



August 10, 2022

Viewpoint Residential Design, LLC
1550 SW Market St., Suite 230A
Lee's Summit, MO 64081
Attn: Jeffrey Pfeifer

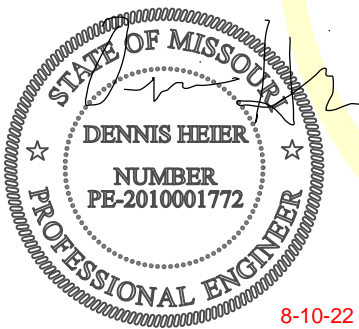
Re: RWR127 Swinney – Notched Hip/Valley Rafter (Inspection Letter)

Per conversation with Jeffrey Pfeifer, on August 10, 2022, Vista Structural Engineering, LLC was asked to address the notched hip & valley rafters to the exterior bearing walls located at the garage. The 1 3/4" x 11 7/8" hip & valley rafters were notched with 7" of available depth (measured from interior face of wall). **We recommend approval of the current framing, without repair.** Please see attached partial plan mark ups, calculations, and photos for reference.

Our firm appreciates the opportunity to serve you. If you have any questions or if you need anything further, please feel free to contact us.

Sincerely,

Vista Structural Engineering, LLC
Dennis Heier, P.E.

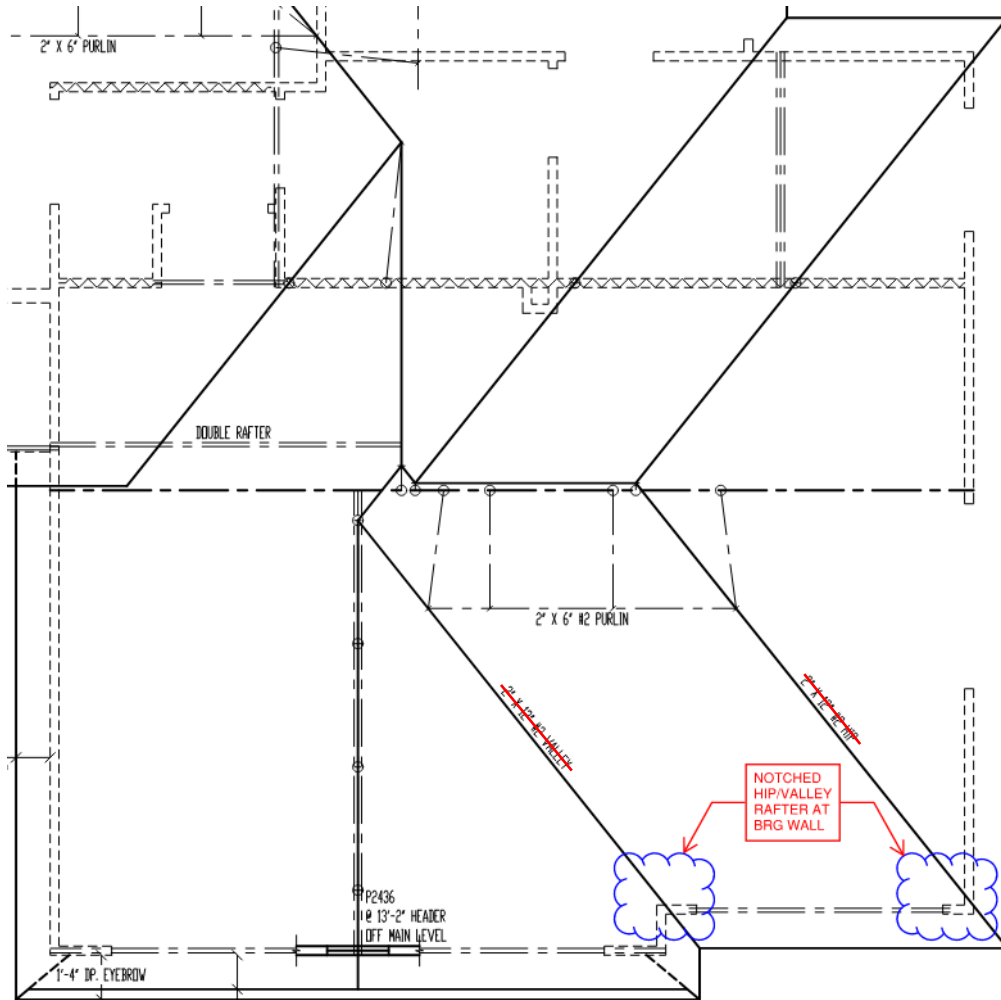


8-10-22

VISTA STRUCTURAL ENGINEERING, LLC

14718 NW DELIA STREET
PORTLAND, OREGON 97229

PHONE: 971.233.6099
VISTASTRUCTURAL.COM



Partial Garage Roof Plan – Location of Notched LVL Hip & Valley Rafters

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Notched Hip Rafter at Garage

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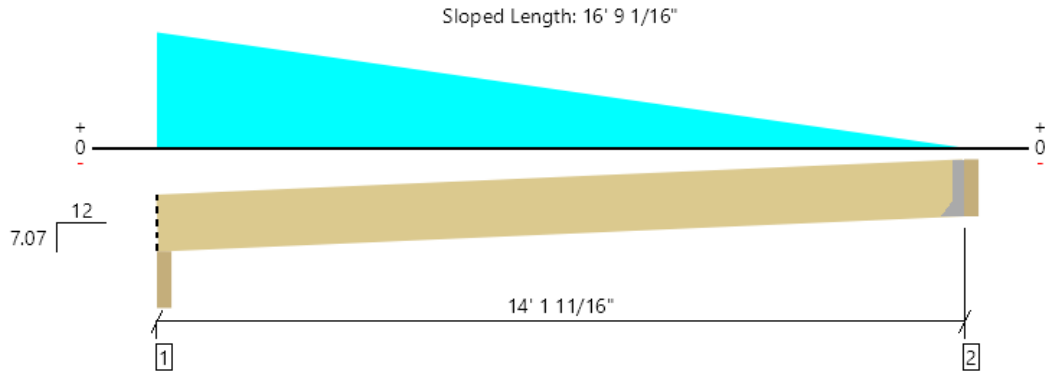
Notched Valley Rafter at Garage

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GOVERNING
REACTION AT
BEARING WALL

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Beveled Plate - SPF	3.50"	3.50"	2.41"	694	843	1537	Blocking
2 - Hanger on 11 1/4" SPF beam	3.50"	Hanger ¹	1.50"	352	407	759	See note ¹

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

• At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger

• ¹ See Connector grid below for additional information and/or requirements.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 14' 1 11/16"	N/A	4.3	--	
1 - Tapered (PLF)	0 to 14' 1 11/16"	N/A	119.0 to 0.0	176.8 to 0.0	Generated from Roof Geometry

Weyerhaeuser Notes

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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Dennis Nguyen Vista Structural Engineering LLC (503) 515-1124 dn@vistastructural.com	



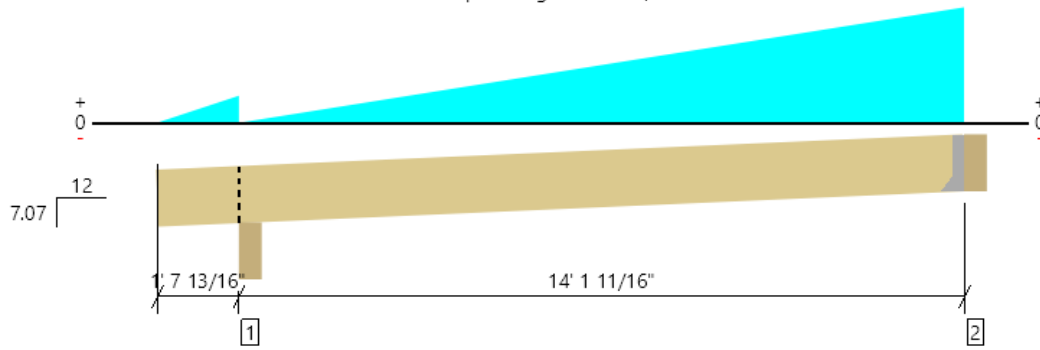
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ForteWEB v3.4, Engine: V8.2.2.122, Data: V8.1.2.2

File Name: RWR127 - SWINNEY

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Sloped Length: 18' 10 5/16"



REACTION AT BEARING WALL

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Beveled Plate - DF	5.50"	5.50"	1.50"	399	459	858	Blocking
2 - Hanger on 11 1/4" DF beam	5.50"	Hanger ¹	1.59"	669	826	1495	See note ¹

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	LRU210Z	1.94"	N/A	6-16d	7-16d	

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 15' 9 1/2"	N/A	4.3	--	
1 - Tapered (PLF)	0 to 1' 7 13/16"	N/A	0.0 to 27.8	0.0 to 41.2	Generated from Roof Geometry
2 - Tapered (PLF)	1' 7 13/16" to 15' 9 1/2"	N/A	0.0 to 117.3	0.0 to 176.8	Generated from Roof Geometry

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ForteWEB Software Operator	Job Notes
Dennis Nguyen Vista Structural Engineering LLC (503) 515-1124 dn@vistastructural.com	



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VISTA
— STRUCTURAL —
ENGINEERING, LLC

NOTCH HIP LVL RAFTER - DESIGN SHEAR CAPACITY CHECK FOR REDUCED DEPTH:

$$A \text{ (REDUCED)} = 1.5 \times 7 = 10.5 \text{ SI}$$

$$F_v = 285 \times 1.15 = 328 \text{ PSI}$$

NOTCHED HIP RAFTER CHECK:

$$R \text{ (D+S, \#)} = 1537\# \text{ (SEE PREVIOUS CALC)}$$

$$f_v = 3/2 \times R/A = 3/2 \times 1537/10.5 = \underline{220 \text{ psi}} < F_v, \text{ OK}$$