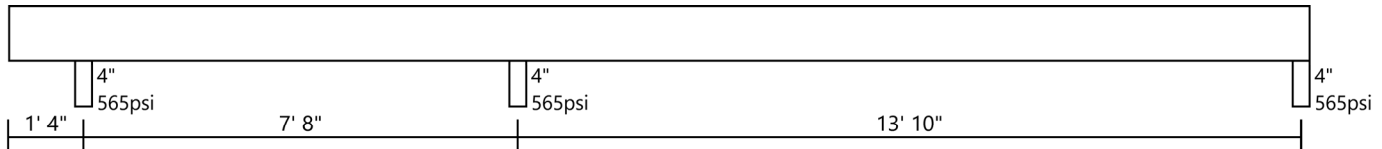


Project: **Milton Built Homes (Plan # 2662-15) - Roof Beams**
 MemberID: **Copy of Copy of Copy of Beam - Roof - Valley 4**
 Usage: **BEAM (Roof)**
 Max Deflection: **LL = L/240 TL = L/180**

Slope: **12/12**



LOADS

Project Design Loads : Roof: Live=20.0 psf, Dead=15.0 psf

#	Shape	Applied	Live+Dead Ld(T)		Live Ld(L)		LDF	Span#	Location*		Additional Info
		To:	@Start	@End	@Start	@End			Starts	Ends	
1	Trapezoidal (plf)	350.0	0.0	200.0	0.0	115%	0	0'	22' 10"	roof load	
2	Trapezoidal (plf)	350.0	0.0	200.0	0.0	115%	0	0'	22' 10"	roof load	
3	Concentrated (lbs)	434.0		278.0		115%	0	17' 6 3/4"		valley point load	
	Uniform (plf)	10.96					0	0'	22' 10"	Self Weight	

If "Applied To" is blank, all plies are assumed to be loaded equally.

*Dimensions measured from left end when span# is 0, otherwise, from left end of the specified span.

LOAD PATTERNS (* = span loaded)

	1	2	3
1	*	*	*

SUPPORTS (lbs)

	1	2	3	
Max Reaction	3013	6129	1056	
Max 115%	1427	2913	505	
Min Reaction	1586	3217	551	
Min 115%	1427	2913	505	
DL Reaction	1586	3217	551	
Min Bearing	3.00"	3.10"	1.50"	[Based on bearing stress below]
Brg Stress (psi)	565	565	565	

DESIGN

	Actual	Span	Location	Group	Allow	LDF	Ratio
V(lbs)	2108	2	7' 6"	31	9080	115%	0.23
M(ft-lbs)	6523	3	0'	31	24232	115%	0.27
RtRn(lbs)	1056	0	22' 10"	31	7910		0.13
IntRn(lbs)	6129	0	9'	31	7910		0.77
LLDefl(")	0.00	1	0'	31	0.20		2L/-10785
TLDefl(")	-0.01	1	0'	31	0.25		2L/-4826
LLDefl(")	0.00	2	3' 10"	31	0.54		L/32074
TLDefl(")	0.01	2	3' 10"	31	0.72		L/13460
LLDefl(")	0.12	3	6' 11"	31	0.98		L/1924
TLDefl(")	0.25	3	6' 11"	31	1.30		L/941

USE: **onCENTER LVL 2.0E 1 3/4" x 11 7/8" 2 Plies**
onCENTER® LVL by BlueLinX

Grade, Depth selected by user

Connect plies together with 2 rows of 0.131" x 3 1/2" nails @ 12" o.c. (one row 2" from top, one row 2" from bottom).

NOTES

1. Designed in accordance with National Design Specifications for Wood Construction and applicable approvals or research reports.
2. Provide full depth lateral support at all bearing locations. Allowable positive moment is calculated based on top edge with continuous lateral support.
3. Allowable negative moment is calculated based on bottom edge laterally supported @16" o.c.
4. Analysis valid for dry-use only (less than 16% moisture content).
5. Loads have been input by the user and have not been verified by BlueLinX Engineered Lumber Technical Services.
6. Bearing length (Min Bearing) based on allowable stress of support material (Bearing Stress); support material capacity shall be verified (by others).
7. When required by the building code, a registered design professional or building official should verify the input loads and product application.
8. Company, product or brand names referenced are trademarks or registered trademarks of their respective owners.
9. Allowable upward deflection for cantilever is the greater of 0.20" or the cantilever span (inches) multiplied by 2 and divided by the factor shown in Max Deflection (located above beam drawing).
10. Load Combinations: 10= D, 20= D + 100%, 30= D + 115%, 40= D + 125%, 50= D + 160%, 60= D + 0.75(100%+115%), 70= D + 0.75(100%+125%), 80= D + 0.75(100%+115%+160%), 90= D + 0.75(100%+125%+160%), 100= 0.6D + 160%, 110= D + Commercial (100%), 120= D + 0.75(100%+160%)
11. Group = Load Combination Number + Load Pattern number. (For simple span, Load pattern = 1 for LL, 0 for DL).