

Graphical Illustration - Not To Scale
 Member Cut Length - 21'- 10"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	18'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	10'- 8"	31516.02 lb ft	45022.29 lb ft	Passed - 70%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	3'- 7"	6286.90 lb	11970.00 lb	Passed - 53%	1.00	D + L
Live Load Deflection	11'- 1"	0'- 3/8"	N/A (L/360)	Passed - L/606	-	0.75(L + Lr)
Total Load Deflection	11'- 1"	0'- 9/16"	N/A (L/240)	Passed - L/371	-	D + 0.75(L + Lr)
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 1 1/2"	97.64 lb	25520.83 lb 21437.50 lb	Passed - 0%	1.25	D + 0.75(L + Lr)
	0'- 1 1/2"	-213.68 lb	18375.00 lb -	Passed - 1%	0.90	D
	1'- 11 1/2"	8250.46 lb	18375.00 lb 21437.50 lb	Passed - 45%	1.00	D + L
	20'- 2 1/2"	8353.42 lb	18375.00 lb 21437.50 lb	Passed - 45%	1.00	D + L
	21'- 8 1/2"	157.58 lb	25520.83 lb 21437.50 lb	Passed - 1%	1.25	D + 0.75(L + Lr)
	21'- 8 1/2"	-276.19 lb	18375.00 lb -	Passed - 2%	0.90	D

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	21'- 10"	Self Weight	16 lb/ft	-	-	-
Uniform	0'	21'- 10"	User Load	165 lb/ft	-	220 lb/ft	-
Uniform	19'- 10"	21'- 10"	Rim1(i466)	45 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J1(i707)	218.00 lb	586.00 lb	-	-
Point	2'- 8"	2'- 8"	J1(i714)	209.00 lb	586.00 lb	-	-
Point	4'	4'	J1(i684)	209.00 lb	586.00 lb	-	-
Point	5'- 4"	5'- 4"	J1(i702)	209.00 lb	586.00 lb	-	-
Point	6'- 8"	6'- 8"	J1(i687)	209.00 lb	586.00 lb	-	-
Point	8'	8'	J1(i717)	209.00 lb	586.00 lb	-	-
Point	9'- 4"	9'- 4"	J1(i691)	209.00 lb	586.00 lb	-	-
Point	10'- 8"	10'- 8"	J1(i693)	209.00 lb	586.00 lb	-	-
Point	12'	12'	J1(i710)	209.00 lb	586.00 lb	-	-
Point	13'- 4"	13'- 4"	J1(i706)	209.00 lb	586.00 lb	-	-
Point	14'- 8"	14'- 8"	J1(i699)	209.00 lb	586.00 lb	-	-
Point	16'	16'	J1(i692)	209.00 lb	586.00 lb	-	-
Point	17'- 4"	17'- 4"	J1(i683)	209.00 lb	586.00 lb	-	-
Point	18'- 8"	18'- 8"	J1(i682)	209.00 lb	586.00 lb	-	-
Point	20'	20'	J1(i686)	209.00 lb	586.00 lb	-	-
Point	21'- 4"	21'- 4"	J1(i705)	183.00 lb	512.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	2'- 1"	-	3652.00 lb	4790.00 lb	2687.00 lb	-
+++	0'- 1 1/2"	0'- 1 1/2"	E1(i6)	-	189.00 lb	226.00 lb	-
+++	1'- 11 1/2"	1'- 11 1/2"	E11(i29)	3652.00 lb	4601.00 lb	2461.00 lb	-
2	20'- 1"	21'- 10"	E10(i28)	3725.00 lb	5138.00 lb	2574.00 lb	-
==>	20'- 2 1/2"	20'- 2 1/2"	E10(i28)	3725.00 lb	4753.00 lb	2381.00 lb	-

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

- This report is based on modeled conditions input by the user. Actual field conditions may differ from those shown. These results should be reviewed by a qualified design professional.



Job: STR. 1006 Butler Drive. EWP
Member Type: Beam | Level: 2nd Floor
MiTek SAPPHIRE™ Supply Version 8.2.2.241.Update18
Designed by Single Member Design Engine

Label: BM6-2-i688

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Date: 03/17/2022 11:53:22

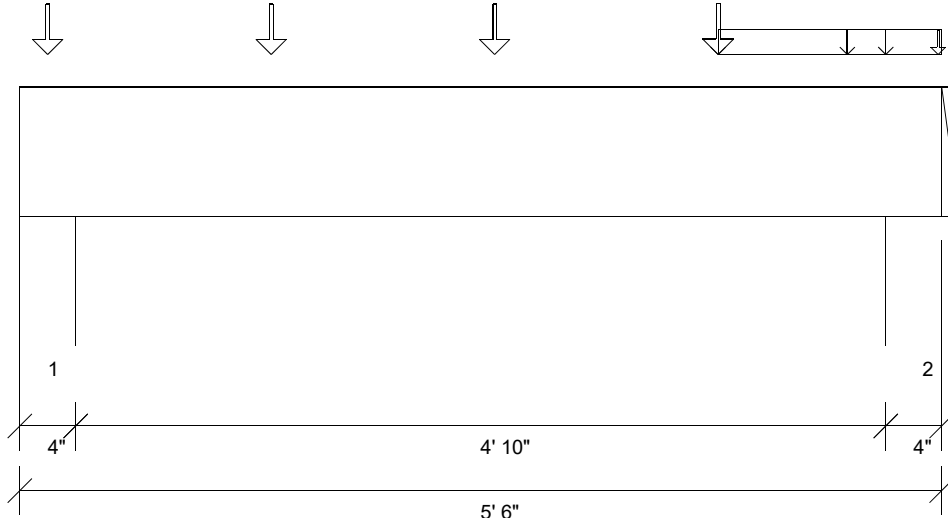
Member: 2 - onCENTER LVL 2.0E 1 3/4" x 18"

Status: Design Passed

==> 21'- 8 1/2" 21'- 8 1/2" E10(i28) - 385.00 lb 193.00 lb -

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 5'- 6"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 2 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	2'- 10"	454.89 lb ft	3429.65 lb ft	Passed - 13%	1.00	D + L	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	4'- 4 3/4"	293.73 lb	2497.50 lb	Passed - 12%	1.00	D + L	
Live Load Deflection	2'- 9 1/4"	0'	N/A (L/360)	Passed - L/999	-	L	
Total Load Deflection	2'- 9 1/4"	0'	N/A (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0'- 3"	467.26 lb	Supported Mt 5100.07 lb	Supported Mt 10500.14 lb	Passed - 9%	1.00	D + L
	5'- 3"	309.45 lb	5099.98 lb	10499.96 lb	Passed - 6%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

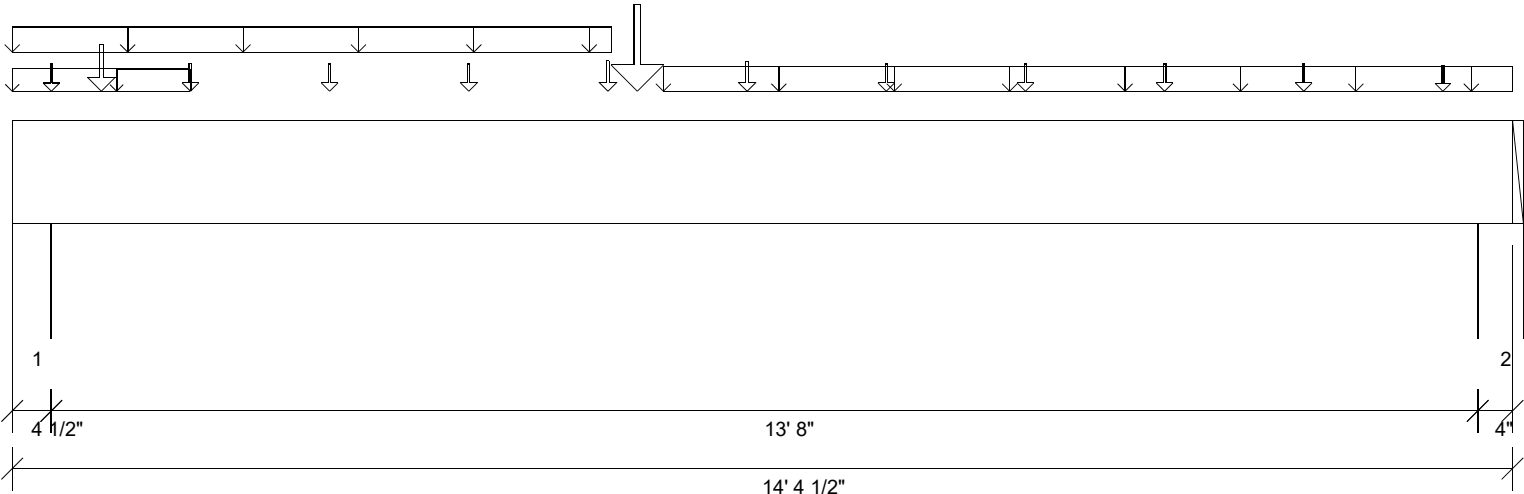
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	5'- 6"	Self Weight	6 lb/ft	-	-	-
Uniform	4'- 2"	5'- 2"	FC2 Floor Material	2 lb/ft	5 lb/ft	-	-
Uniform	5'- 2"	5'- 6"	FC2 Floor Material	2 lb/ft	8 lb/ft	-	-
Point	0'- 2"	0'- 2"	J7(i594)	42.00 lb	140.00 lb	-	-
Point	1'- 6"	1'- 6"	J7(i601)	42.00 lb	140.00 lb	-	-
Point	2'- 10"	2'- 10"	J7(i598)	42.00 lb	140.00 lb	-	-
Point	4'- 2"	4'- 2"	J7(i582)	43.00 lb	144.00 lb	-	-
Point	5'- 5 3/4"	5'- 5 3/4"	FC2 Floor Material	-	1.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E24(i20)	122.00 lb	351.00 lb	-	-
2	5'- 2"	5'- 6"	E19(i15)	83.00 lb	221.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 14' 4 1/2"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 2 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	5'- 11 7/8"	21062.97 lb ft	21278.23 lb ft	Passed - 99%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 4 3/8"	4891.59 lb	7896.87 lb	Passed - 62%	1.00	D + L
Live Load Deflection	6'- 11 9/16"	0'- 3/8"	N/A (L/360)	Passed - L/434	-	L
Total Load Deflection	6'- 11 5/8"	0'- 5/8"	N/A (L/240)	Passed - L/255	-	D + L
Max. Reaction	0'- 3 1/2"	6061.21 lb	Supported Mt/ 11812.29 lb	Passed - 51%	1.00	D + L
	14'- 1 1/2"	3856.91 lb	Supporting Mt/ 12249.88 lb	Passed - 37%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

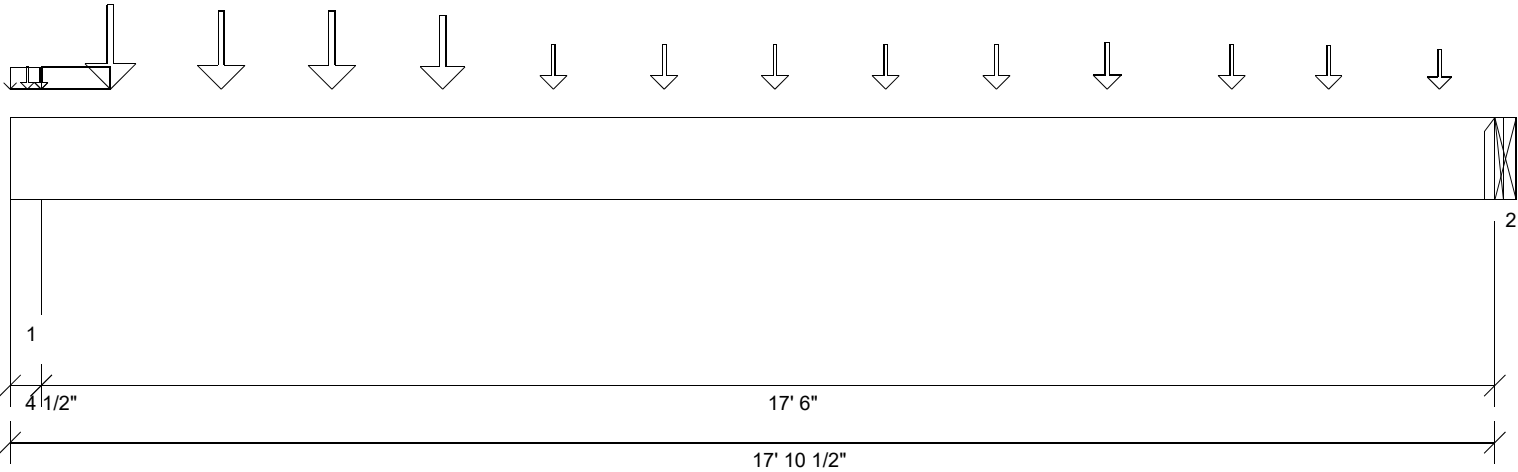
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	14'- 4 1/2"	Self Weight	11 lb/ft	-	-	-
Uniform	0'	5'- 8 7/8"	E34(i55)	45 lb/ft	-	-	-
Uniform	-0'	1'	FC2 Floor Material	5 lb/ft	15 lb/ft	-	-
Uniform	1'	1'- 8 1/2"	FC2 Floor Material	2 lb/ft	4 lb/ft	-	-
Uniform	6'- 2 7/8"	14'- 4 1/2"	E35(i77)	45 lb/ft	-	-	-
Point	0'- 4 1/2"	0'- 4 1/2"	J3(i653)	94.00 lb	235.00 lb	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	BM4-2(i719)	409.00 lb	1031.00 lb	-	-
Point	1'- 8 1/2"	1'- 8 1/2"	J3(i624)	95.00 lb	238.00 lb	-	-
Point	3'- 1/2"	3'- 1/2"	J3(i656)	96.00 lb	241.00 lb	-	-
Point	4'- 4 1/2"	4'- 4 1/2"	J3(i656)	96.00 lb	241.00 lb	-	-
Point	5'- 8 1/2"	5'- 8 1/2"	J3(i625)	237.00 lb	262.00 lb	-	-
Point	5'- 11 7/8"	5'- 11 7/8"	PBO7(i76)	1432.00 lb	2341.00 lb	-	-
Point	7'- 1/2"	7'- 1/2"	J3(i615)	224.00 lb	241.00 lb	-	-
Point	8'- 4 1/2"	8'- 4 1/2"	J3(i656)	96.00 lb	241.00 lb	-	-
Point	9'- 8 1/2"	9'- 8 1/2"	J3(i640)	96.00 lb	241.00 lb	-	-
Point	11'- 1/2"	11'- 1/2"	J3(i640)	96.00 lb	241.00 lb	-	-
Point	12'- 4 1/2"	12'- 4 1/2"	J3(i640)	96.00 lb	241.00 lb	-	-
Point	13'- 8 1/2"	13'- 8 1/2"	J3(i593)	72.00 lb	181.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4 1/2"	E17(i41)	2344.00 lb	3781.00 lb	-	-
2	14'- 1/2"	14'- 4 1/2"	E8(i40)	1581.00 lb	2212.00 lb	-	-

Errors, Warnings & Notes:

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- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 17'- 10 1/2"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 4 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	7'- 10 1/2"	7329.75 lb ft	21278.23 lb ft	Passed - 34%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 4 3/8"	1659.99 lb	7896.87 lb	Passed - 21%	1.00	D + L
Live Load Deflection	8'- 10"	0'- 5/16"	N/A (L/360)	Passed - L/703	-	L
Total Load Deflection	8'- 10 1/8"	0'- 7/16"	N/A (L/240)	Passed - L/507	-	D + L
Max. Reaction	0'- 3 1/2"	2184.83 lb	Supported Mt/ 11812.50 lb	Passed - 18%	1.00	D + L
	17'- 10 1/2"	1440.70 lb	Supporting Mt/ 13781.25 lb	Passed - 37%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	17'- 10 1/2"	Self Weight	11 lb/ft	-	-	-
Uniform	0'	0'- 4 1/2"	FC2 Floor Material	-	1 lb/ft	-	-
Uniform	0'- 4 1/2"	1'- 2 1/2"	FC2 Floor Material	2 lb/ft	6 lb/ft	-	-
Point	0'- 2 1/2"	0'- 2 1/2"	E37(i78)	13.00 lb	-	-	-
Point	0'- 4 1/2"	0'- 4 1/2"	FC2 Floor Material	-	1.00 lb	-	-
Point	1'- 2 1/2"	1'- 2 1/2"	J2(i703)	156.00 lb	333.00 lb	-	-
Point	2'- 6 1/2"	2'- 6 1/2"	J2(i718)	103.00 lb	342.00 lb	-	-
Point	3'- 10 1/2"	3'- 10 1/2"	J2(i708)	103.00 lb	342.00 lb	-	-
Point	5'- 2 1/2"	5'- 2 1/2"	J2(i712)	94.00 lb	313.00 lb	-	-
Point	6'- 6 1/2"	6'- 6 1/2"	J5(i661)	43.00 lb	142.00 lb	-	-
Point	7'- 10 1/2"	7'- 10 1/2"	J5(i661)	43.00 lb	142.00 lb	-	-
Point	9'- 2 1/2"	9'- 2 1/2"	J7(i594)	43.00 lb	142.00 lb	-	-
Point	10'- 6 1/2"	10'- 6 1/2"	J7(i594)	43.00 lb	142.00 lb	-	-
Point	11'- 10 1/2"	11'- 10 1/2"	J7(i598)	43.00 lb	142.00 lb	-	-
Point	13'- 2 1/2"	13'- 2 1/2"	J7(i582)	45.00 lb	151.00 lb	-	-
Point	14'- 8 1/2"	14'- 8 1/2"	J6(i606)	43.00 lb	142.00 lb	-	-
Point	15'- 10 1/2"	15'- 10 1/2"	J6(i648)	40.00 lb	133.00 lb	-	-
Point	17'- 2 1/2"	17'- 2 1/2"	J6(i674)	34.00 lb	112.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4 1/2"	E22(i18)	632.00 lb	1553.00 lb	-	-
2	17'- 10 1/2"	17'- 10 1/2"	BM5-2(i711)	409.00 lb	1031.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			MII Seal Length	Other Information
			Top	Face	Member		
2	USP	HD412	-	16- 16d	8- 10d	N/A	-

Errors, Warnings & Notes:

* The dead loads used in the design of this member were applied to the structure as sloped dead loads.

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

- This report is based on modeled conditions input by the user. Actual field conditions may differ from those shown. These results should be reviewed by a qualified design professional.



Job: STR. 1006 Butler Drive. EWP
Member Type: Beam | Level: 2nd Floor
MiTek SAPPHIRE™ Supply Version 8.2.2.241.Update18
Designed by Single Member Design Engine

Label: BM4-2-i719

Page: 6 of 12
Date: 03/17/2022 11:53:22

Member: 2 - onCENTER LVL 2.0E 1 3/4" x 11 7/8"

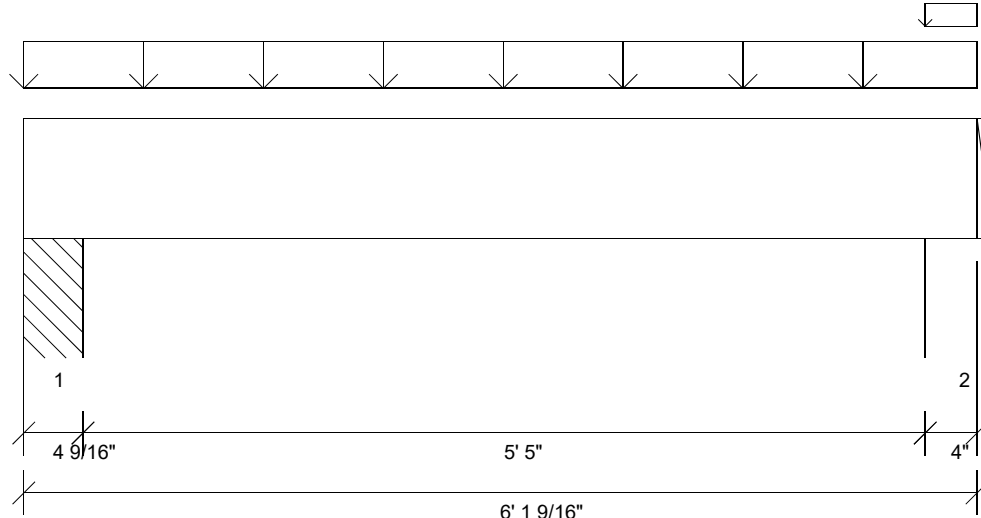
Status: Design Passed

* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.

* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

- This report is based on modeled conditions input by the user. Actual field conditions may differ from those shown. These results should be reviewed by a qualified design professional.



Graphical Illustration - Not To Scale
 Member Cut Length - 6'- 3 1/16"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 5'- 9 9/16"	Bottom:	5'- 9 9/16"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	3'- 1 1/16"	1123.01 lb ft	4287.06 lb ft	Passed - 26%	1.25	D + 0.75(L + Lr)	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	1'- 1 13/16"	564.51 lb	3121.88 lb	Passed - 18%	1.25	D + 0.75(L + Lr)	
Live Load Deflection	3'- 1 1/16"	0'	N/A (L/360)	Passed - L/999	-	0.75(L + Lr)	
Total Load Deflection	3'- 1 1/16"	0'	N/A (L/240)	Passed - L/999	-	D + 0.75(L + Lr)	
Max. Reaction	0'- 3 9/16"	899.56 lb	Supported Mt 5820.58 lb	Supported Mt 9929.23 lb	Passed - 15%	1.25	D + 0.75(L + Lr)
	5'- 10 9/16"	886.98 lb	5100.04 lb	10500.08 lb	Passed - 17%	1.25	D + 0.75(L + Lr)

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

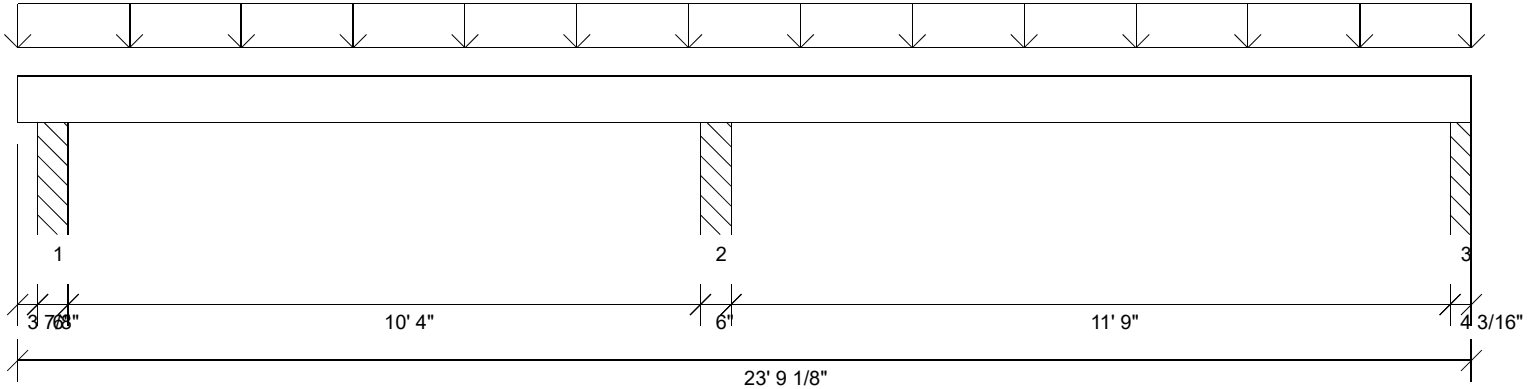
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	-0'	6'- 1 9/16"	Self Weight	6 lb/ft	-	-	-
Uniform	-0'	6'- 1 9/16"	User Load	150 lb/ft	60 lb/ft	120 lb/ft	-
Uniform	5'- 9 9/16"	6'- 1 9/16"	FC2 Floor Material	3 lb/ft	6 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	-0'	0'- 4 9/16"	PBO3(i27)	482.00 lb	185.00 lb	371.00 lb	-
2	5'- 9 9/16"	6'- 1 9/16"	E5(i38)	475.00 lb	184.00 lb	365.00 lb	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 23'- 10 7/8"
 MemberPitch - 0/12

Design Information:

Building Code: IRC 2018	Floor Dead Load: 12.0 lb/ft ²	Roof Dead Load: 15.0 lb/ft ²	Ground Snow Load: 0.0 lb/ft ²
Design Methodology: ASD	Floor Live Load: 40.0 lb/ft ²	Roof Live Load: 20.0 lb/ft ²	
	Unbraced Length Top: 23'- 10 7/8"	Bottom: 23'- 10 7/8"	

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	11'- 4 15/16"	4845.74 lb ft	12078.16 lb ft	Passed - 40%	1.25	D + 0.75(L + Lr)
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	12'- 5 3/16"	1873.70 lb	7689.06 lb	Passed - 24%	1.25	D + 0.75(L + Lr)
Live Load Deflection	17'- 9 11/16"	0'- 1/8"	N/A (L/360)	Passed - L/999	-	0.75(L + Lr)
Total Load Deflection	18'- 1/4"	0'- 3/16"	N/A (L/240)	Passed - L/830	-	D + 0.75(L + Lr)
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 6 7/8"	1435.38 lb	16734.29 lb 15224.92 lb	Passed - 9%	1.25	D + 0.75(L + Lr)
	11'- 4 15/16"	4205.50 lb	16734.31 lb 15224.94 lb	Passed - 28%	1.25	D + 0.75(L + Lr)
	23'- 5 15/16"	1527.94 lb	10983.25 lb 10617.15 lb	Passed - 14%	1.25	D + 0.75(L + Lr)

Design Notes:

- * The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- * Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	23'- 9 1/8"	Self Weight	8 lb/ft	-	-	-
Uniform	0'	23'- 9 1/8"	User Load	150 lb/ft	60 lb/ft	120 lb/ft	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'- 3 7/8"	0'- 9 7/8"	PBO1(i25)	710.00 lb	322.00/-53.00 lb	644.00/-107.00 lb	-
2	11'- 1 15/16"	11'- 7 15/16"	PBO2(i26)	2271.00 lb	860.00 lb	1720.00 lb	-
3	23'- 4 15/16"	23'- 9 1/8"	PBO3(i27)	783.00 lb	331.00/-34.00 lb	662.00/-68.00 lb	-

Errors, Warnings & Notes:

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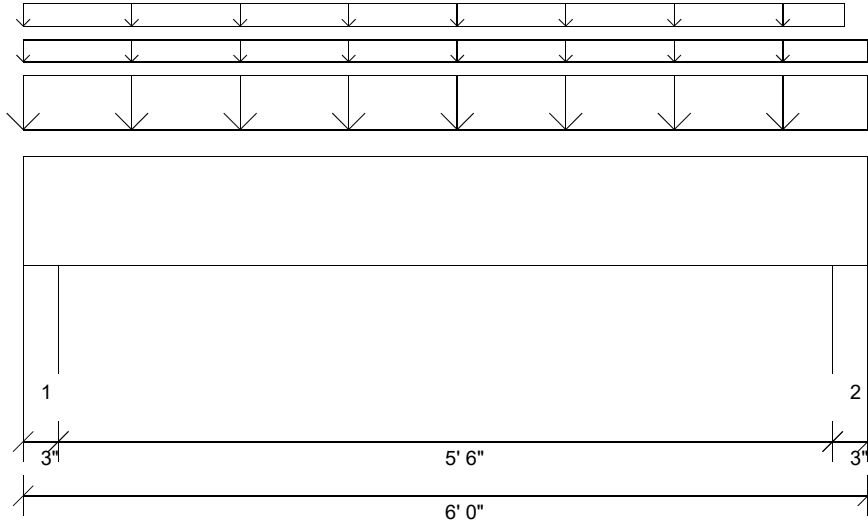
Job: STR. 1006 Butler Drive. EWP
 Member Type: Beam | Level: 2nd Floor
 MiTek SAPPiRE™ Supply Version 8.2.2.241.Update18
 Designed by Single Member Design Engine

Label: BM2-2-i581

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 Date: 03/17/2022 11:53:22

Member: 2 - onCENTER LVL 2.0E 1 3/4" x 9 1/4"

Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 6'
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	5'- 6"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	3'	2638.05 lb ft	16650.34 lb ft	Passed - 16%	1.25	D + Lr	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	1'- 1/4"	1305.23 lb	7689.06 lb	Passed - 17%	1.25	D + Lr	
Live Load Deflection	3'	0'	N/A (L/360)	Passed - L/999	-	Lr	
Total Load Deflection	3'	0'- 1/16"	N/A (L/240)	Passed - L/999	-	D + Lr	
Max. Reaction	0'- 2"	1978.40 lb	Supported Mt 7875.03 lb	Supported Mt 9187.54 lb	Passed - 25%	1.25	D + Lr
	5'- 10"	1970.62 lb	7875.03 lb	9187.54 lb	Passed - 25%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

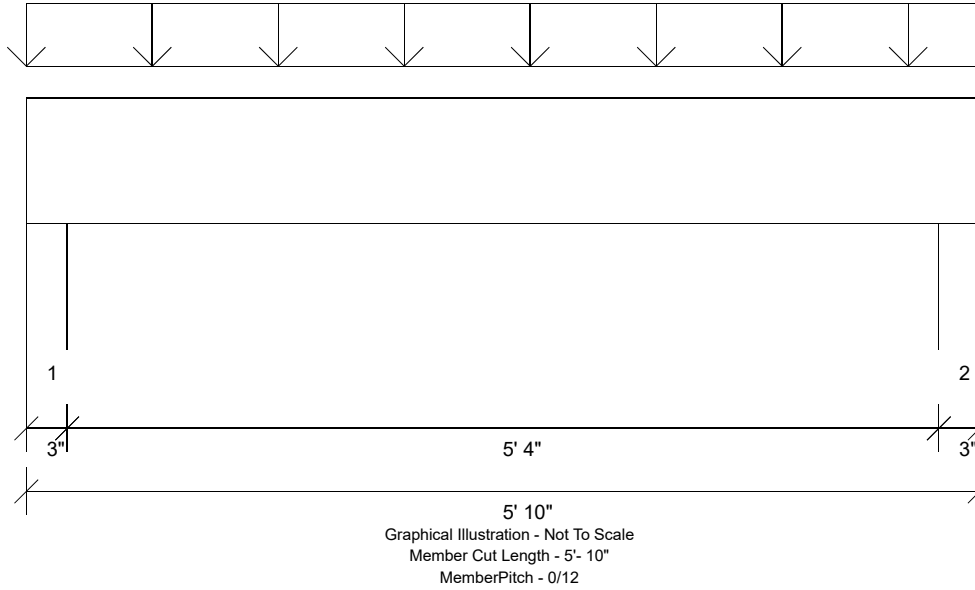
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	6'	Self Weight	8 lb/ft	-	-	-
Uniform	0'	6'	User Load	255 lb/ft	-	340 lb/ft	-
Uniform	0'	6'	Rim2(i672)	11 lb/ft	20 lb/ft	-	-
Uniform	0'	5'- 10"	Rim2(i672)	45 lb/ft	-	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 3"	E4(i39)	958.00 lb	60.00 lb	1020.00 lb	-
2	5'- 9"	6'	E5(i38)	951.00 lb	60.00 lb	1020.00 lb	-

Errors, Warnings & Notes:

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- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Design Information:

Building Code: IRC 2018	Floor Dead Load: 12.0 lb/ft ²	Roof Dead Load: 15.0 lb/ft ²	Ground Snow Load: 0.0 lb/ft ²
Design Methodology: ASD	Floor Live Load: 40.0 lb/ft ²	Roof Live Load: 20.0 lb/ft ²	
	Unbraced Length Top: 5'- 4"	Bottom: 5'- 4"	

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	2'- 11"	2273.35 lb ft	16650.34 lb ft	Passed - 14%	1.25	D + Lr
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1/4"	1144.00 lb	7689.06 lb	Passed - 15%	1.25	D + Lr
Live Load Deflection	2'- 11"	0'	N/A (L/360)	Passed - L/999	-	Lr
Total Load Deflection	2'- 11"	0'	N/A (L/240)	Passed - L/999	-	D + Lr
Max. Reaction	0'- 2"	1760.01 lb	<u>Supported Mt</u> 7875.03 lb	Passed - 22%	1.25	D + Lr
	5'- 8"	1760.01 lb	<u>Supporting Mt</u> 9187.54 lb	Passed - 22%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

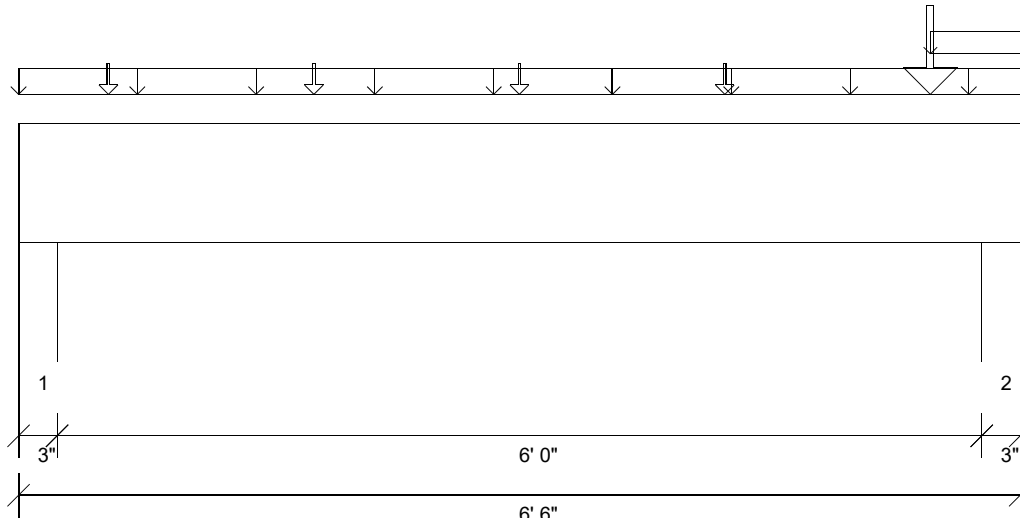
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	5'- 10"	Self Weight	8 lb/ft	-	-	-
Uniform	0'	5'- 10"	User Load	255 lb/ft	-	340 lb/ft	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 3"	E3(i4)	768.00 lb	-	992.00 lb	-
2	5'- 7"	5'- 10"	E4(i39)	768.00 lb	-	991.00 lb	-

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Graphical Illustration - Not To Scale
 Member Cut Length - 6'- 6"
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	6'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	3'- 3"	2144.89 lb ft	13320.27 lb ft	Passed - 16%	1.00	D + L	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	1'- 1/4"	1027.80 lb	6151.25 lb	Passed - 17%	1.00	D + L	
Live Load Deflection	3'- 4 1/16"	0"	N/A (L/360)	Passed - L/999	-	L	
Total Load Deflection	3'- 4 3/16"	0'- 1/16"	N/A (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0'- 2"	1317.32 lb	Supported Mt 7874.93 lb	Supported Mt 9187.42 lb	Passed - 17%	1.00	D + L
	6'- 4"	3016.50 lb	7874.92 lb	9187.41 lb	Passed - 38%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

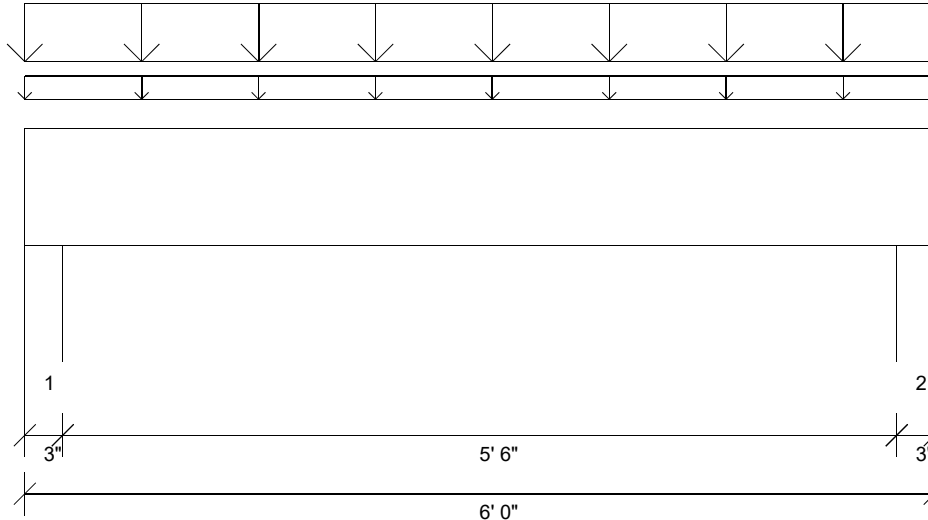
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	6'- 6"	Self Weight	8 lb/ft	-	-	-
Uniform	0'	6'- 6"	Rim2(i676)	45 lb/ft	-	-	-
Uniform	5'- 11"	6'- 6"	Rim2(i676)	1 lb/ft	2 lb/ft	-	-
Point	0'- 7"	0'- 7"	J3(i658)	176.00 lb	238.00 lb	-	-
Point	1'- 11"	1'- 11"	J3(i588)	160.00 lb	238.00 lb	-	-
Point	3'- 3"	3'- 3"	J3(i633)	160.00 lb	238.00 lb	-	-
Point	4'- 7"	4'- 7"	J3(i618)	160.00 lb	238.00 lb	-	-
Point	5'- 11"	5'- 11"	J3(i590)	1208.00 lb	1169.00 lb	717.00 lb	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 3"	E16(i13)	659.00 lb	658.00 lb	48.00 lb	-
2	6'- 3"	6'- 6"	E17(i41)	1552.00 lb	1464.00 lb	669.00 lb	-

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Graphical Illustration - Not To Scale
 Member Cut Length - 6'
 MemberPitch - 0/12

Design Information:

Building Code:	IRC 2018	Floor Dead Load:	12.0 lb/ft ²	Roof Dead Load:	15.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length Top:	0'	Bottom:	5'- 6"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	3'	2441.74 lb ft	16650.34 lb ft	Passed - 15%	1.25	D + Lr
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1/4"	1208.14 lb	7689.06 lb	Passed - 16%	1.25	D + Lr
Live Load Deflection	3'	0'	N/A (L/360)	Passed - L/999	-	Lr
Total Load Deflection	3'	0'	N/A (L/240)	Passed - L/999	-	D + Lr
Max. Reaction	0'- 2"	1831.29 lb	<u>Supported Mt</u> 7874.93 lb	Passed - 23%	1.25	D + Lr
	5'- 10"	1831.29 lb	<u>Supporting Mt</u> 9187.41 lb	Passed - 23%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	6'	Self Weight	8 lb/ft	-	-	-
Uniform	0'	6'	User Load	255 lb/ft	-	340 lb/ft	-
Uniform	-0'	6'	Rim2(i583)	7 lb/ft	10 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 3"	E8(i40)	811.00 lb	30.00 lb	1020.00 lb	-
2	5'- 9"	6'	E7(i2)	811.00 lb	30.00 lb	1020.00 lb	-

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