSION TO CENTER OF STUDS OR
BOLT	1. 5/8"Φ THREADED ROD 2. ALL OTHER HOLD DOWN SEE DETAIL (NB-2) FOR MORE INFORMATION. 3. BOLT LOCATION ON PLANS SHOWN BY SOLID DIMENSION TO CENTER OF BOLT

DANIEL CHARLES SIMON
REGISTERED ARCHITECT
NORTH CAROLINA
WOODSTOCK, MD
9540

DIV-COMM-LOT-UNIT

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

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VERSION 01
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DATE:
OPTION

MODEL
CEDAR
DRAWING TITLE
FOUNDATION HOLD DOWN DETAILS

SHEET NO.	OPTION DESCRIPTION	
A-4	OPTION	6

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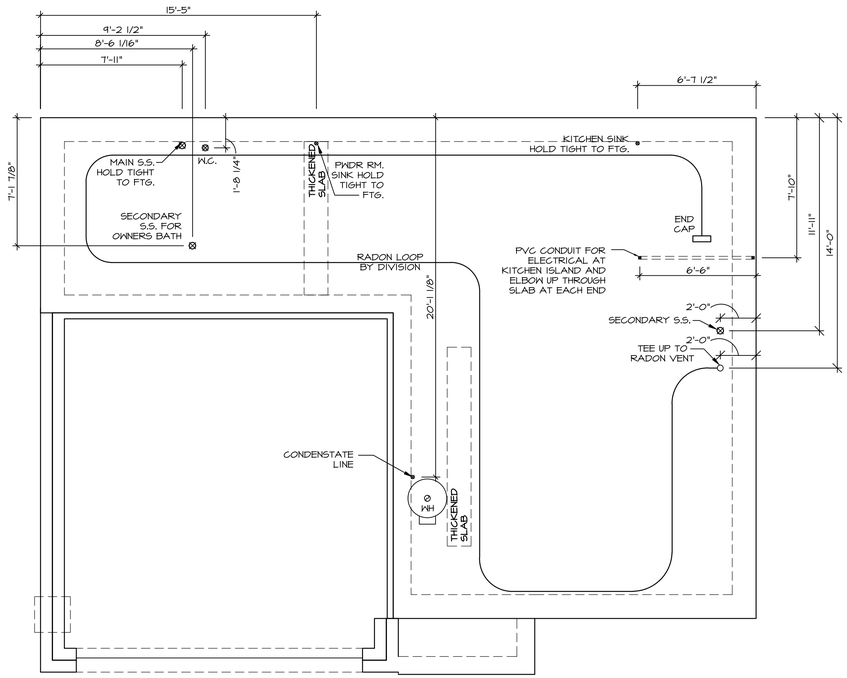
NOTE

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
- SCREENS 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"

DIV-COMM-LOT-UNIT: ---

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

STREET ADDRESS: ---

APT. NO.: ---

CITY: ---

STATE: ---

ZIP: ---

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VERSION 01

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DATE:

OPTION

OPTION DESCRIPTION

MODEL CEDAR

DRAWING TITLE PLUMBING PLAN

SHEET NO. A-5

7

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FIRST FLOOR JACK SCHEDULE			
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS
JI01	JACK - (3) 2X4 SPF STUD GRADE	1019	
JI02	JACK - (2) 2X4 SPF STUD GRADE	1019	
JI03	JACK - (2) 2X4 SPF STUD GRADE	1014	
JI04	JACK - (2) 2X4 SPF STUD GRADE	1014	
JI05	JACK - (2) 2X4 SPF STUD GRADE	1012	
JI06	JACK - (4) 2X4 SPF	1025	
JI07	JACK - (4) 2X4 SPF	1025	
JI08	JACK - (2) 2X4 SPF STUD GRADE	1008	
JI09	JACK - (2) 2X4 SPF STUD GRADE	1008	
JI10	JACK - (2) 2X4 SPF STUD GRADE	1010	
JI11	JACK - (2) 2X4 SPF STUD GRADE	1010	
JI12	JACK - (4) 2X4 SPF STUD GRADE	1006	
JI13	JACK - (4) 2X4 SPF STUD GRADE	1006	
JI14	JACK - (4) 2X4 SPF STUD GRADE	1006	
JI15	JACK - (4) 2X4 SPF STUD GRADE	1006	

FIELD INSTALLED FIRST FLOOR BEAM/HEADER SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
BI01	INT HEADER - 2X8 - 2 PLY	4'-1"	1019	

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.
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 WINDOWS HAVE **7'-0 1/2"** HEADER HEIGHT UNLESS OTHERWISE NOTED.
9. ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
10. TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.

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.

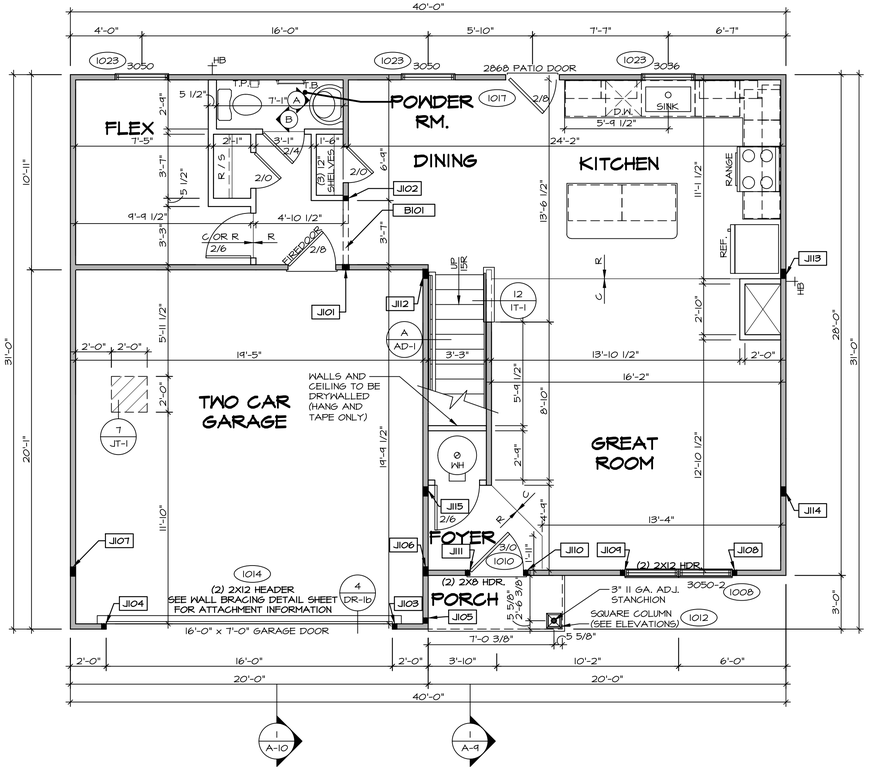
AT STAIRS:

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

LEGEND

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

SEE FC DETAILS FOR FRAMING CONNECTORS



1 A-7 **FIRST FLOOR PLAN**

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

DANIEL CHARLES SIMON
REGISTERED ARCHITECT
21938
STATE OF MARYLAND

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

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Frederick, MD 21703

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VERSION 01
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DATE:
OPTION
OPTION DESCRIPTION

MODEL CEDAR
DRAWING TITLE FIRST FLOOR PLAN
SHEET NO. A-7

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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 BEARINGS, 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.
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 WINDOWS HAVE **7'-0 1/2"** HEADER HEIGHT UNLESS OTHERWISE NOTED.
9. ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
10. TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.

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.

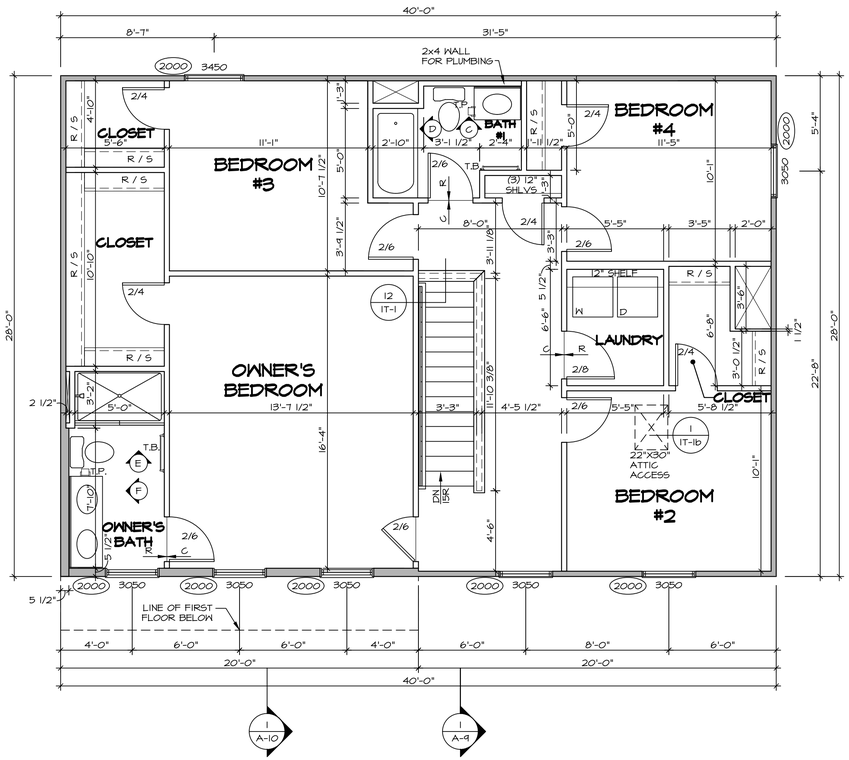
AT STAIRS:

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

LEGEND

- BEARING WALL
- NON BEARING WALL
- ⊗ INDICATES BEARING FROM POINT-LOAD ABOVE
- JACKS
- (B_) BEAM/HEADER
- [F_] PAD FOOTING
- (G_) STEEL COLUMN
- (X) TRUSS TIE DOWN
- [X] PORTAL FRAME
- [X] JOIST/TRUSS
- [L___-_] LVL
- (X) ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS



SECOND FLOOR PLAN

A-8 — SCALE: 1/4" = 1'-0"

CHARLES SIMON DANIELL REGISTERED ARCHITECT 9549 NORTH CAROLINA WOODSTOCK

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

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

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VERSION 01
DRAWN BY
DATE:
OPTION

MODEL: CEDAR
DRAWING TITLE: SECOND FLOOR PLAN
OPTION DESCRIPTION

SHEET NO. A-8

10

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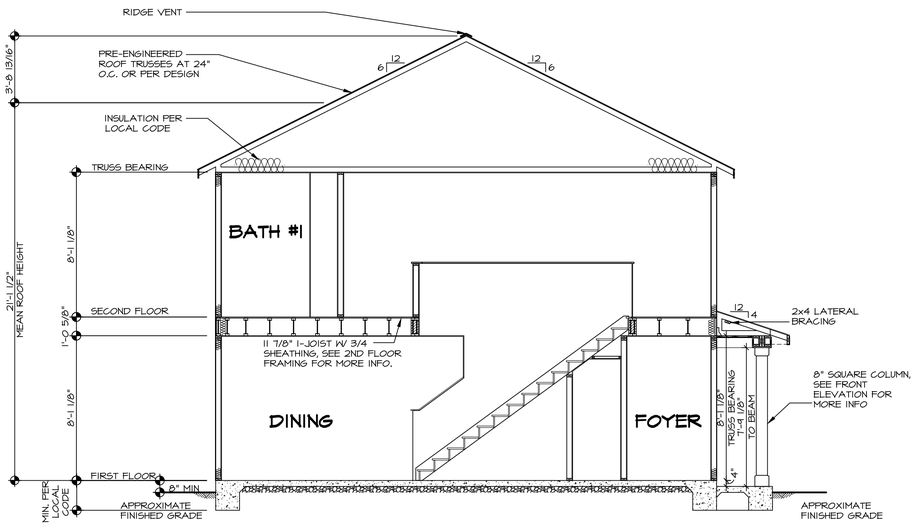

BUILDING SECTION - FOYER

1 / A-9

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

DANIEL CHARLES SIMON
REGISTERED ARCHITECT
NO. 9549
STATE OF MARYLAND

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

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

STREET ADDRESS: ---- ----

APT. NO.: ----

CITY: ----

STATE: ----

ZIP: ----

12/01/21 - 2:44 pm

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Frederick, MD 21703

SHEET NO.: A-9

MODEL: CEDAR

DRAWING TITLE: BUILDING SECTION - FOYER

OPTION DESCRIPTION

SET NO. CDR00

VERSION 01

DRAWN BY

DATE:

OPTION

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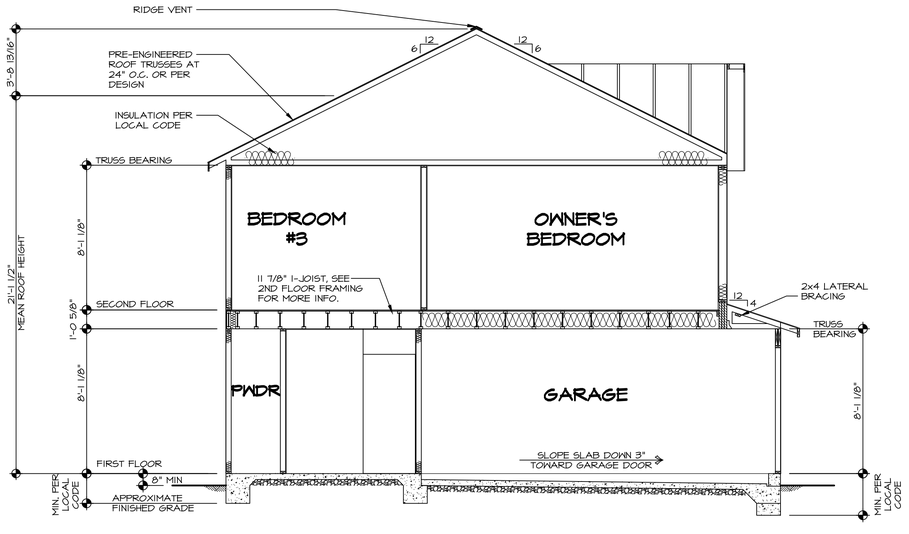

1 / A-10 BUILDING SECTION - GARAGE

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

DANIEL CHARLES SIMON — 9549 — REGISTERED PROFESSIONAL ENGINEER — NORTH CAROLINA — WOODSTOCK

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

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

12/01/21 - 2:44 pm

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Frederick, MD 21703

SHEET NO. A-10

MODEL CEDAR

DRAWING TITLE BUILDING SECTION - GARAGE

SET NO. CDR00
VERSION 01

DRAWN BY

DATE:

OPTION

OPTION DESCRIPTION

12

V:\As-Sold\2-Jobs\ASD\2021 2nd Half-Complete\KLH\DETACHED\CEDAR_CDR00_01\ELF_R_06_0184\12 A-10 SECT_GAR_LS.dwg 12/01/21 - 2:44 pm

SECOND FLOOR LVL LENGTH SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
L201-3	LVL 1.75 - 18	20'-0"	1025	5.A
L202	LVL 1.75 - 11-14	11'-9"	1004	

SECOND FLOOR FRAMING LENGTH SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
2AA	PRI 60 - 11-14	39'-9 3/4"		J-0053
2AA-2	PRI 60 - 11-14 DBL	39'-9 3/4"	1036	J-0159
2AB	PRI 60 - 11-14	16'-6 1/8"	1031	J-0054
2AC	PRI 60 - 11-14	19'-9 3/4"		
2AE	PRI 60 - 11-14	39'-9 3/4"		
2AF-2	PRI 60 - 11-14 DBL	20'-2 3/8"	1033	J-0055
2AG	PRI 60 - 11-14	39'-9 3/4"	1033	J-0053
2AL	PRI 60 - 11-14	16'-6 1/8"	1037	J-0246
2AP	PRI 60 - 11-14	39'-9 3/4"	1038	J-0400
2AQ	PRI 60 - 11-14	19'-9 3/4"	1040	J-0402

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.

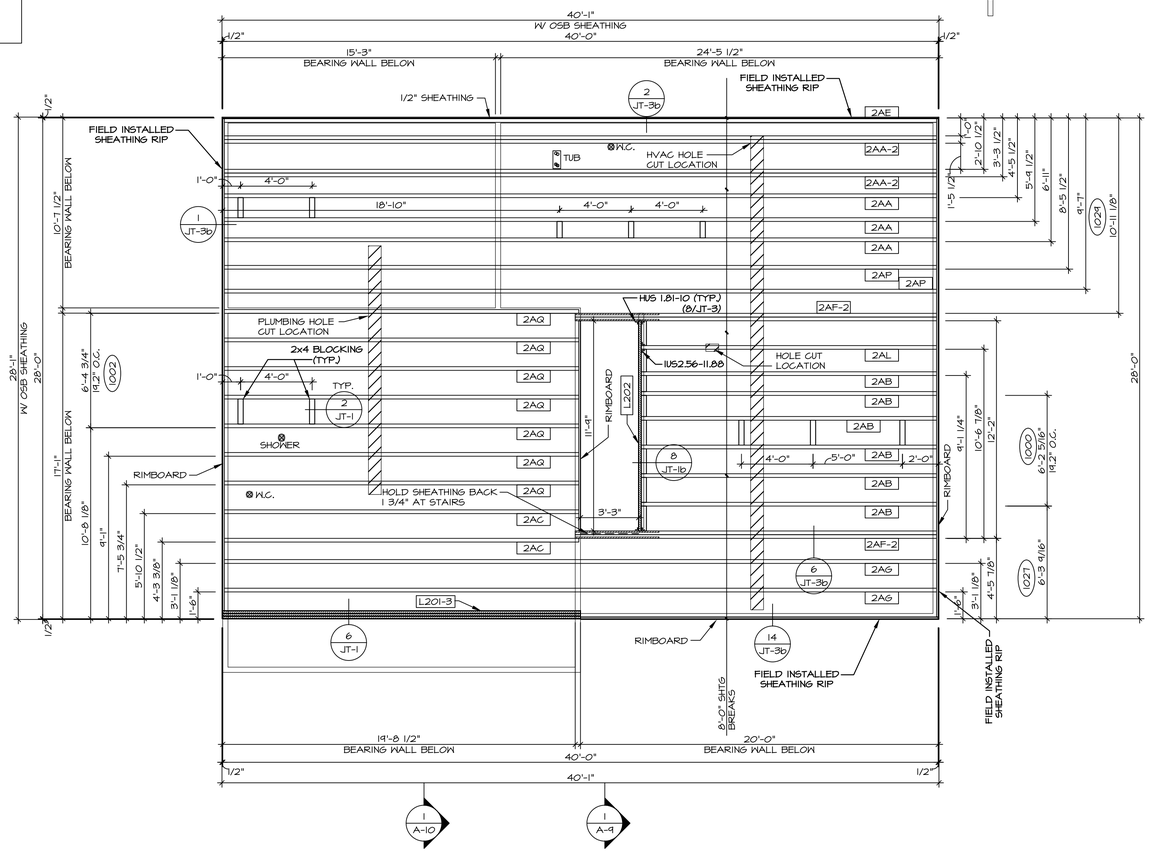
I-JOIST FLOOR SYSTEM

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-4) FOR TYPICAL HANGERS.
10. ALL LVL 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.

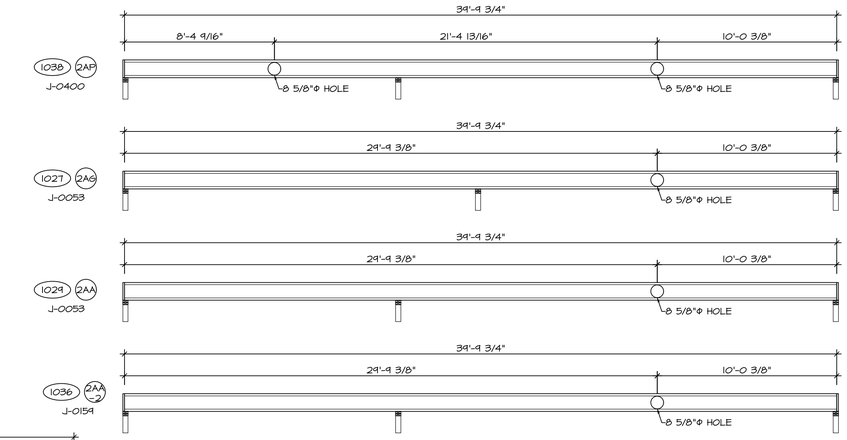
LEGEND

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

SEE FC DETAILS FOR FRAMING CONNECTORS



1 / S-2 **SECOND FLOOR FRAMING PLAN**
SCALE: 1/4" = 1'-0"



2 / S-2 **JOIST HOLE CUTS**
SCALE: 1/4" = 1'-0"

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SET NO. CDR00
VERSION 01
DRAWN BY
DATE:
OPTION

SHEET NO. S-2
MODEL CEDAR
DRAWING TITLE SECOND FLOOR JOIST LAYOUT
OPTION DESCRIPTION
20

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TRUSS SCHEDULE					
IDENTIFIER	SPECS	TRUSS NUMBER	LENGTH	ROOF PITCH (X/12)	TYPE
AA	SE	16903	28'-0"	6/12	COMMON
AB	SE	16904	28'-0"	6/12	SPECIAL
AC	SE	16900	3'-0"	6/12	MONO
AD	SE	16908	28'-0"	6/12	COMMON
AF	SE	16910	28'-0"	6/12	GABLE END
AG	SE	16913	28'-0"	6/12	GABLE END
V01	VT	93344	4'-0"	6-6/12	VALLEY
V02	VT	93345	8'-0"	6-6/12	VALLEY
V03	VT	93346	12'-0"	6-6/12	VALLEY
V04	VT	93407	16'-0"	6-6/12	VALLEY
V05	VT	95401	20'-0"	6-6/12	VALLEY

FIELD INSTALLED ROOF FRAMING BEAM/HEADER SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
B301	BEAM BUILT 2X8 - 2 PLY RFF	7'-6"	1012	

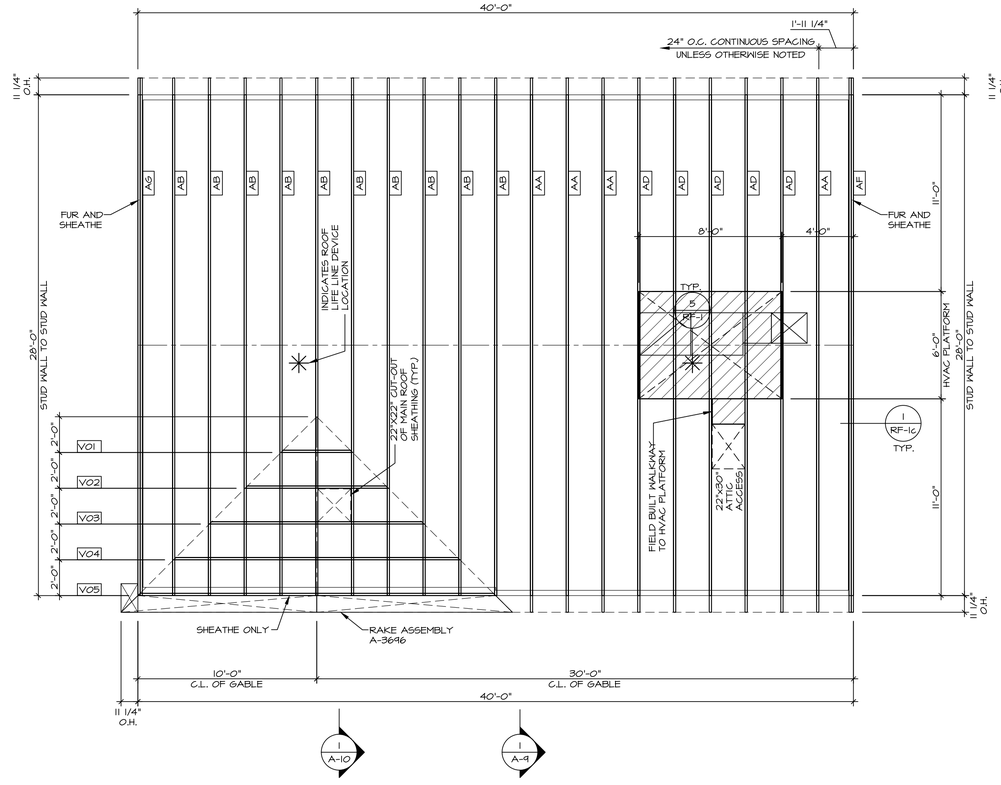
ROOF FRAMING NOTES

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. TRUSS BRACING (2/RF-1c)
   - 1.6. LIFELINE ATTACHMENT (5/RF-1)
   - 1.7. FALL PROTECTION ON PLATFORM TRUSSES (11/RF-1)
2. IF TRUSS DOES NOT APPEAR ON THE TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING REQUIRED.

LEGEND

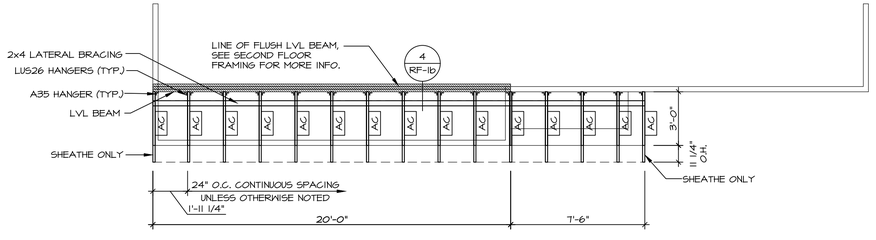
- BEARING WALL
- NON BEARING WALL
- ⊗ INDICATES BEARINGS FROM POINT-LOAD ABOVE
- JACKS
- (B_) BEAM/HEADER
- [F_] PAD FOOTING
- ◇C_◇ STEEL COLUMN
- ⬡X⬡ TRUSS TIE DOWN
- [X] PORTAL FRAME
- [X] JOIST/TRUSS
- [L_-_-_] LVL
- (X) ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS



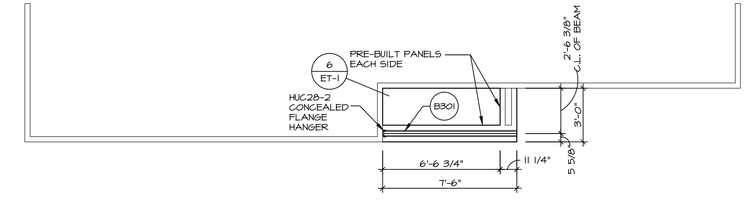
1 S-3 ROOF FRAMING

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



4 S-3 PARTIAL ROOF FRAMING PLAN

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



5 S-3 PORCH BEAM PLAN

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

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OPTION
OPTION DESCRIPTION

MODEL: CEDAR
DRAWING TITLE: ROOF FRAMING
SHEET NO.: S-3

21

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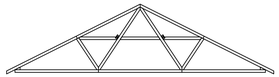

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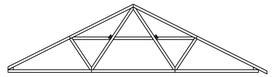

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TRUSS BRACINGDETAILS

1 / S-4

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

TRUSS BRACING NOTES

1. IF TRUSS DOES NOT APPEAR ON THIS TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING IS REQUIRED.
2. 1X6 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 1X6 LATERAL BRACING.
4. DIAGONAL BRACING REQUIRED WHEN LATERAL BRACING IS REQUIRED (1/RF-1)
5. STUDDED GABLE BRACING DETAIL 1/RF-1c TO BE UTILIZED FOR TRUSSES 6'-4" 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.

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DRAWING TITLE
TRUSS BRACING DETAILS

SHEET NO.
S-4

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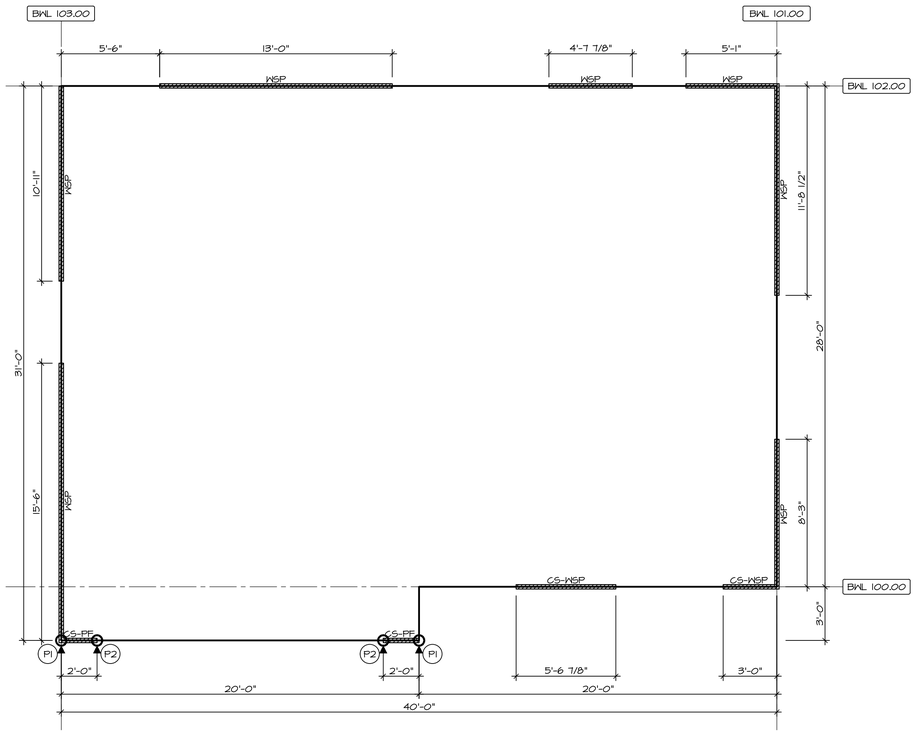
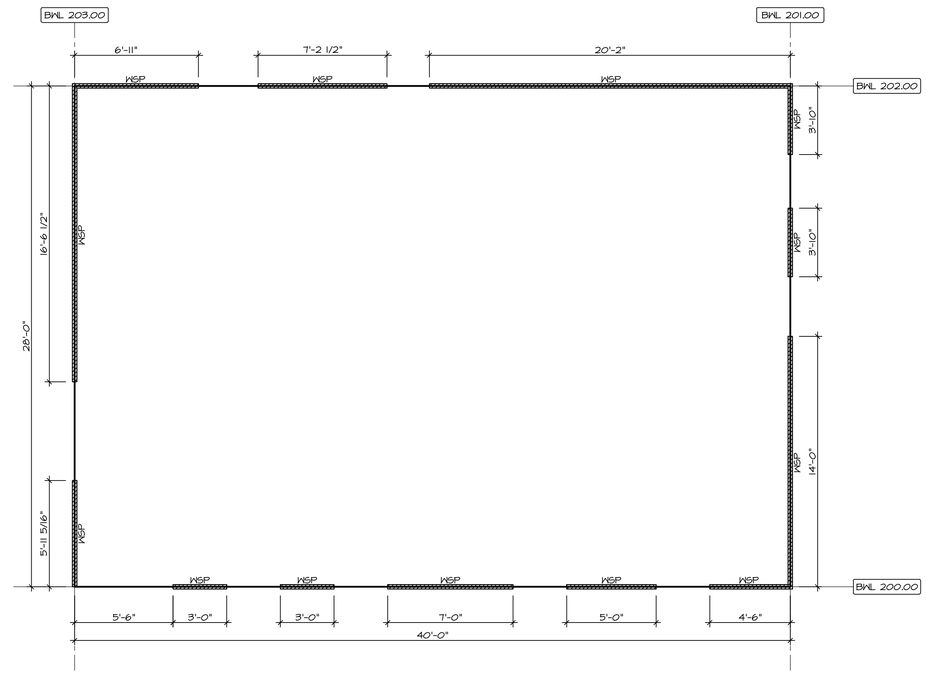


FIRST FLOOR BRACED WALL DETAIL

1 / S-5

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



SECOND FLOOR BRACED WALL DETAIL

2 / S-5

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

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
▶O	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 1-3/4" 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 WALLBOARD BLOCKED AT THE EDGES (W/ METHOD GB-BW-1, GB-BW-2)	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.

BRACED WALL LINE SCHEDULE

WIND SPEED (ULT)	IDENTIFIER	ACTUAL (FT)	REQUIRED (FT)	METHOD
130 MPH	BWL 100.00	14.51'	9.36'	CONTINUOUS (2 SIDES)
130 MPH	BWL 101.00	19.96'	14.78'	WSP (2 SIDES)
130 MPH	BWL 102.00	22.74'	10.73'	WSP (2 SIDES)
130 MPH	BWL 103.00	26.42'	15.24'	WSP (2 SIDES)
130 MPH	BWL 200.00	21.00'	5.18'	WSP (2 SIDES)
130 MPH	BWL 201.00	21.32'	7.06'	WSP (2 SIDES)
130 MPH	BWL 202.00	34.24'	5.18'	WSP (2 SIDES)
130 MPH	BWL 203.00	25.13'	7.06'	WSP (2 SIDES)

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MODEL: CEDAR

DRAWING TITLE: BRACED WALL PANEL DETAIL

DRAWN BY:

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OPTION

OPTION DESCRIPTION

SHEET NO. S-5

23

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