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As directed by the North Carolina Board of Architecture and Registered Interior Designers, architectural seals are not required for - and should not be placed by NVR on - these plans and specifications. These plans and specifications are prepared solely by, and for the exclusive use of, NVR, Inc. and are solely for a family residence consisting of eight or fewer attached units with grade level exits and which is not part of or physically connected with any other buildings or residential units. NVR, Inc. does not provide any third party the opportunity to customize these plans. The respective drawings contained herein shall be used only as construction assembly drawings by NVR, Inc. and its subcontractors. Any unauthorized use of these plans without the written consent of NVR, Inc. is prohibited.

# GRAND CAYMAN

V-COMM-LOT-UNIT		
DMM-LOT		
REET ADDRESS		APT. NO.
TY	STATE	ZIP
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	1.	<u> </u>				T -		
Page	Sheet	<b>Description</b> Page	Sheet	Description	Page	Sheet	Description	
1	CS-1	COVERSHEET	FD-7	FOUNDATION DETAILS				
1.1	SS-1	SPEC SHEET	RF-1	STANDARD DETAILS				
2	CA-1	ROOF VENT AND VOLUME CALCULATIONS	RF-1B	STANDARD DETAILS				
4	A-1	ELEVATIONS	RF-1C	STANDARD DETAILS				
7	A-3	FOUNDATION	SEP-1	SEP DETAILS				
8	A-4	FOUNDATION HOLD DOWN	SEP-2	SEP DETAILS				
9	A-5	PLUMBING	SEP-3	SEP DETAILS				
<del>_</del> 11	A-7	FIRST FLOOR PLAN	SEP-4	SEP DETAILS				
12	A-8	BUILDING SECTION	SP-1	SAFETY DETAILS				
13	A-9	BUILDING SECTION - GARAGE	SP-2	SAFETY DETAILS				
20	S-3	ROOF FRAMING	SP-3	SAFETY DETAILS				
21	S-4	TRUSS BRACING DETAILS	WB-2	WALL BRACING DETAIL				
22	S-5	WALL BRACING DETAILS	WD-1	STANDARD DETAILS				
	AD-1	HOUSE DETAILS	WD-3	STANDARD DETAILS				
	DR-1	STANDARD DETAILS	WS-1B	STANDARD DETAILS				
	DR-1B	STANDARD DETAILS						
	DR-3	STANDARD DETAILS						
	ET-1	STANDARD DETAILS						
	ET-1B	STANDARD DETAILS						
	ET-1C	STANDARD DETAILS						
	ET-1D	STANDARD DETAILS						
	ET-1H	STANDARD DETAILS						
	ET-3	STANDARD DETAILS						
	ET-3B	STANDARD DETAILS						
	ET-3C	STANDARD DETAILS						
	F-1	FLASHING DETAILS						
	F-1B	FLASHING DETAILS						
	F-1C	FLASHING DETAILS						
	F-1D	FLASHING DETAILS						
	F-3	FLASHING DETAILS-STONE						
	F-3B	FLASHING DETAILS						
	FA-1B	ASSEMBLY DETAILS						
	FC-1	FRAMING/FASTENER DETAILS						
	FC-1B	FRAMING AND FASTENER DETAILS						
	FC-2	FRAMING/FASTENER DETAILS						
	FC-3	FASTENER DETAILS						
	FC-4	FRAMING/FASTENER DETAILS						
	FC-5	FRAMING/FASTENER DETAILS						
	FD-1	STANDARD DETAILS						
	FD-1B	FOUNDATION DETAILS						
	FD-4	STANDARD DETAILS						



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specifications.

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

FIRST FLOOR SQUARE FO	OTAGE -
DESCRIPTION	TOTAL SQ. FT.
ST FLOOR CRAWL / SLAB FOUNDATION (BASE SF)	1533 SF
	1533 SF
GARAGE SQUARE FOOT	1
DESCRIPTION  FWO CAR GARAGE CRAWL / SLAB FOUNDATION	TOTAL SQ. FT.
MO CAR GARAGE CRAME / SLAB FOUNDATION	
	443 SF
unfinished square foc	TAGE
DESCRIPTION	TOTAL SQ. FT.
REAR COVERED PORCH (ADD. SF)	140 SF
FRONT COVERED PORCH (ADD. SF)	25 SF
	165 SF
TOTAL FINISHED SQUARE F	OOTAGE
DESCRIPTION	TOTAL SQ. FT.
ST FLOOR CRAWL / SLAB FOUNDATION (BASE SF)	1533 SF
	1533 SF
SET NO VERSION SHEET	NO. PAGE NO

#### GENERAL

- These plans and specifications are designed for the exclusive use by NVR, Inc. for the purpose of residential construction. As such, these products are offered for sale in NVR, Inc. communities only. NVR, Inc. is a production homebuilder and does not provide the opportunity to customize these plans. The respective drawings contained here in (A-, E-, S- and M-) shall only be used as construction assembly drawings by NVR, Inc. and their sub-contractors. Any unauthorized use of these plans without the written consent of NVR, Inc. 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
- 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 I3D 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

#### CODE ANALYSIS

- 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

I. Insulation requirements per 2018 NCRC Chapter II, 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
Ī	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 ÁCCA 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
Ridge vent: 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

Floor Living Areas

Table of Loads for House Structure. Per Table 301.5

_	
	- 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)
•	- IO# P.S.F. (Dead)
- Bottom Chord	- 10# P.S.F. (Live) (Attics without storage)
	- 20# P.S.F. (Live) (Attics with limited storac
	- 10# P.S.F. (Dead)
Habitable Attics	- 30# P.S.F. (Live)
Trusses	- Areas up to 130 <b>mph</b> ultimate wind speed p Table R301.2(4)
	- Exposure category 'B'
Malls	- Areas up to <b>130 mph</b> ultimate wind speed p
	Table R301.2(4)
	Vult   115 mph   130 mph
	Vasa 89 mph 101 mph
	Note: Linear interpolation between
	contour lines permitted.

- 40# P.S.F. (Live)

<u>Design Criteria</u>

Design Codes:

National Design specification for Wood Construction by National Forest

- 40# P.S.F. (Live)

- 10# P.S.F. (Dead)

Allowable deflection of structural members per IRC Table R301.7

2. Specification for the Design Fabrication and Erection of Structural Steel for B<u>ivildings</u> by American Institute of Steel Construction.

Materials Headers\* Southern Pine (KD-19), No. 1 Grade Spruce-Pine-Fir, Stud Grade Jacks Spruce-Pine-Fir, Stud Grade

Beams\*\* Southern Pine (KD-19), No. 1 Grade 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)

\* Where required, Laminated Veneer Lumber may be used per Engineering

\*\* Structural Steel - A.S.T.M. A36

#### FOUNDATIONS

- I. 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 WI.4xWI.4 mesh or equivalent fiber mesh reinforcement.
- 7. Unconditioned crawl spaces shall have a minimum net area of ventilation not less than I square foot for each 150 square feet of area, unless the ground surface is covered by a Class I vapor retarder, in which case the minimum net area of ventilation shall not be less than I 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
- 10. Block piers to be solid block or mortar-filled hollow block.

block shall be filled with mortar.

- II. 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 paraina from footing to top of finished grade. The paraing 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, I'-O" 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 **Ŕ407.2**.
- 17. For masonry veneers:

Per R703.8.4.I - Corrugated sheet metal veneer ties shall be a minimum of No. 22 U.S. qauqe 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.

be provided behind brick. Per Table R703.8.4 - Provide minimum I-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

Per R703.2 - One layer of No. 15 asphalt felt or other approved water-resistive barrier shall

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 flashina shall be attachéd 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

MALL HEIGHT	WALL THICKNESS	LATERAL SOIL LOAD (a)	UNBALANCED FILL	VERTICAL REINFORCING (b)	HORIZONTAL REINFORCING (b)			
		4=	6'-0"	NOT REQUIRED	2- #4 BARS (f)			
		45	7'-0"	NOT REQUIRED (d)	3- #4 BARS (d,e)			
	8"	60	6'-0"	NOT REQUIRED (d)	3- #4 BARS (d,e)			
8'-0"		60	7'-0"	#4 @ 22" O.C. (d)	3- #4 BARS (d,e)			
		45	6'-0"	NOT REQUIRED	2- #4 BARS (f)			
	10"	<del>49</del>	7'-0"	NOT REQUIRED	2- #4 BARS (f)			
	10"	60	6'-0"	NOT REQUIRED	2- #4 BARS (f)			
				NOT REQUIRED	2- #4 BARS (f)			
	<b>8</b> "	8"	45	7'-0"	NOT REQUIRED (d)	4- #4 BARS (d,e)		
			8"	8"	8"	8"		8'-0"
			7'-0"	#4 @ 19" O.C. (d)	4- #4 BARS (d,e)			
9'-0"		60	8'-0"	#4 @ 15" O.C. (d)	4- #4 BARS (d,e)			
		45	7'-0"	NOT REQUIRED	3- #4 BARS (g)			
		IO" 60	8'-0"	NOT REQUIRED (d)	4- #4 BARS (d,e)			
			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.I.2(1).
- q. ONE BAR WITHIN 12" OF TOP AND ONE EACH AT THIRD POINT OF WALL HEIGHT PER TABLE 404.1.2(1).

# PLANS

- I. 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. hqt. 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 eqress 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.

above) or a ramp in accordance with Section R311.8.

- 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
- 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
- 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 quard.
- 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.
- II. Wood framed bearing walls shall  $2 \times 6$  at 24" o.c. maximum or  $2 \times 4$  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
- 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.

SCF	SCREW FASTENING SCHEDULE						
	M	TH ADHESIVE					
Framina Spacina	Ceilings	Load-bra. walls	Non-load-brq. walls				
16							
24	24   16   16   24						
	WITHOUT ADHESIVE						
Framing Spacing	Framing Spacing Ceilings Load-brg. walls Non-load-brg. walls						
16 12 16 16							
24	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 abové by not less than 5/8" type X qyp. 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" aupsum board per Section R302.6.. Opéninas 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.I.
- 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.I.I Exception #1.
- 19. Attic spaces shall be ventilated w/ridge and soffit vents unless otherwise noted. Venting provided per
- 20. Fireblocking shall be installed between ceiling and floor openings per R302.II. 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
- 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 RIOO4 and IOO5.
- 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
- 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 I 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
- 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
- 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 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.

which the window is located. Glazing between the floor and 24" shall be fixed or have openings through

- 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
- Townhouse construction (R302.2.5): Projections extending into the fire-separation distance shall have not less than I-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 aupsum board. Véntina 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. I-hour fire-rated construction required on projections within 2' to 3' of lot line per R302.I. No projections allowed within 2' of property line.
- I-hour fire-rated construction required on townhouse eaves within 3' of the property line.

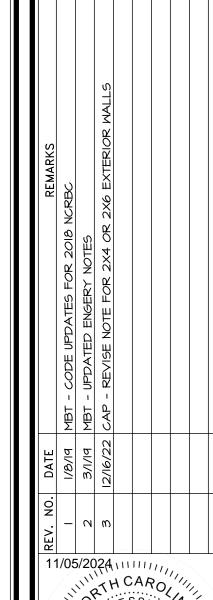
Design Category C.

- 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 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
- 35. Minimum floor sheathing shall be 5/8" tonque & 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.

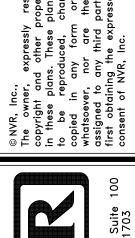
## ELECTRICAL

- I. 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
- 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 Ifc 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.

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**NVR** 

Version 2.0 (Last Revised 04/26/19)

HOUSE VOLU	ME CALCULATIONS	
HOUSE NAME	GRAND CAYMAN	
HOUSE VERSION	GCM00 / 01	
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)

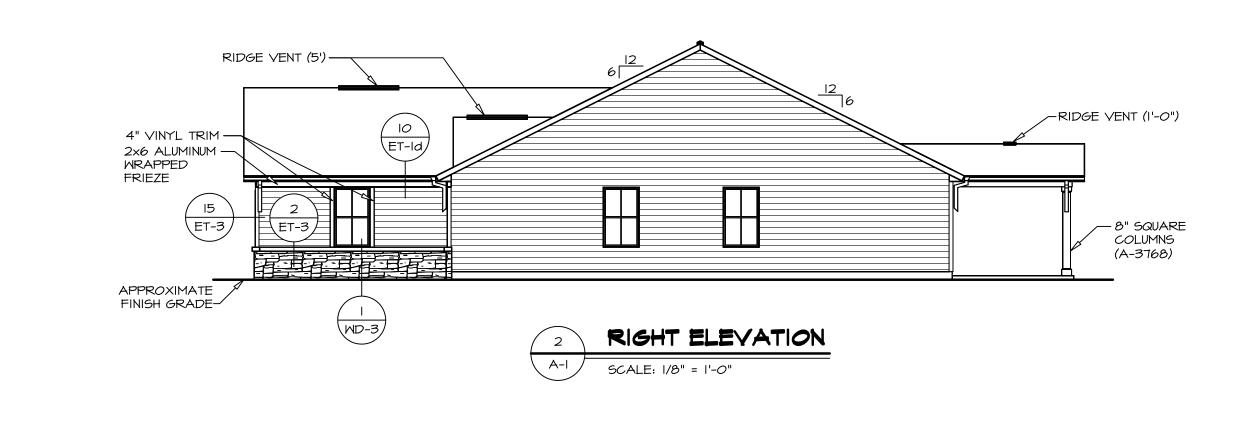
ELEVATION "J", "K", "L"						
Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)			
Main section of the house	1680.00	13.30	22348			
Garage bump out from main house	320.00	11.40	3647			
		Total House Volume	25994			

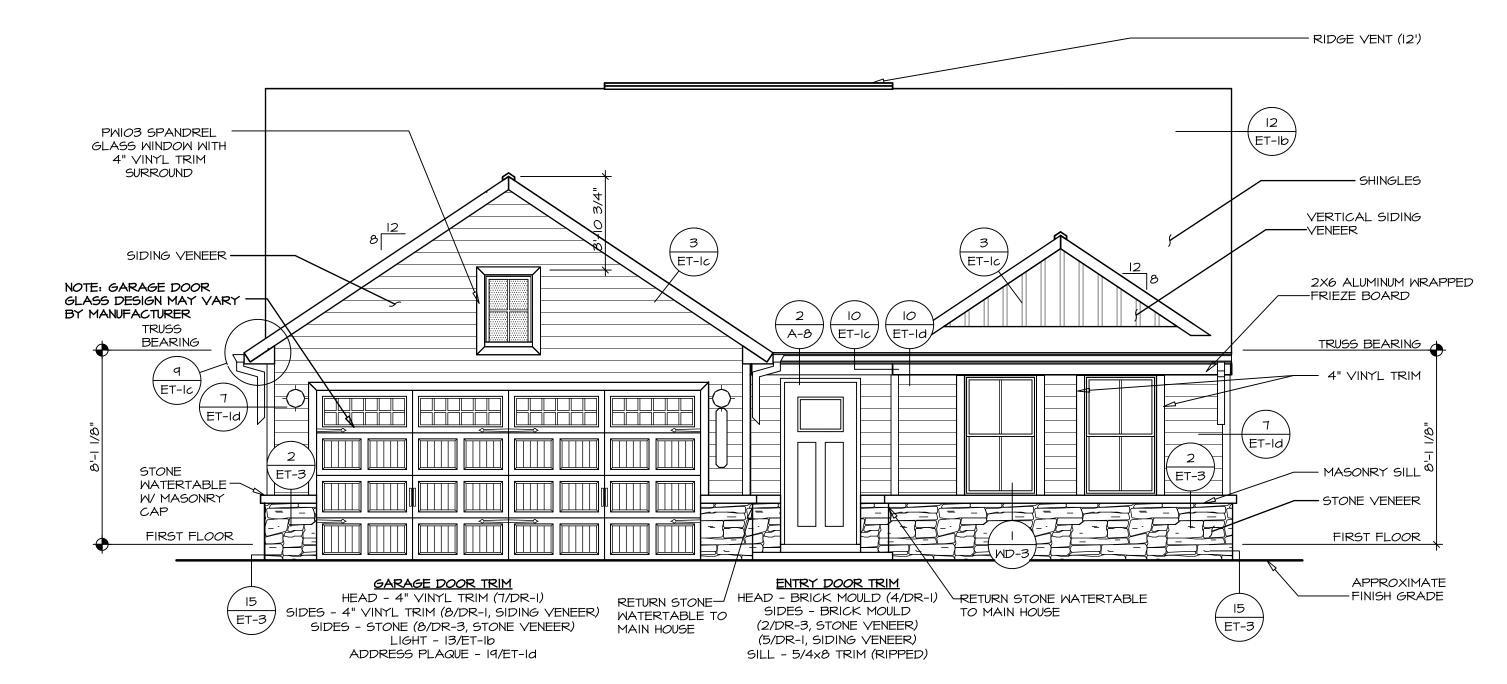
Additional areas of volume to be added to total house volume as needed						
Location / Area of house / option	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)			
Covered Porch "EPE"	140.00	9.44	1321			
Full Basement "FBA"	1584.67	8.63	13668			
Crawl space "FCA"	158/1 67	0.80	1268			

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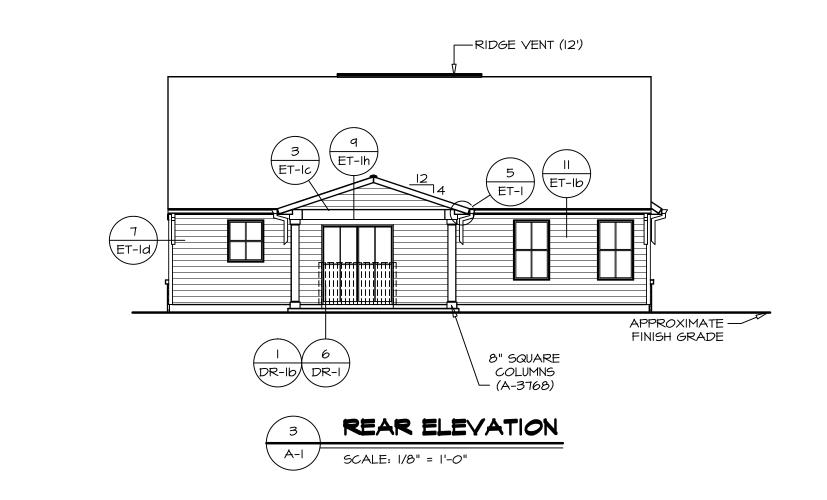
NVR, Inc. 5285 Westview Drive, Suite 100 Frederick, MD 21703

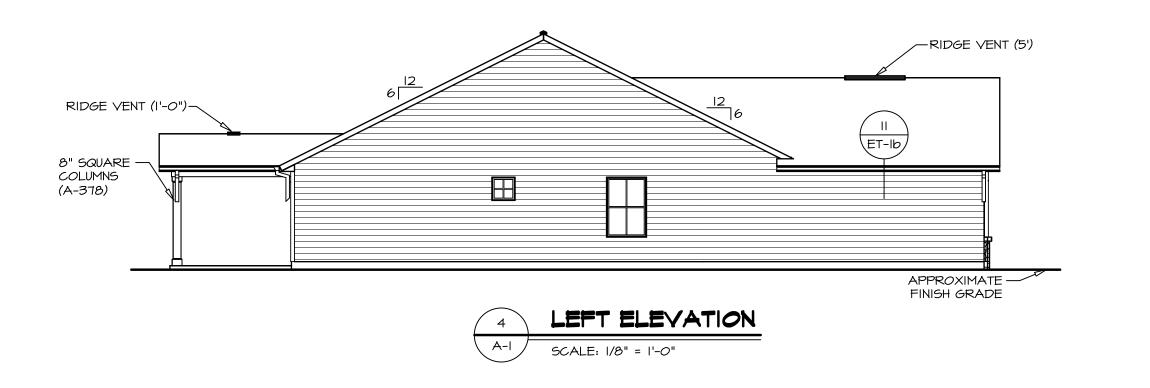
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- AND VOLUME CALCULATIONS	DRAWN BY
CALCULATIONS	DATE:
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16 Sheets 1 of Specific CA-1 CAICS dwg 11/01/24 - 3:01 pm	/24 - 3.01  nm











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MODEL  GRAND CAYMAN  DRAWING TITLE		PTION VDATION	
MODEL GRAND DRAWING TITLE	ELEVATIONS	OPTION DESCRIPTION SLAB FOUNDATION	

PAD FOOTING SCHEDULE							
IDENTIFIER	LENGTH	MIDTH	HEIGHT	ENG. NUM.	REMARKS		
F007	2'-0"	2'-0"	1'-0"	50001			
F008	2'-0"	2'-0"	1'-0"	50001			

FOUNDATION DIAGONALS							
АВ							
Α	0"	Α	43'-1"				
В	43'-I"	В	0"				
C	25'-7 3/8"	O	20'-0"				
D	58'-0"	D	58'-0"				
E	42'-0"	E	70'-5 7/16"				

## FOUNDATION NOTES - SLAB

- I. SEE STANDARD DETAIL CATEGORY **"FD"** SHEET(S).
  I.I. CONCRETE SLAB ON VAPOR BARRIER OVER
- SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
- 2. FOUNDATION UNDER GARAGE:
  2.I. 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-I 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-\_ FOR FOOTER SLEEVE INFORMATION.

# LEGEND

BEARING WALL



J\_ JACKS

BEAM/HEADER
PAD FOOTING

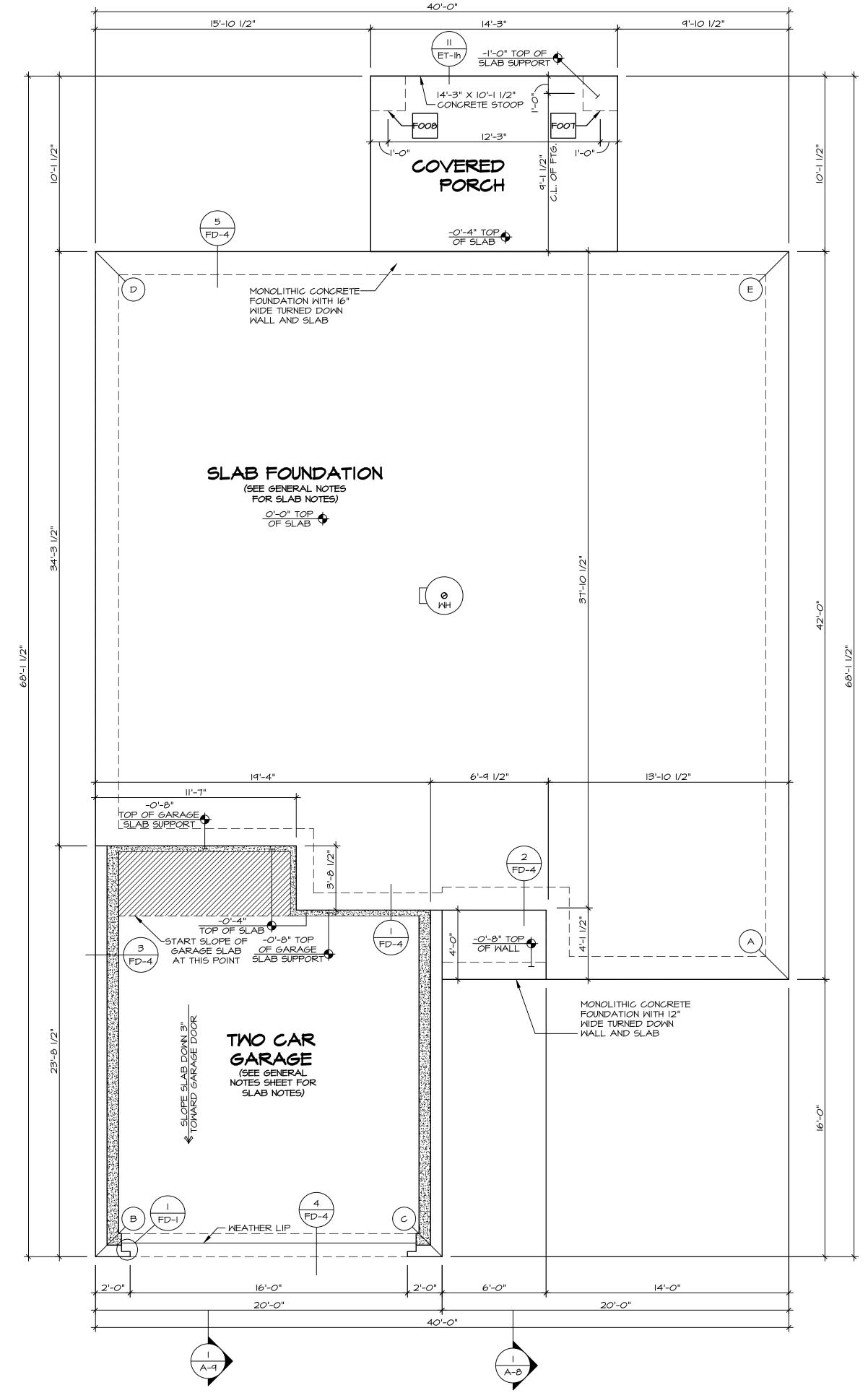
STEEL COLUMN

TRUSS TIE DOWN

X PORTAL FRAME

X JOIST/TRUSS

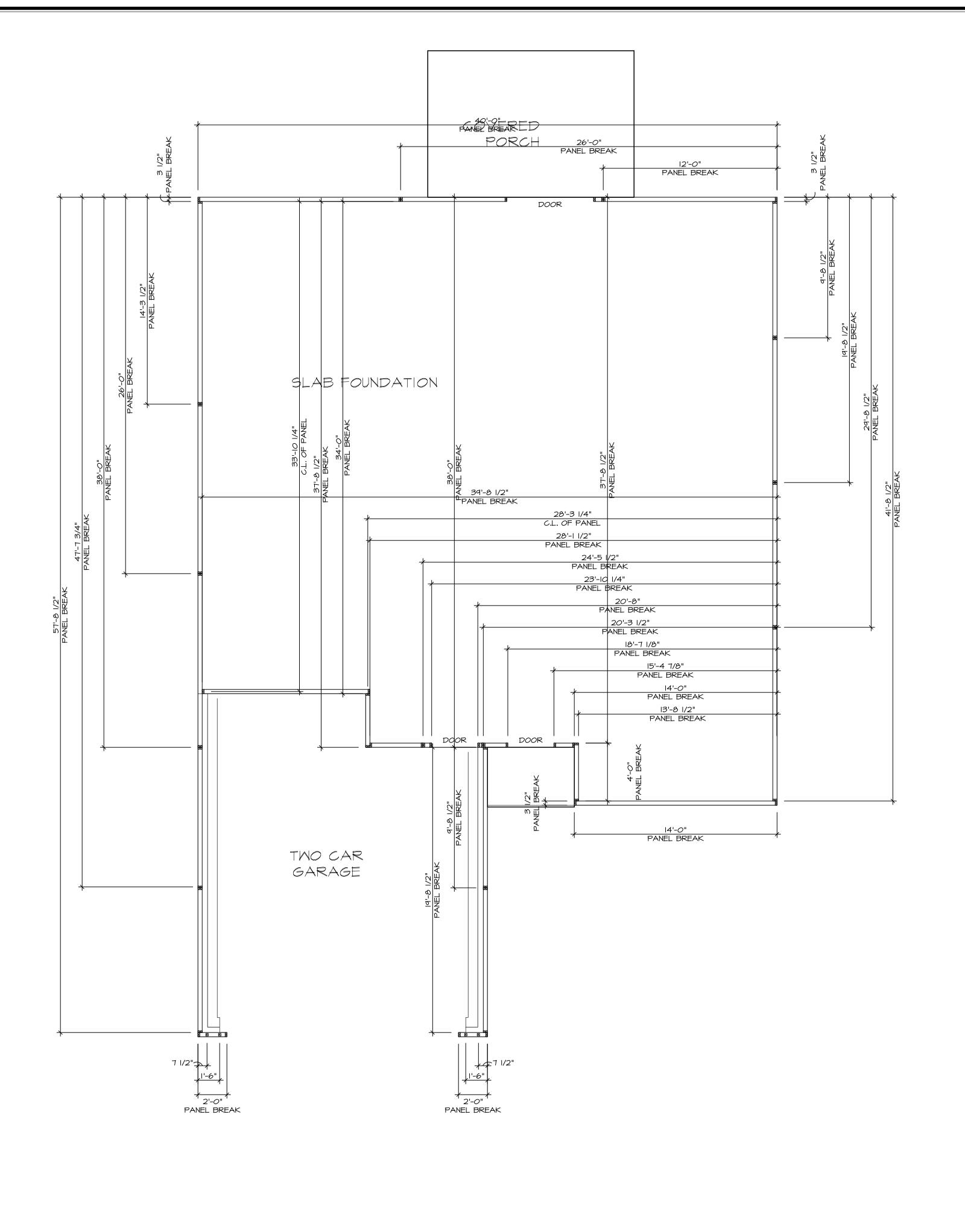
X ENGINEERING PAGE NUMBER
SEE FC DETAILS FOR
FRAMING CONNECTORS



FOUNDATION PLAN

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

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FOUNDATION HOLD DOWN DETAIL

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

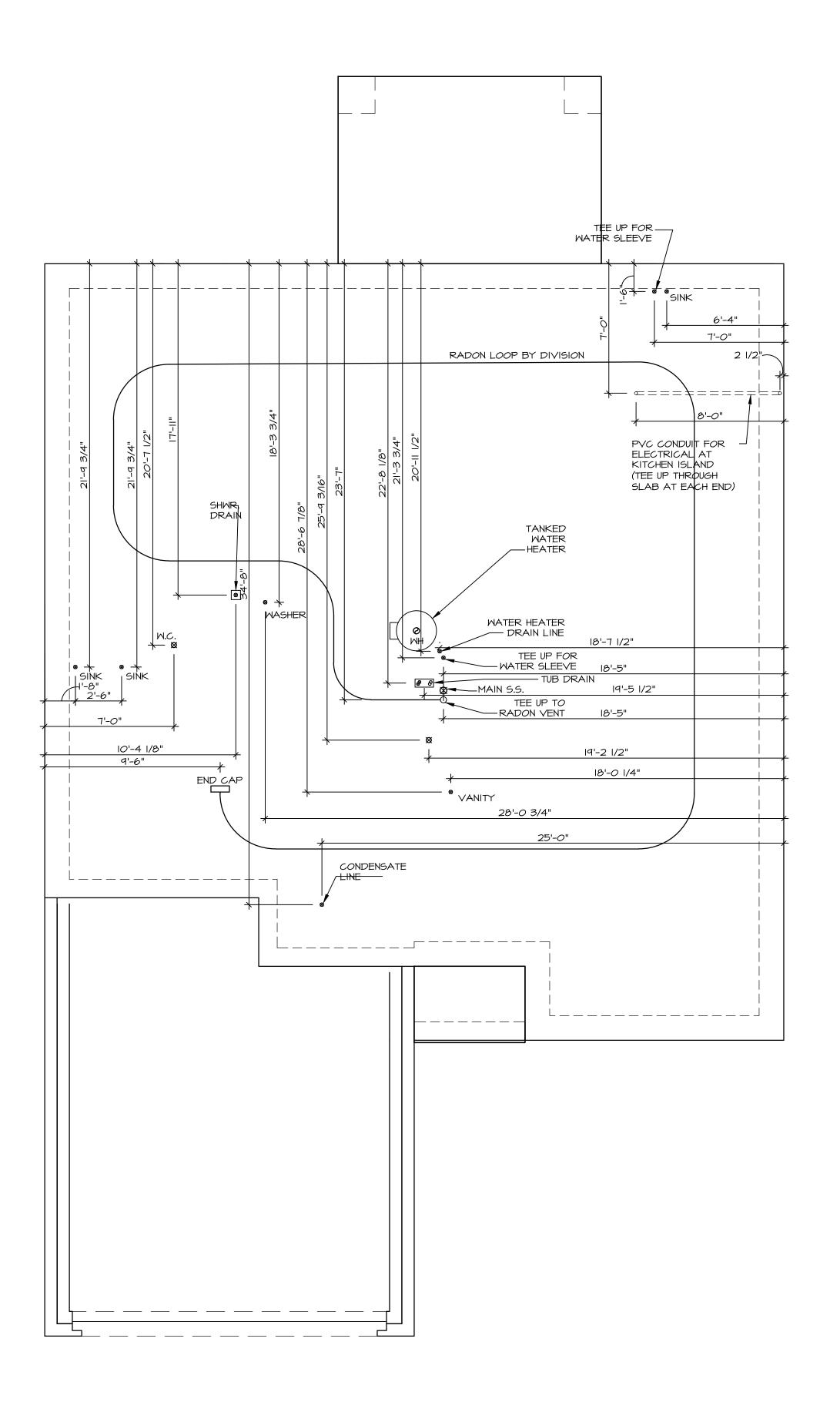
		© NVR, Inc.,	(doo)		NVR, Inc. 5285 Westview Drive, Suite 100 Frederick, MD 21703	
		SET NO. GCMOO		DRAWN BY CEL DATE:	NOITION	
	HOLD DOWN NOTES  DETAIL (9/FD-I) FOR HOLD DOWN OFFSET DIMENSIONS. DETAIL (12/FD-I) FOR HOLD DOWNS ON CMU BLOCK.  I. ALL PANELS GREATER THAN 24" SHALL HAVE AN ANCHOR WITHIN 12" OF THE PANEL BREAKS / ENDS. (SEE DETAIL SHEET FF-I FOR MORE INFORMATION ON ANCHOR DETAILS)	NAMYAO		DOMN		
STRAP	I. STRAP:  a. ON FOUNDATION USE (STHDI4)  b. ON FLOOR SYSTEM USE (STHDI4RJ)  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	MODEL GRAND C	IG TITLE	FOUNDATION HOLD DOWN	OPTION DESCRIPTION	
B⊘LT ∭o	I. THREADED ROD  2. ALL OTHER HOLD DOWN SEE DETAIL (WB-2) FOR MORE INFORMATION.	SHEET NO.	7	<b>†</b>		$\omega$

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INSTALLATION OF RADON STACK AND LOOP TO BE DETERMINED BY DIVISION



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PLUMBING PLAN

A-5 SCALE: 1/4" = 1'-0"

FIRST FLOOR JACK SCHEDULE						
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS			
JI06	JACK - (2) 2X4 SPF STUD GRADE	1006				
TOIL	JACK - (2) 2X4 SPF STUD GRADE	1006				
80IL	JACK - (3) 2X4 SPF STUD GRADE	1004				
POIL	JACK - (3) 2X4 SPF STUD GRADE	1004				
OIL	JACK - (3) 2X4 SPF STUD GRADE	1012				
IIL	JACK - (3) 2X4 SPF STUD GRADE	1012				

## FLOOR PLAN NOTES

ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
 ALL HEADERS TO HAVE (I) 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 I/2", UNLESS OTHERWISE NOTED.
4. HATCHED AREAS INDICATE DROPPED CEILINGS. ALL DROPPED CEILINGS ARE I2" 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 HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.

TANKED WATER HEATER SHOWN AS BASE CONDITION,

OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN

# GYPSUM NOTES

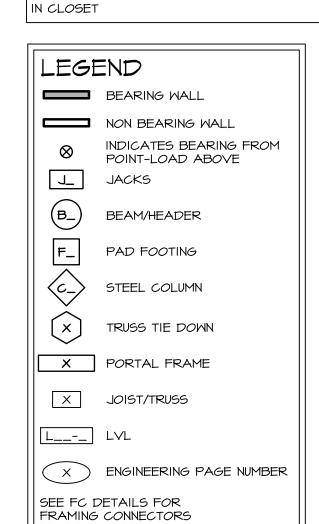
LIEU OF TANKED WATER HEATER.

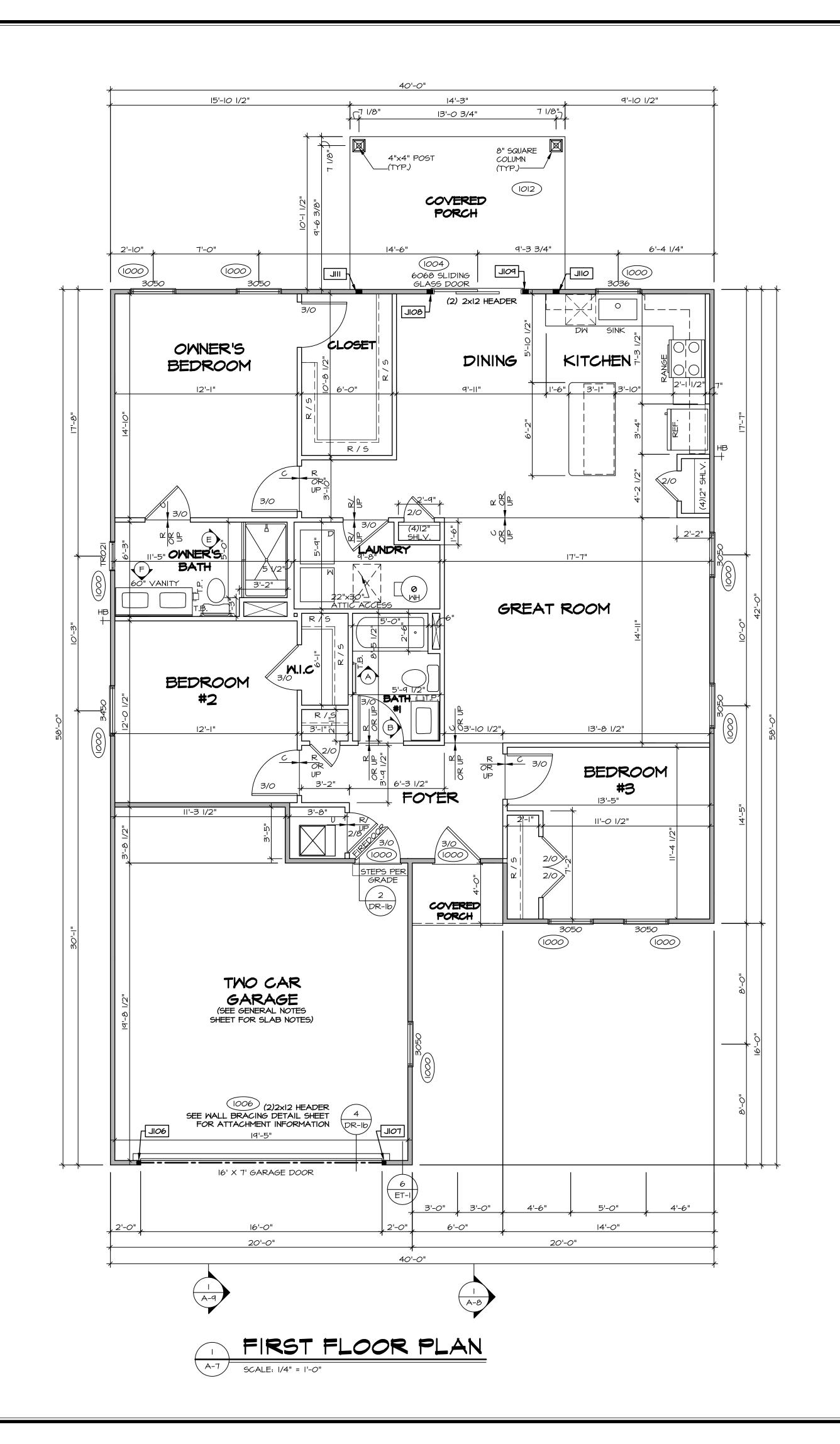
AT GARAGE:

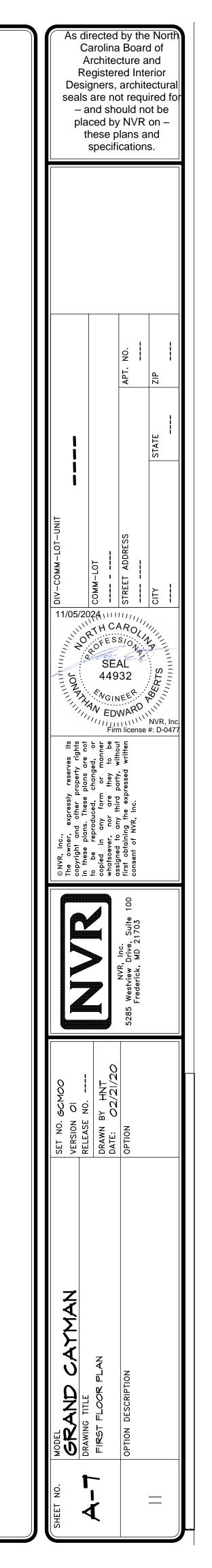
GYPSUM BOARD AT COMMON WALLS, CEILINGS, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL **FA-I(b)** FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

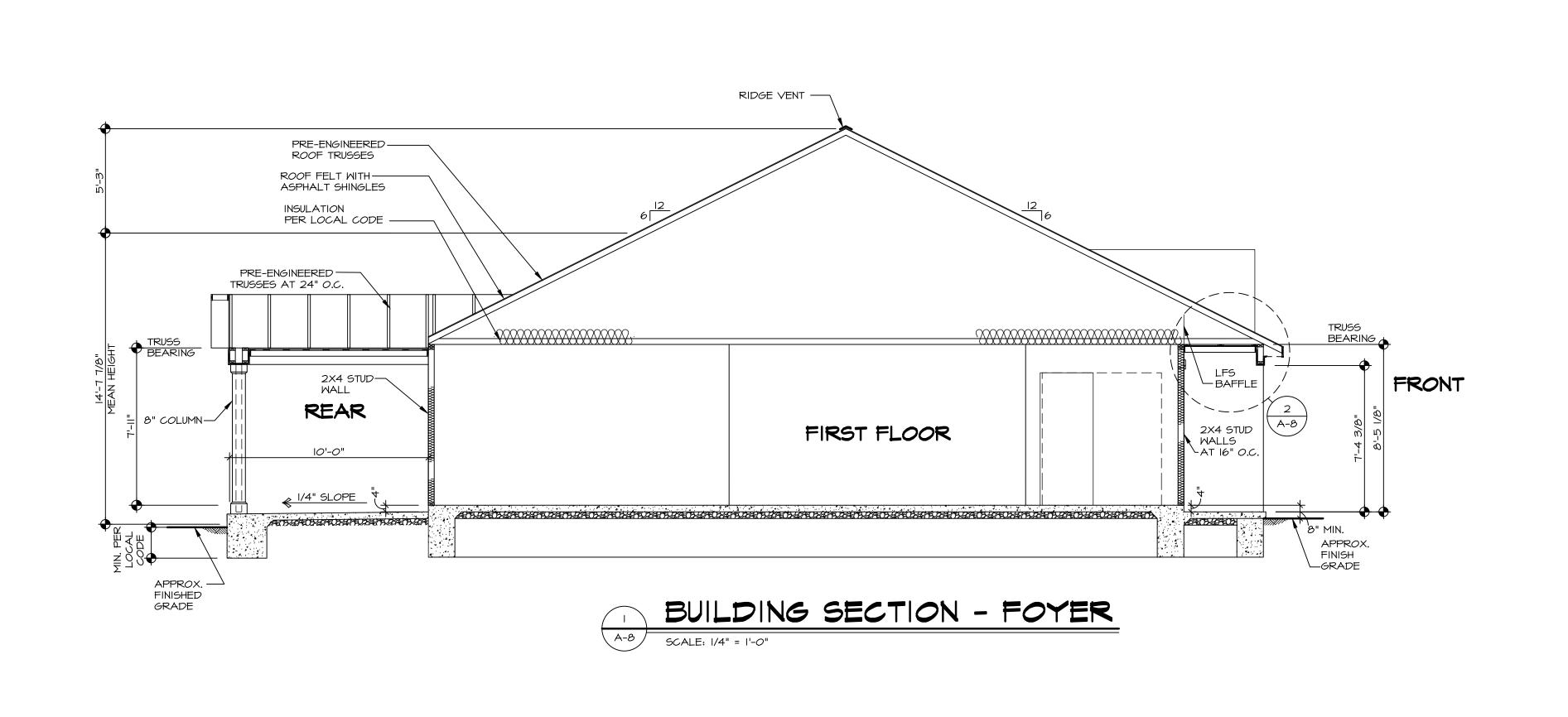
AT STAIRS:

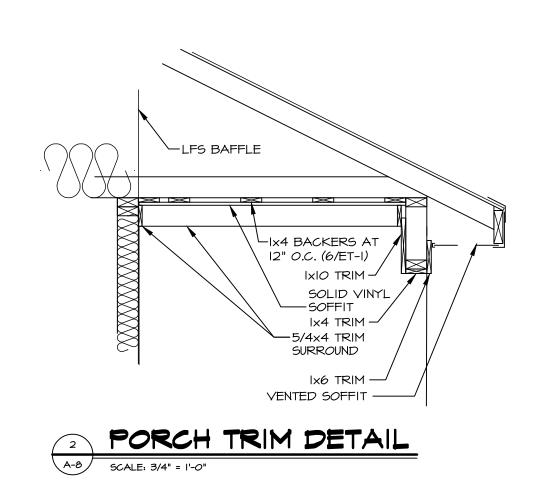
1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS











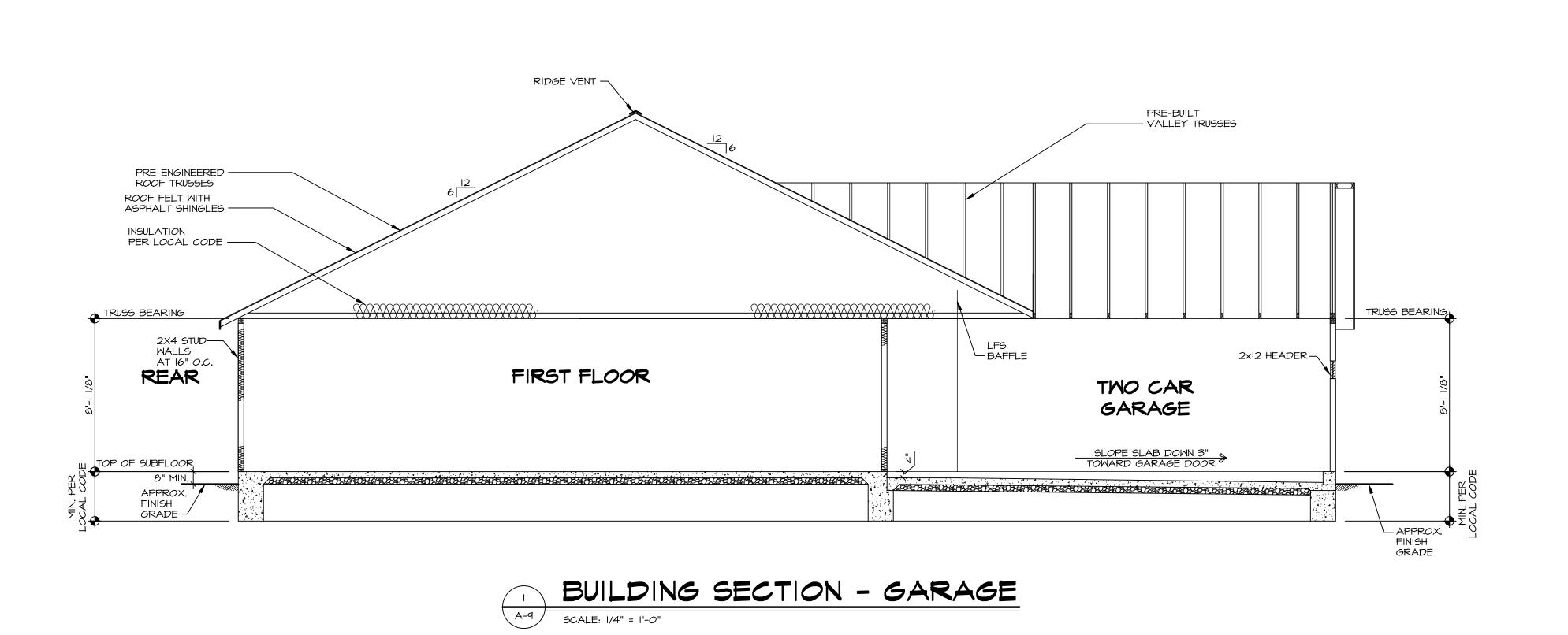
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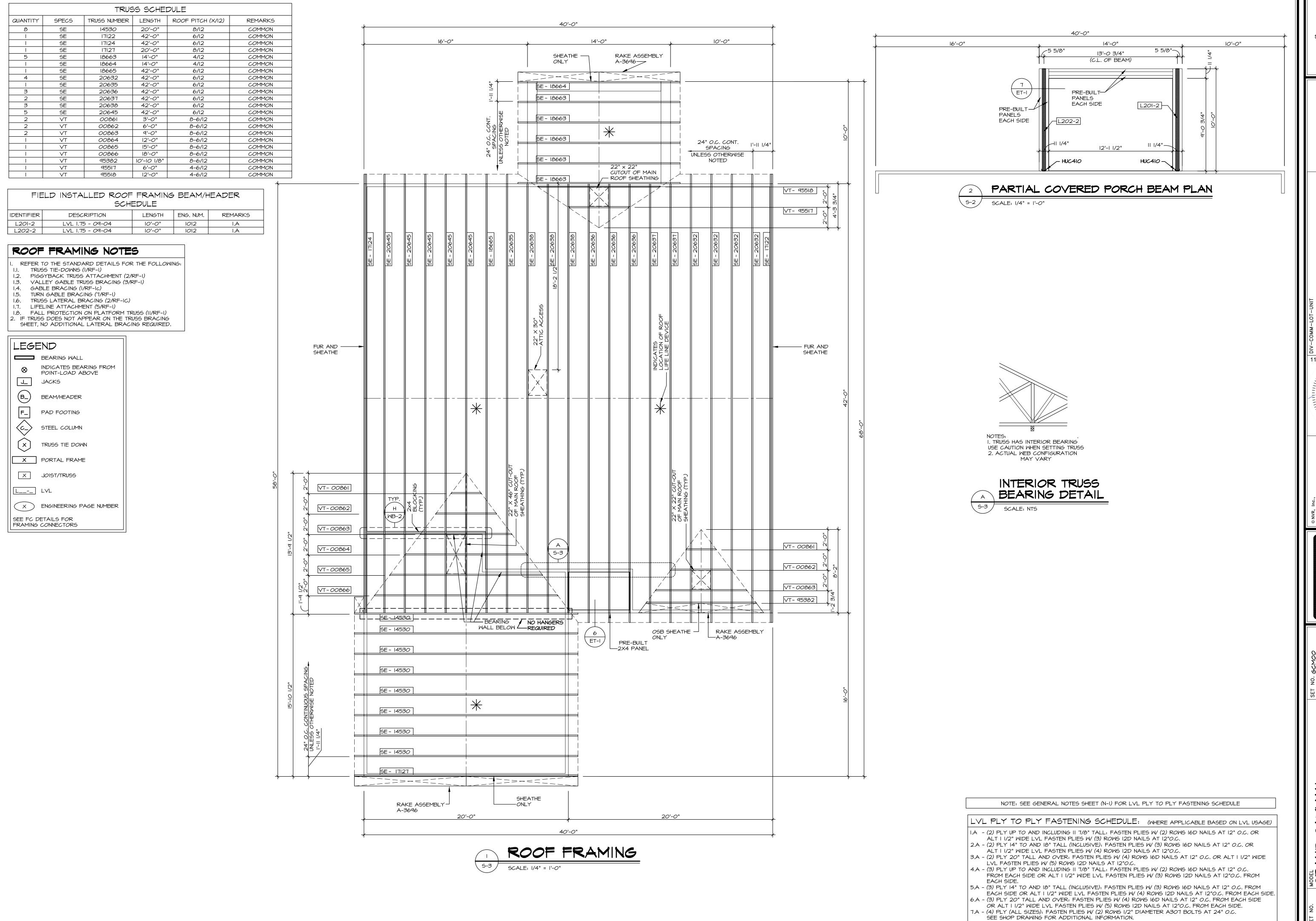
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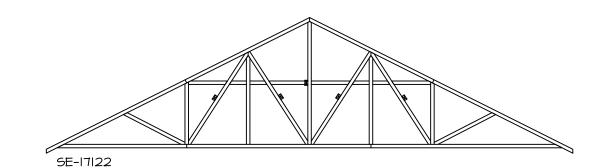
MODEL

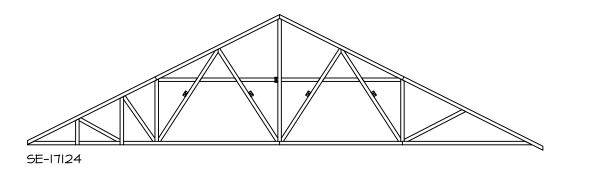
GRAND CAYM

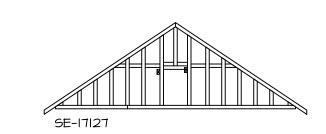
DRAWING TITLE

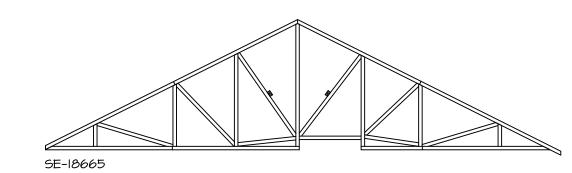
ROOF FRAMING

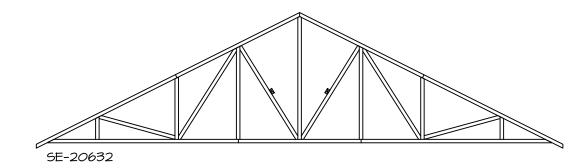
DRAWING ROOF TO OPTION DI

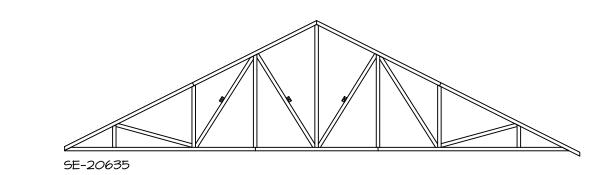


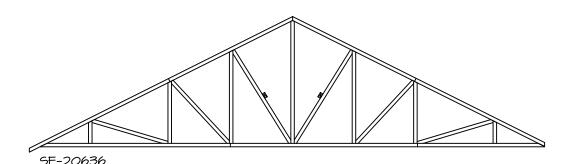


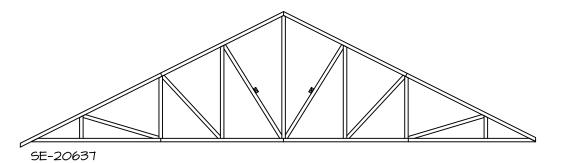


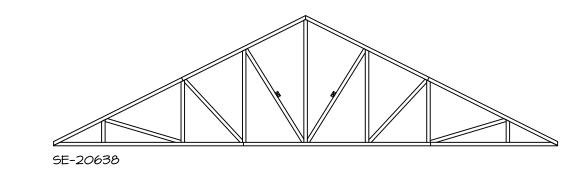


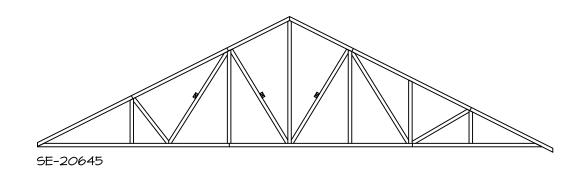














# TRUSS BRACING NOTES

- . IF TRUSS DOES NOT APPEAR ON THIS TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING IS REQUIRED.

- REQUIRED.

  2. 2X4 SPF#2 LATERAL BRACES SHALL BE NAILED TO MINIMUM (3) TRUSS MEMBERS WITH MINIMUM (2) IOD NAILS. PROVISIONS MUST BE MADE AT ENDS OR SPECIFIED INTERVALS TO RESTRAIN OR ANCHOR LATERAL BRACING.

  3. WEB "T" BRACE, DETAIL 3/RF-Ic, IS REQUIRED WHERE LATERAL BRACING IS NOT CONTINUOUS ACROSS THREE (3) OR MORE TRUSSES AND MAY BE USED IN LIFT OF 2X4 LATERAL BRACING.

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-Ic)

5. STUDDED GABLE BRACING DETAIL I/RF-Ic TO BE UTILIZED FOR TRUSSES 6'-9" IN HEIGHT OR GREATER.

6. PARTIALLY SHEATHED GABLES, SEE 5/RF-Ic 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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BRACED WALL LINE SCHEDULE							
WIND SPEED (ULT)   IDENTIFIER   REQUIRED (FT)   ACTUAL (FT)   METHOD							
I30 MPH	BWL 100.00	5.25'	6.00'	CONTINUOUS (WITH GMB)			
130 MPH	130 MPH BWL 101.00 8.63' 27.99' WSP (WITH GWB)						
I30 MPH	BWL 102.00	15.84'	17.00'	LIB			
130 MPH	BWL 103.00	5. <i>0</i> 5'	16.66'	MSP (MITH GMB)			
130 MPH	BWL 104.00	10.72'	23.66	MSP (MITH GMB)			
130 MPH	BWL 105.00	9.09'	50.25'	MSP (MITH GMB)			

BML XXX.XX	BRACED WALL LINE I.D.
	BRACED WALL LINE
	HOUSE WALL
	BRACED WALL PANEL
MSP	WOOD STRUCTURAL PANEL
<i>G</i> B	GYPSUM BOARD (I) SIDED OR (2) SIDED
GB-BM	GYPSUM BOARD BLOCKED WALL CONSTRUCTION (I) SIDED OR (2) SIDED (SEE STANDARD DETAIL G/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 FO PORTAL FRAME HEADER INFORMATION (SEE STANDARD DETAIL A, C/ WB-2)
C5-G	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL ADJACENT TO GARAGE OPENINGS
Ю	HOLD-DOWN  I. SEE SHEET WB-2 "P_" INDICATOR SCHEDULE AND DETAILS  2. ARROW INDICATES LOCATION

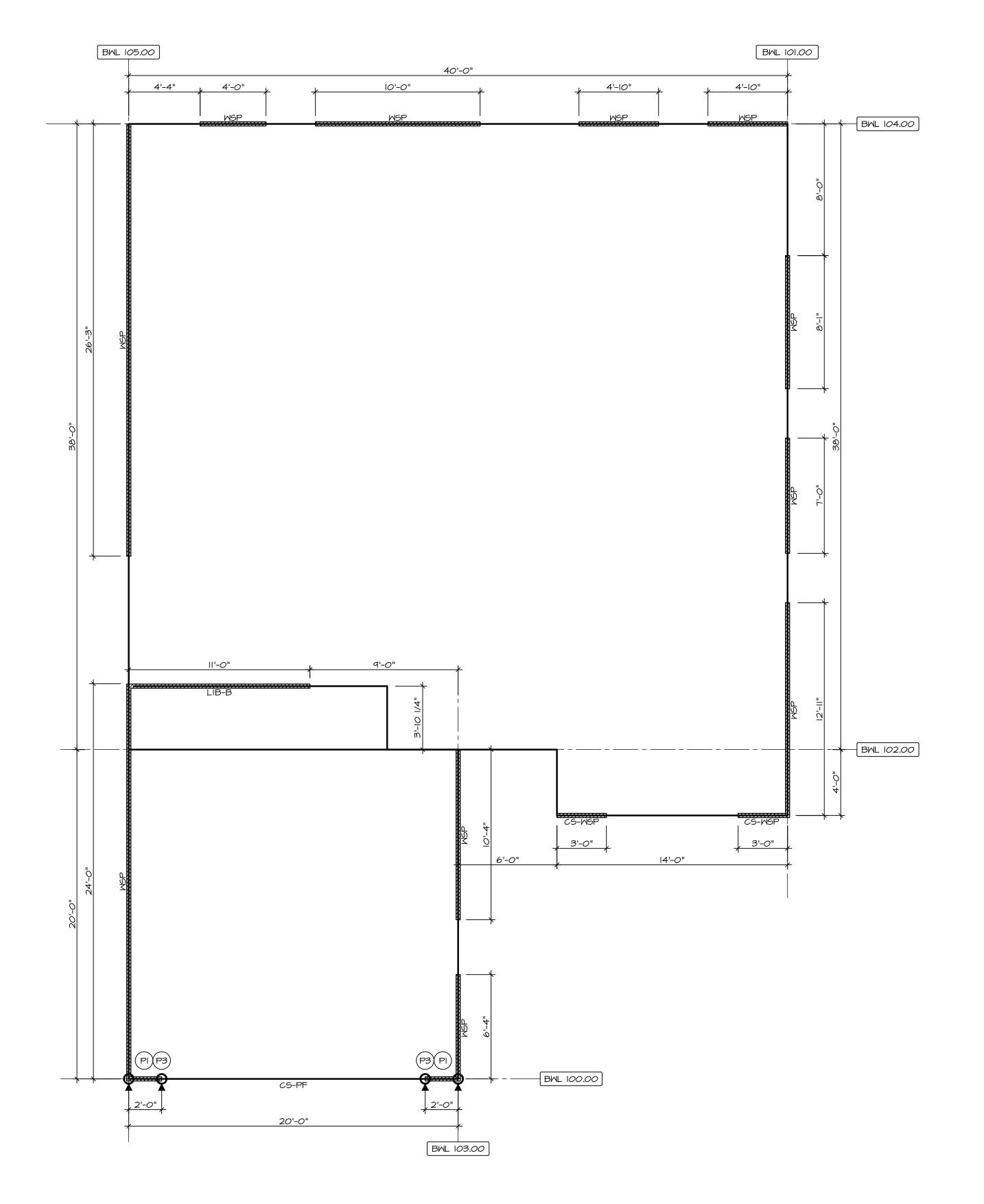
FASTENING SCHEDULE							
SHEATHING	FASTENER	SPACING					
SHEATHING	FASTENER	EDGES	FIELD				
7/16" WOOD STRUCTURAL PANELS OR	8d COMMON NAILS	6" O.C.	12" <i>O.</i> C.				
EQUIVALENT (W METHOD MSP, CS-MSP, CS-G)	ALTERNATIVE FASTENER 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	6" O.C.				
1/2" GYPSUM WALLBOARD	I-1/4" LONG, I/4" HEAD, .098" DIA. ANNULAR-RINGED NAILS	7" O.C.	7" O.C.				
(W/ METHOD GB-I, GB-2)	CORROSION RESISTANT TYPE W I-I/4" DRYWALL SCREWS	7" O.C.	7" O.C.				
LAMINATED FIBROUS	IOd X I I/4" GALVANIZED ROOFING NAILS	3" O.C.	3" O.C.				
STRUCTURAL SHEATHING	I-I/4" I6-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	3" O.C.				
I/2" GYPSUM WALLBOARD BLOCKED AT THE EDGES (W/ METHOD GB-BW-I, GB-BW-2)	CORROSION RESISTANT	4" O.C.	12" O.C.				

NOTES:

I. 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.





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