

INSULATION NOTES

Requirements for Climate Zone 4

Fenestration U-Factor Skylight U-Factor Ceiling R-Value Exceptions:

N1102.2.1 Ceilings with attic spaces.

When Section N1102.1.1 would require R-38 in the ceiling, installing R-30 over 100 percent of the ceiling area shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly, when Section N1102.1.1 would require R-49 in the ceiling, installing R-38 over 100 percent of the ceiling area shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the *U*-factor alternative approach in Section

N1102.1.3 and the total UA alternative in Section

N1102.2.2 Ceilings without attic spaces.

N1102.1.4.

Where Section N1102.1.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section N1102.1.1 shall be limited to 500 square feet (46 m2) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the *U*-factor alternative approach in Section N1102.1.3 and the total UA alternative in Section N1102.1.4.

Wood Frame Wall R-Value Mass Wall R-Value

Floor R-Value

Basement Wall R-Value

10/13 (The first R-Value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.)

Slab R-Value and Depth Crawl Space Wall R-Value

10/13 (The first R-Value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.)

FRAMING NOTES

- 1. Exterior dimensions are to face of masonry or wall sheathing. 2. Interior dimensions are to face of studs.
- 3. On an Addition or Renovation project, shaded walls indicate existing walls that shall remain.
- . Sleeping Room spans are based on 30# per square foot Live Load and 10# per square foot Dead Load. All Other Room spans are based on 40# per square foot Live Load and 10# per square foot Dead Load. Roof rafters are based on 20# per square foot Live Load and 10# per square foot Dead Load.
- 6. Unless otherwise noted, #2SYP is assumed for all framing lumber when calculating maximum spans.
- 7. Unless otherwise noted, all stud framing is assumed to be #2 SPF.
- 8. Provide pressure treated sill plates, anchored to the foundation with anchor bolts spaced at maximum of 6 feet on center. There shall be a minimum of two bolts per plate section with one bolt located no more than 12 inches, or less than seven bolt diameters, from each end of the plate section. A nut and washer shall be tightened on each bolt of the plate.
- 9. Provide pressure treated lumber for all beams and members within 12" of finished grade.
- 10. Provide pressure treated band board and sill wherever any
- decks meets the house. 11. All metal fasteners and connectors into pressure treated lumber must be listed "ACQ Approved" Hot Dipped Galvanized or Stainless
- 12. Double joists under all parallel partitions or cabinetry. 13. Unless otherwise noted, all sawn lumber headers/beams to receive (2) jack studs and (1) king stud @ each end.
- 14. Unless otherwise noted, all LVL's to be minimum 1.9E.
- 15. Unless otherwise noted, all double LVL's get (3) jacks each end and all triples get (4) jacks each end.
- 16. Unless otherwise noted, all door & window headers to be (2) 2x10's. 17. All wall sheathing to be ½" CDX Plywood or 7/16" OSB with Tyvek
- Housewrap or 15" Felt. 18. All sub flooring to be glued and nailed.
- 19. All roof sheathing to be ½" CDX Plywood or 7/16" OSB.

CONCRETE SLAB NOTES

- 1. Concrete slabs on ground floors, including basement slabs and garage slabs, shall be a minimum of 3-1/2 inches thick.
- 2. Minimum compressive strength for basement slabs and interior floor slabs on grade shall be 2,500 psi.
- 3. Minimum compressive strength for garage slabs shall be 3,000 psi. 4. All slabs for porches, carports, garages, and steps exposed to weather shall have a minimum compressive strength of 3,500 psi.
- 5. The area within the foundation walls shall have all vegetation, top soil, and foreign material removed.
- 6. Fill material shall be free of organic material as well as other
- 7. Install a minimum of 4 inches of clean #57 stone as a base course. 8. Concrete shall be reinforced by one of two methods:
 - b. Adding fiberglass reinforcing fibers to the concrete prior to

a. 6" Wire mesh supported in the center to upper third of the

- pouring and finishing. 9. For basement slabs, install a vapor retarder of minimum 6 mil polyethylene with joints lapped not less than 6 inches between the base course and the concrete slab.
- 10. All basement and garage slabs shall be insulated with a minimum of R-10 foam insulation projecting a minimum of 24 inches by a combination of vertical insulation and insulation extending under
- 11. The top edge of the insulation, installed between the exterior wall and the edge of the interior slab, shall be cut at a 45 degree angle away from the exterior wall.
- 12. All basement and garage slabs shall be troweled to a smooth
- 13. Garage slabs shall be sloped toward the garage doors at a minimum rate of 1/8" per foot.
- 14. All sub-slabs for brick or stone porch paving shall be finished level. 15. Porch slabs greater than 18 inches above grade shall be supported by galvanized steel composite decking and

beams/pipes sized as necessary. Porch slabs less than 18 inches

above grade shall be supported by #57 clean stone. 16. Clean all foundation areas of loose debris, trash, and organic material prior to installation of composite decking.

NON-VENTED CRAWLSPACE NOTES

- 1. Permanently install insulation to crawlspace walls from top of foundation downward to finished grade level and then vertically and/or horizontally for at least an additional 24 inches.
- 2. All insulation material to be noncombustible or at a minimum have a noncombustible facing material. 3. Install continuous vapor retarder where earth is exposed in the crawlspace. Overlap joints by minimum of 6 inches with edges sealed
- or taped. Extend the vapor retarder minimum of 6 inches up the stem wall and attach and seal to wall. 4. Make sure crawlspace is clean and clear of all trash and debris, including all loose wood and organic material, prior to installing vapor
- 5. Provide conditioned air supply sufficient to deliver at a rate of 1 cfm for each 50 square feet of crawlspace area. Install a return air pathway to the finished space above via a duct or transfer grille.

FOOTING & MASONRY NOTES

- 1. Soil conditions are assumed to be 2,000psf.
- 2. Exterior dimensions are to face of masonry or wall sheathing. 3. Continuous concrete footings shall be constructed of minimum
- 2,500psi concrete. See plan details for width and thickness. 4. Provide minimum 2-courses x 24" wide grouted solid under all steel beams or concentrated loading conditions. Consult Soil
- Report for additional size and rebar specifications. 5. Exterior steps are shown for location only. Contractor shall determine and verify all grade elevations and number of steps required.
- 6. Anchor bolts shall be placed at a maximum of 6 feet on center. There shall be a minimum of two bolts per plate section with one bolt located no more than 12 inches, or less than seven bolt diameters, from each end of the plate section. Bolts shall be a minimum ½" in diameter and shall extend a minimum of 7 inches into masonry or concrete.
 - a. Walls 24 inches total length or shorter connecting offset braced wall panels shall be anchored to the foundation with a minimum of one anchor bolt located in the center third of the plate section and shall be attached to adjacent braced wall panels.
 - b. Walls 12 inches total length or shorter connecting offset braced wall panels shall be permitted to be connected to the foundation without anchor bolts.
- 7. Brick veneer walls to have non-corrosive metal ties @ 16" O.C. vertically and horizontally and weep holes at 24" O.C. at base flashing.
- 8. Provide minimum 4" bearing at each end of lintels for brick veneer walls

BRACED WALL REQUIREMENT NOTES

- 1. BRACED WALL REQUIREMENTS: Lateral stability for this structure is provided by continuous wood panel sheathing per IRC-2009 code R602.10.3 (Continuous Sheathing Methods).
- Connection criteria for continuous wood panel sheathing shall be 6d common nails at 6" spacing at panel edges and 12" spacing at Intermediate supports (studs). 16 gauge x 1-3/4" staples may also Be used at 3" spacing at panel edges and 6" spacing at intermediate supports (studs).

Version 5/14/2015

1/4" = 1'-0"

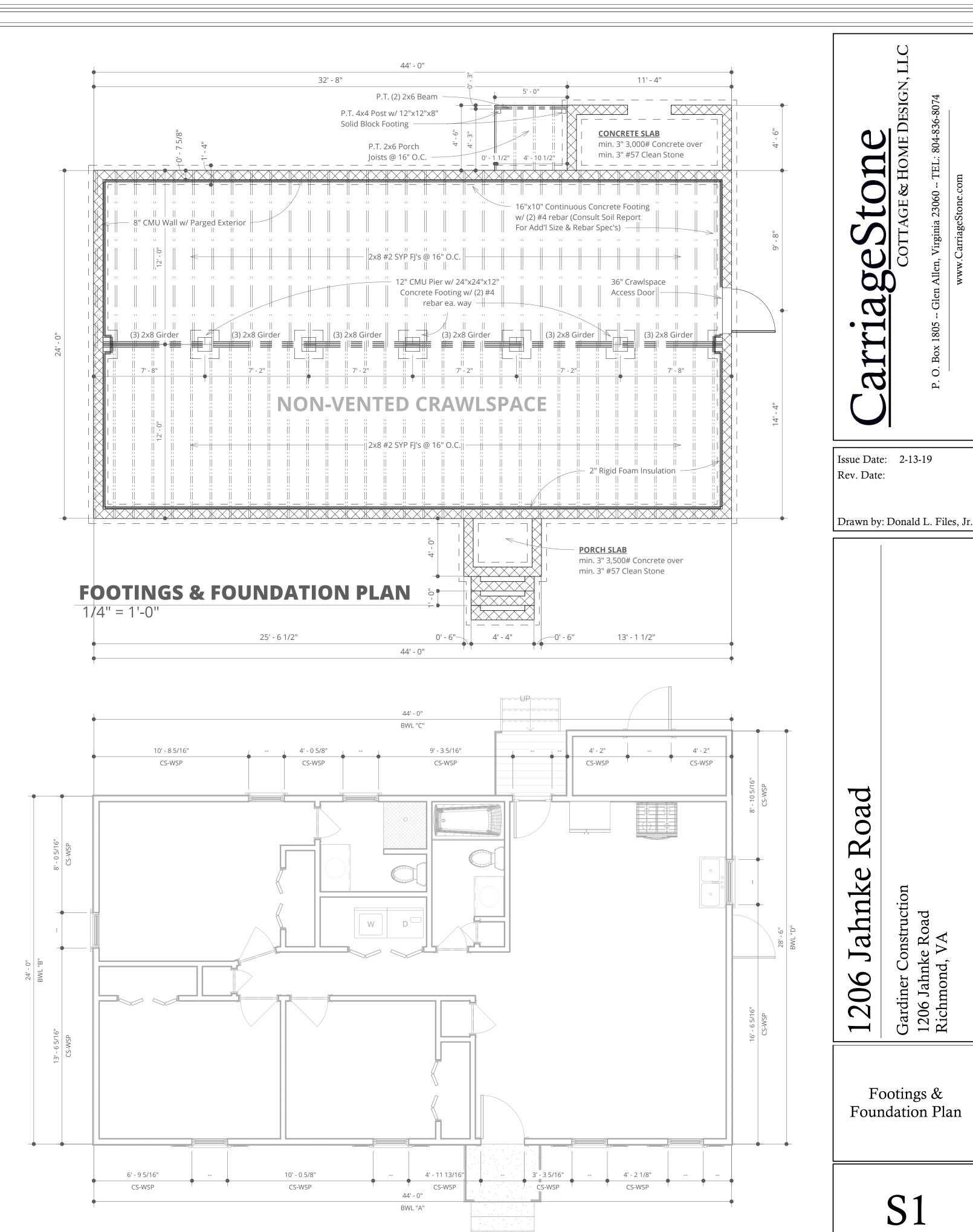
BRACED WALL PLAN -- FIRST FLOOR

3. All wall sheathing to be ½" CDX Plywood or 7/16" OSB with Tyvek Housewrap or 15" Felt.

"CLASSIC" WALL BRACING WORKSHEET PER THE 2012 VIRGINIA RESIDENTIAL CODE

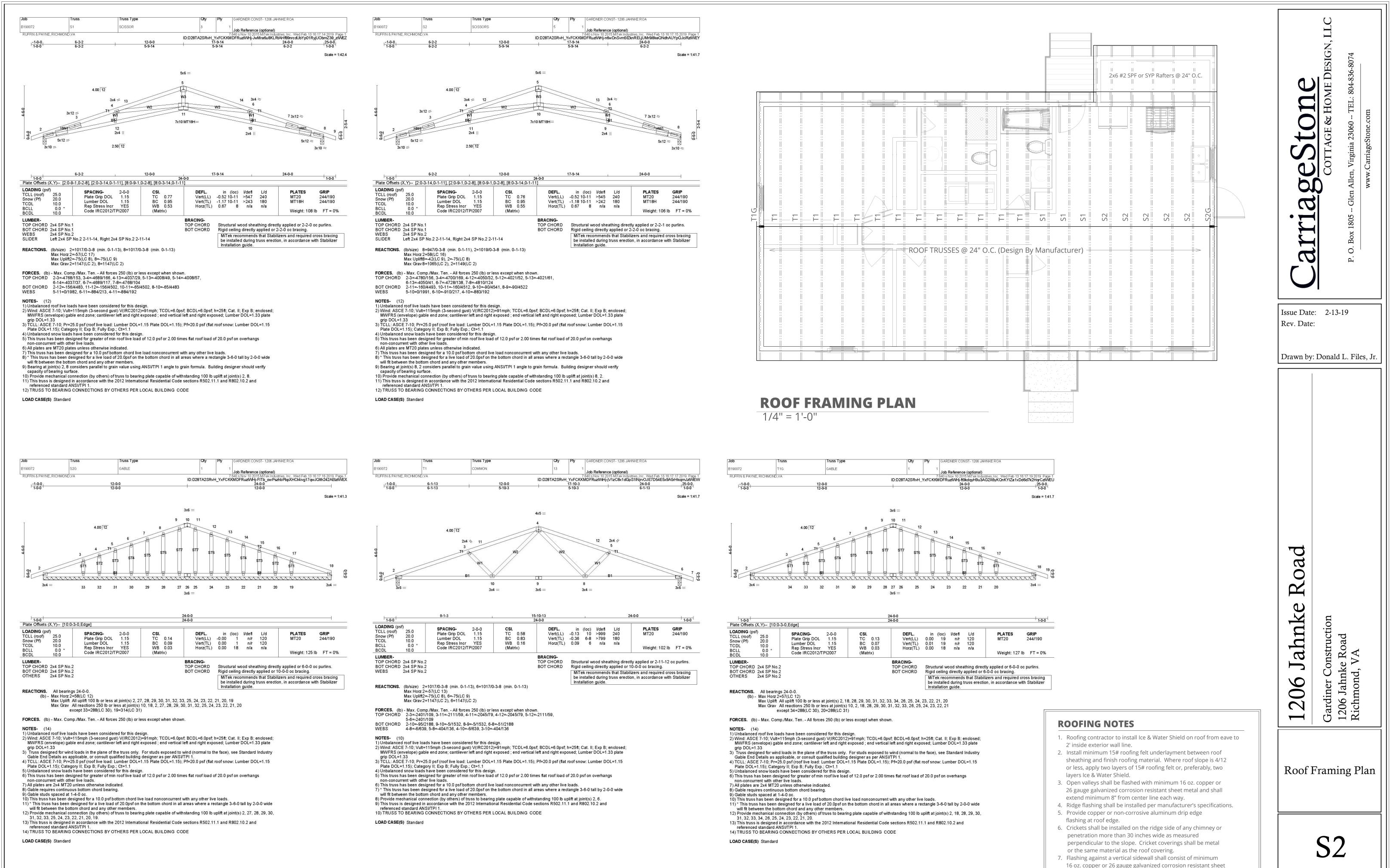
	WIND SPEED (MPH)		9	0																		
BWL DESIGNATION			A		В		C		D							l l						
NUMBER OF FLOORS ABOVE BWL			0		0		0		0													
BWP METHOD			CS-WSP		CS-WSP		CS-WSP		CS-WSP													
AVERAGE BWL SPACING (ft)			26.25		44		26.25		44													
TABULAR REQUIREMENT (ft)			4.44		6.60		4.44		6.60													
	EXPOSURE		В	1.00	В	1.00	В	1.00	В	1.00												
	EAVE-TO-RIDGE HT (ft)		4.00	0.70	4.00	0.70	4.00	0.70	4.00	0.70												
	MAXIMUM WALL HEIGHT (ft)		8.00	0.90	8.00	0.90	8.00	0.90	8.00	0.90												
ADJUSTMENT	NUMBER OF BWLs		2	1.00	2	1.00	2	1.00	2	1.00												
sora,	OMIT INTERIOR FINISH		No	1.00	No	1.00	No	1.00	No	1.00												
	ADD PAIR 800# HOLD DOWNS		No	1.00	No	1.00	No	1.00	No	1.00												
l	HORIZONTAL JOINTS BLOCKED		No	2.00	No	2.00	No	2.00	No	2.00												
	REDUCED FASTENER SPACING		No	1.00	No	1.00	No	1.00	No	1.00												
	REQUIRED BWP LENGTH (ft)		2.80		4.16		2.80		4.16													
	(feet) WSP, SFB = actual GB (ss) = 0.5 x actual GB (ds) = actual	BWP	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH	METHOD	LENGTH
		1	CS-WSP	4.00	CS-WSP	13.50	CS-WSP		CS-WSP	8.00												
ے		2	CS-WSP	3.00	CS-WSP	8.00	CS-WSP	200 000000000	CS-WSP	16.00											Ĩ	
AL BW		3	CS-WSP	5.00			CS-WSP	3880 000														
ACTUAL BWP		4	CS-WSP	10.00			CS-WSP	4.00														
	$CS-PF = 1.5 \times actual$	5	CS-WSP	8.00			CS-WSP	4.00														
1	PFG = 1.5 x actual PFH, ABW = 4 feet	6																				
		7																				
ACTUAL BWP LENGTH (ft)			30.00		21.50		31.75		24.00													
ACTUAL ≥ REQUIRED?			PASS		PASS		PASS		PASS				6									
BWPs ≤ 20' APART?			Yes		Yes		Yes		Yes													
≥ 2 PANELS IN BWL?			Yes		Yes		Yes		Yes													
BWP BEGINS ≤ 10' FROM ENDS? CONTINUOUS SHEATHING				Yes END 1 END 2		END 1 END 2		END 1 END 2		END 1 END 2		END 1 END 2		END 1 END 2		LND 0						
	END CONDITIONS		END I	END Z	END I	END Z	ENVI	ENV Z	ן עאנ	END Z	END 1	ENU Z	ENVI	ENU Z	ENDI	END Z	ENDI	ENU Z	ENVI	ENU Z	END 1	END 2
BWL COMPLIANCE			PA	SS	PA	SS	PA	SS	P/	ISS												

created by Chuck Bajnai, telephone (804) 717-6428 and Brian Foley, telephone (703) 324-1842



Project Number 2019.618

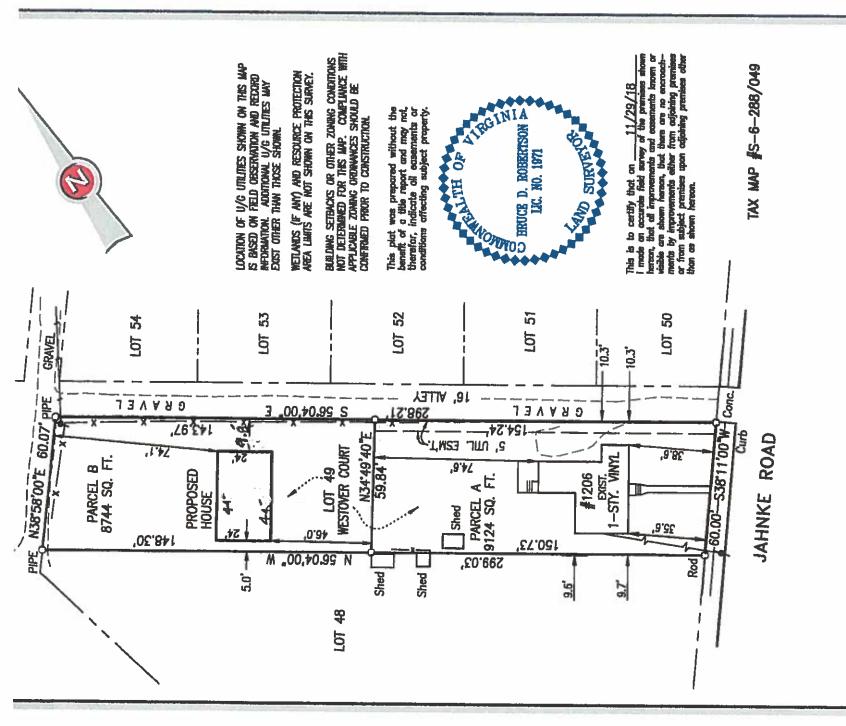
1/4" = 1'-0"



2019.618 1/4" = 1'-0"

Project Number

metal step flashing as required to maintain minimum height.



ROAD DIVISION JAHNKE WESTOVER COURT **PROPOSED** 1206 LOCATED SHOWING 49, **[0** PROPERTY SURVEY ᆼ

CITY OF RICHMOND, VIRGINIA

Date: 12/5/18 Scale: 1"=40'