

Additional STRUCTURAL CALCULATIONS

NEW ADDITION RESIDENCE FOR:

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PREPARED BY:



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August 22, 2024

Job No. EA - Others

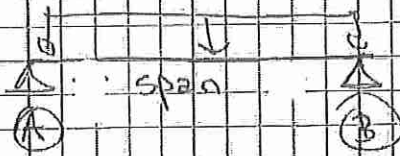
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Girder 1

Comment #1:

$$Span = 15'-8''$$

$$B_{trib} = \frac{24'-8''}{2} + 1' = 13'-4''$$



$$q_{DL} = 25 \text{ PSF}$$

$$q_{LL} = 30 \text{ PSF}$$

$$q_{IT} = 55 \text{ PSF}$$

$$q_{W} = 34.8 \text{ PSF (as Truss B)} - 5 = 29.8$$

$$\Rightarrow G_A = G_B = (55) \times 13'-4'' \times \frac{15'-8''}{2} = 5744 \text{ \#}$$

$$U_A = U_B = (29.8) \times \frac{13'-4''}{2} \times \frac{15'-8''}{2} = 3115 \text{ \#}$$

$\Rightarrow$ Use Strap

UU-VUE NV358-20

$$U_{allow} = 3367 \text{ \#}$$

• Check WF-16

Comment #2:

loads:

$$DL: Roof: (25) \times \left(\frac{15'-8''}{2} + 2' \right) = 246 \text{ \# / ft}$$

$$Wall: (60) \times 10' = 600 \text{ \# / ft.}$$

$$\text{Total} = 846 \text{ \# / ft.}$$

$$U \rightarrow Roof: (30) \times \left(\frac{15'-8''}{2} + 2' \right) = 296 \text{ \# / ft.}$$

$$\begin{aligned} P_{DL} &= 2611 \text{ \#} \\ P_{UL} &= 3133 \text{ \#} \end{aligned} \left. \begin{array}{l} \\ \end{array} \right\} \text{Distributed in 5'-0" (wall below girder)}$$

$$\Rightarrow q_{DL} = \frac{2611 \text{ \#}}{5'} = 522 \text{ \# / ft.}$$

$$q_{UL} = \frac{3133 \text{ \#}}{5'} = 627 \text{ \# / ft.}$$

$$\Rightarrow SB_{act.} = \frac{(846 + 296 + 522 + 627) \text{ \#}}{1.33'} = 1719 \text{ PSF} < 2000 \text{ PSF.}$$