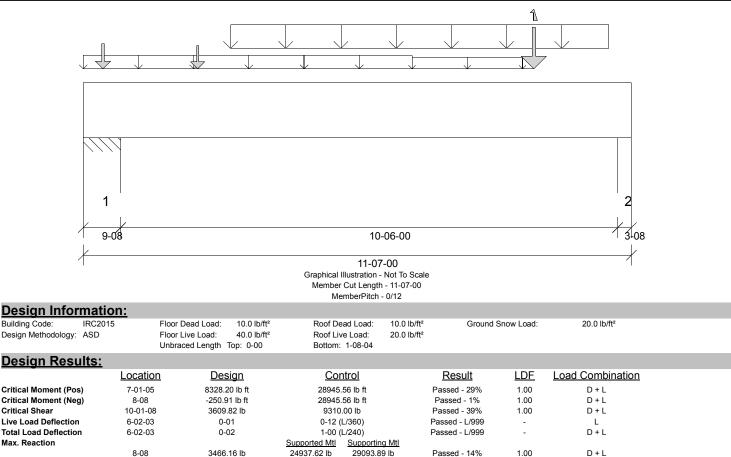


# Member Type: Beam | Level: 2nd Floor Designed by Single Member Design Engine

# Member: 2 - 1 3/4" x 14" (2.0E 3100) LVL

# Label: 1BM1-2-i1272

Page: 1 of 11 Date: 08/17/2021 15:47:56 Status: Design Passed



#### Design Notes:

11-04-08

\* Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

10718.73 lb

Passed - 40%

1.00

D + L

9187.48 lb

#### Loading:

				Maximum Load Magnitudes						
Type	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow			
Self Weight	0-00	11-07-00	Self Weight	14 lb/ft	-	-	-			
Uniform	0-00	6-11-06	FC1 Floor Decking	18 lb/ft	72 lb/ft	-	-			
Uniform	3-01-06	11-01-05	Smoothed Load	77 lb/ft	308 lb/ft	-	-			
Uniform	6-11-06	9-06-04	FC1 Floor Decking	8 lb/ft	32 lb/ft	-	-			
Point	9-06-04	9-06-04	1BM3-2(i1299)	338.00 lb	1267.00/-55.00 lb	-	-			
Point	5-00	5-00	FJ16(i1180)	154.00 lb	616.00 lb	-	-			
Point	2-05-00	2-05-00	FJ16(i1181)	135.00 lb	538.00 lb	-	-			

# Support Information:

			_	Maximum Analysis Reactions					
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow		
1	0-00	9-08	W35(i37)	763.00 lb	2691.00/-10.00 lb	-	-		
2	11-03-08	11-07-00	W40(i40)	810.00 lb	2854.00/-45.00 lb	-	-		

#### Errors, Warnings & Notes:

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

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

3652.68 lb

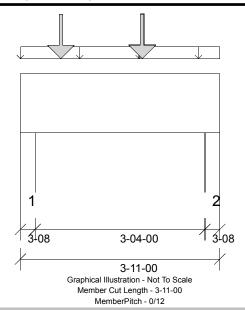
\* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

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



Member Type: Beam | Level: 2nd Floor Designed by Single Member Design Engine

# Member: 2 - 1 3/4" x 14" (2.0E 3100) LVL



# Design Information:

Design intorna							
Building Code: IRC	2015 Floo	or Dead Load: 10.0 lb/ft <sup>2</sup>	Roof Dead Load:	10.0 lb/ft <sup>2</sup>	Ground S	Snow Load:	20.0 lb/ft <sup>2</sup>
Design Methodology: ASD	) Floo	or Live Load: 40.0 lb/ft <sup>2</sup>	Roof Live Load:	20.0 lb/ft <sup>2</sup>			
	Unb	praced Length Top: 0-00	Bottom: 1-05-00				
<b>Design Results</b>	<u>:</u>						
	Location	<u>Design</u>	<u>Control</u>		<u>Result</u>	<u>LDF</u>	Load Combination
Critical Moment (Pos)	2-04-12	769.78 lb ft	28945.56 lb ft		Passed - 3%	1.00	D + L
Critical Shear	1-05-08	855.61 lb	9310.00 lb		Passed - 9%	1.00	D + L
Live Load Deflection	1-11-10	0-00	0-12 (L/360)	I	Passed - L/999	-	L
Total Load Deflection	1-11-10	0-00	1-00 (L/240)	I	Passed - L/999	-	D + L
Max. Reaction			Supported Mtl Supportin	ng Mtl			
	2-08	898.47 lb	9187.52 lb 10718.7	'8 lb	Passed - 10%	1.00	D + L
	3-08-08	614.22 lb	9187.63 lb 10718.9	90 lb	Passed - 7%	1.00	D + L

Design Notes:

\* Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

# Loading:

				Maximum Load Magnitudes							
<u>Type</u>	<u>Start</u>	End	Source	<u>Dead</u>	Floor Live	Roof Live	<u>Snow</u>				
Self Weight	0-00	3-11-00	Self Weight	14 lb/ft	-	-	-				
Uniform	-0-00	3-11-00	FC1 Floor Decking	3 lb/ft	12 lb/ft	-	-				
Point	9-09	9-09	FJ18(i1213)	139.00 lb	556.00 lb	-	-				
Point	2-04-12	2-04-12	FJ18(i1214)	140.00 lb	561.00 lb	-	-				
upport Info	rmation:										

			_	Maximum Analysis Reactions					
Support Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow		
1	0-00	3-08	W40(i40)	202.00 lb	696.00 lb	-	-		
2	3-07-08	3-11-00	W41(i41)	145.00 lb	469.00 lb	-	-		

### Errors, Warnings & Notes:

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

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

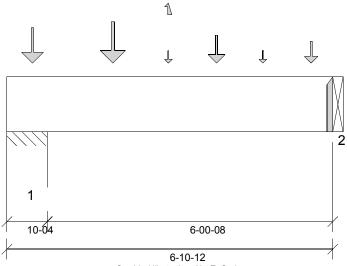
\* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

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



Member Type: Beam | Level: 2nd Floor Designed by Single Member Design Engine

# Member: 2 - 1 3/4" x 14" (2.0E 3100) LVL



#### Graphical Illustration - Not To Scale Member Cut Length - 6-10-12 MemberPitch - 0/12

# **Design Information:**

Design informat	<u>1011.</u>						
Building Code: IRC20	D15 Floor	Dead Load: 10.0 lb/ft <sup>2</sup>	Roof Dead Load:	10.0 lb/ft <sup>2</sup>	Ground Snow Load:	20.0 lb/ft <sup>2</sup>	
Design Methodology: ASD	Floor	Live Load: 40.0 lb/ft <sup>2</sup>	Roof Live Load:	20.0 lb/ft <sup>2</sup>			
	Unbra	ced Length Top: 0-00	Bottom: 1-01-08				
<b>Design Results:</b>							
	Location	<u>Design</u>	<u>Control</u>	<u>Resul</u>	t <u>LDF</u>	Load Combination	
Critical Moment (Pos)	4-05-04	2640.55 lb ft	28945.56 lb ft	Passed -	9% 1.00	D + L	
Critical Moment (Neg)	9-04	-292.35 lb ft	28945.56 lb ft	Passed -	1% 1.00	D + L	
Critical Shear	2-00-04	1078.97 lb	9310.00 lb	Passed - 1	2% 1.00	D + L	
Live Load Deflection	3-09-04	0-00	0-12 (L/360)	Passed - L	/999 -	L	
Total Load Deflection	3-09-05	0-00	1-00 (L/240)	Passed - L	/999 -	D + L	
Max. Reaction			Supported Mtl Supportin	ng Mtl			
	9-04	3030.81 lb	26840.36 lb 31313.7	75 lb Passed - 7	1.00	D + L	
	6-10-12	1609.32 lb	1609.32 lb 0.00 l	lb Passed - 1	00% 1.00	D + L	

#### Design Notes:

\* Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

# Loading:

				Maximum Load Magnitudes						
Type	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>			
Self Weight	0-00	6-10-12	Self Weight	14 lb/ft	-	-	-			
Point	6-08	6-08	-	253.00 lb	1010.00 lb	-	-			
Point	2-02-14	2-02-14	-	309.00 lb	1238.00 lb	-	-			
Point	4-05-04	4-05-04	FJ18(i1240)	177.00 lb	710.00 lb	-	-			
Point	6-05-04	6-05-04	FJ18(i1241)	116.00 lb	462.00 lb	-	-			
Point	3-05-00	3-05-00	FJ20(i1305)	-	103.00/-75.00 lb	-	-			
Point	5-05-00	5-05-00	FJ4(i1231)	24.00 lb	95.00 lb	-	-			

# **Support Information:**

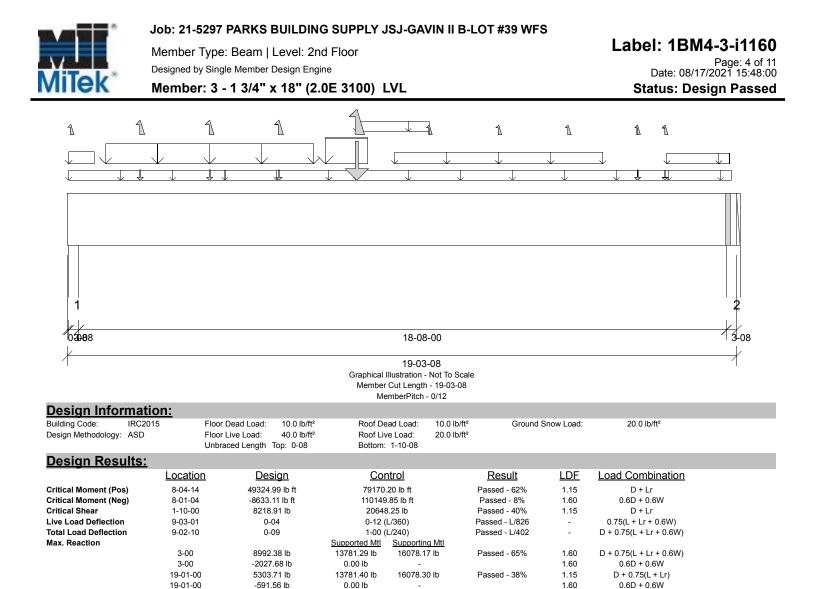
			_		Maximum Analy	sis Reactions	
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow
1	0-00	10-04	W39(i39)	646.00 lb	2406.00/-43.00 lb	-	-
2	6-10-12	6-10-12	1BM1-2(i1272)	338.00 lb	1267.00/-55.00 lb	-	-
Connector	r Information:	<u>.</u>					
			<u>N</u>	lailing Requireme	<u>nts</u>		
Support	Manufacturer	Model	<u>Top</u>	Face	<u>Member</u>	Iviiii Sear	Other Information
2	Simpson	HHUS410	-	-	-	N/A	Connector manually specified by the user.

# Errors, Warnings & Notes:

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



#### **Design Notes:**

\* Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

#### Loading:

					Maximum Loa	ad Magnitudes	
<u>Type</u>	<u>Start</u>	End	Source	<u>Dead</u>	Floor Live	Roof Live	<u>Snow</u>
Self Weight	0-00	19-03-08	Self Weight	28 lb/ft	-	-	-
Uniform	0-08	8-04-00	FC1 Floor Decking	-	29 lb/ft	-	-
Uniform	0-08	9-04	W61(i338)	-	-	134 lb/ft	47 lb/ft
Uniform	1-01-04	7-01-04	W61(i338)	348 lb/ft	-	360 lb/ft	151 lb/ft
Uniform	7-05-04	8-08-00	W61(i338)	552 lb/ft	-	557 lb/ft	234 lb/ft
Uniform	8-04-00	19-01-12	FC1 Floor Decking	-	24 lb/ft	-	-
Uniform	8-04-00	10-05-04	FC1 Floor Decking	-	9 lb/ft	-	-
Uniform	9-05-04	15-05-04	Smoothed Load	30 lb/ft	124 lb/ft	-	-
Uniform	17-03-06	19-01-02	FC1 Floor Decking	-	83 lb/ft	-	-
Point	2-01-04	2-01-04	-	98.00 lb	-	86.00/-4.00 lb	82.00 lb
Point	4-01-04	4-01-04	-	98.00 lb	-	86.00/-4.00 lb	82.00 lb
Point	6-01-04	6-01-04	-	105.00 lb	-	102.00/-5.00 lb	97.00 lb
Point	8-04-03	8-04-03	-	3318.00 lb	122.00 lb	3250.00/-3.70 lb	1261.00 lb
Point	10-05-04	10-05-04	FJ8(i1306)	-	-5.00 lb	-	-
Point	12-05-04	12-05-04	FJ8(i1276)	-	-9.00 lb	-	-
Point	14-05-04	14-05-04	FJ8(i1261)	-	-9.00 lb	-	-
Point	16-05-04	16-05-04	FJ8(i1262)	-	174.00/-6.00 lb	-	-
Point	17-02-12	17-02-12	FJ8(i1263)	-	111.00/-2.00 lb	-	-
Point	1-04	1-04	W61(i338)	-	-	-	-

			_	Maximum Analysis Reactions						
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>			
1	0-08	4-00	W23(i25)	4677.00 lb	648.00/-9.00 lb	4292.00/-12.00 lb	1848.00 lb			
2	19-00-00	19-03-08	W39(i39)	2762.00 lb	1179.00/-22.00 lb	2181.00/-4.00 lb	901.00 lb			

# Errors, Warnings & Notes:

Support Information:

\* CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.

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

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

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



Member Type: Beam | Level: 2nd Floor Designed by Single Member Design Engine Member: 3 - 1 3/4" x 18" (2.0E 3100) LVL

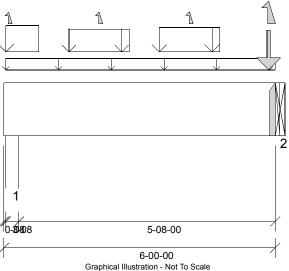
Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

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



Member Type: Beam | Level: 2nd Floor Designed by Single Member Design Engine

# Member: 1 - 1 3/4" x 14" (2.0E 3100) LVL



Graphical Illustration - Not To Scal Member Cut Length - 6-00-00 MemberPitch - 0/12

# **Design Information:**

Design informa	<u>ation.</u>									
Building Code: IRC	C2015	Floor Dead Load:	10.0 lb/ft <sup>2</sup>	Roof De	ead Load:	10.0 lb/ft <sup>2</sup>	Ground S	Snow Load:	20.0 lb/ft <sup>2</sup>	
Design Methodology: AS	D	Floor Live Load:	40.0 lb/ft <sup>2</sup>	Roof Liv	/e Load:	20.0 lb/ft <sup>2</sup>				
		Unbraced Length	Top: 0-08	Bottom:	5-08-00					
<b>Design Results</b>	<u>s:</u>									
	Locatio	<u>n De</u>	<u>sign</u>	<u>Cor</u>	<u>ntrol</u>		<u>Result</u>	<u>LDF</u>	Load Combination	
Critical Moment (Pos)	3-09-06	1610.	33 lb ft	16643	.70 lb ft		Passed - 10%	1.15	D + Lr	
Critical Moment (Neg)	4-01-04	-423.	90 lb ft	23156	.44 lb ft		Passed - 2%	1.60	0.6D + 0.6W	
Critical Shear	4-10-00	1169	.18 lb	5353	.25 lb		Passed - 22%	1.15	D + Lr	
Live Load Deflection	3-02-10	0-	-00	0-12 (	L/360)		Passed - L/999	-	0.6W	
Total Load Deflection	3-02-04	0-	-00	1-00 (	L/240)		Passed - L/999	-	D + 0.75(L + Lr + 0.6W)	
Max. Reaction				Supported Mtl	Supporting	a Mtl				
	2-04	1133	.99 lb	4593.73 lb	5359.36	lb	Passed - 25%	1.60	D + 0.75(L + Lr + 0.6W)	
	2-04	-375	.32 lb	0.00 lb	-			1.60	0.6D + 0.6W	
	6-00-00	6418	3.81 lb	6418.81 lb	0.00 lb	)	Passed - 100%	1.15	D + Lr	
	6-00-00	-780	.29 lb	0.00 lb	-			1.60	0.6D + 0.6W	

#### **Design Notes:**

#### Loading:

				Maximum Load Magnitudes							
<u>Type</u>	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>				
Self Weight	0-00	6-00-00	Self Weight	7 lb/ft	-	-	-				
Uniform	0-08	6-00-00	FC1 Floor Decking	11 lb/ft	42 lb/ft	-	-				
Uniform	0-08	9-04	W60(i340)	217 lb/ft	-	258 lb/ft	90 lb/ft				
Uniform	1-05-04	2-09-04	W60(i340)	176 lb/ft	-	194 lb/ft	67 lb/ft				
Uniform	3-05-04	4-09-04	W60(i340)	194 lb/ft	-	213 lb/ft	74 lb/ft				
Point	1-04	1-04	W60(i340)	-	-	-	-				
Point	2-01-04	2-01-04	W60(i340)	-	-	-	-				
Point	4-01-04	4-01-04	W60(i340)	-	-	-	-				
Point	5-10-04	5-10-04	W60(i340)	3010.00 lb	-	2967.00/-3.00 lb	1163.00 lb				

# Support Information:

				Maximum Analysis Reactions								
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>					
1	0-08	4-00	W34(i26)	447.00 lb	129.00 lb	447.00 lb	155.00 lb					
2	6-00-00	6-00-00	1BM4-3(i1160)	3318.00 lb	122.00 lb	3250.00/-3.00 lb	1261.00 lb					
Connecto	Connector Information:											
			<u>N</u>	ailing Requiremen	<u>nts</u>							
Support	Manufacturer	Model	<u>Top</u>	Face	Member	Length	Other Information					
2		IUS1.81/14	-	-	-	N/A	Connector manually specified by the user.					

#### Errors, Warnings & Notes:

\* CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.

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\* 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.

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# Member Type: FloorJoist | Level: 2nd Floor Designed by Single Member Design Engine

Member: 1 - 14" NI-40x

Page: 7 of 11 Date: 08/17/2021 15:48:00 Status: Design Passed

			$\checkmark$		$\checkmark$				
									I
									I
-08			15-0	0-04					/
			15-00	6-02					
			Graphical Illustration	- Not To Scale	2				
			Member Cut Lengt	h - 15-06-02					
Design Information	n		MemberPitch	- 0/12					
Building Code: IRC2015		Dead Load: 10.0 lb/ft <sup>2</sup>	Roof Dead Load:	10.0 lb/ft <sup>2</sup>	Groun	d Snow Load:	20.0 lb/ft <sup>2</sup>		
Design Methodology: ASD	Floor	Live Load: 40.0 lb/ft <sup>2</sup>	Roof Live Load:	20.0 lb/ft <sup>2</sup>					
	Unbra	ced Length Top: 0-00	Bottom: 15-00-04						
<u>Design Results:</u>									
	Location	<u>Design</u>	<u>Control</u>		<u>Result</u>	<u>LDF</u>	Load Combinat	<u>on</u>	
Critical Moment (Pos)	7-09-10	2882.31 lb ft	4530.03 lb ft		Passed - 64%	1.00	D + L		

Critical Moment (Pos)	7-09-10	2882.31 lb ft	4530.03 lb ft	Passed - 64%	1.00	D + L
Critical Shear	15-03-11	750.62 lb	1730.00 lb	Passed - 43%	1.00	D + L
Live Load Deflection	7-09-10	0-03	0-12 (L/480)	Passed - L/999	-	L
Total Load Deflection	7-09-10	0-03	1-00 (L/240)	Passed - L/851	-	D + L
Max. Reaction			Supported Mtl Supporting Mtl			
	2-08	765.52 lb	1500.00 lb 7656.23 lb	Passed - 51%	1.00	D + L
	15-04-12	780.31 lb	1387.50 lb 5195.35 lb	Passed - 56%	1.00	D + L

#### **Design Notes:**

# Loading:

				Maximum Load Magnitudes							
<u>Type</u>	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>				
Uniform	1-12	15-06-02	FC1 Floor Decking	20 lb/ft	80 lb/ft	-	-				
Support Info	rmation:										
				Maximum Analysis Reactions							
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>				
1	0-00	3-08	W35(i37)	152.00 lb	610.00 lb	-	-				
2	15-03-12	15-06-02	W24(i27)	157.00 lb	627.00 lb	-	-				

# Errors, Warnings & Notes:

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

\* A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.

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

# MiTek\*

Member Type: FloorJoist | Level: 2nd Floor Designed by Single Member Design Engine

Member: 1 - 14" NI-40x

Status: Design Passed

$\Lambda$	 	 	 		 	 	
l							
							2
	 	 	 	7 00 04	 	 	
·				7-00-04			12-1

# 17-02-10

#### Graphical Illustration - Not To Scale Member Cut Length - 17-02-10 MemberPitch - 0/12

<b>Design Infor</b>	mation:					
Building Code:	IRC2015	Floor Dead Load: 10.0 lb/ft <sup>2</sup>	Roof Dead Load: 10.	0 lb/ft <sup>2</sup> Ground S	now Load:	20.0 lb/ft <sup>2</sup>
Design Methodology:	ASD	Floor Live Load: 40.0 lb/ft <sup>2</sup>	Roof Live Load: 20.	0 lb/ft <sup>2</sup>		
		Unbraced Length Top: 0-00	Bottom: 17-00-04			
Design Resu	<u>ults:</u>					
	Locatio	on <u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	Load Combination
Critical Moment (Pos	s) 8-06-10	2922.94 lb ft	4530.03 lb ft	Passed - 65%	1.00	D + L
Critical Shear	0-01	683.22 lb	1730.00 lb	Passed - 39%	1.00	D + L
Live Load Deflection	<b>1</b> 8-06-10	0 0-03	0-12 (L/480)	Passed - L/948	-	L
Total Load Deflection	n 8-06-10	0-04	1-00 (L/240)	Passed - L/758	-	D + L
Max. Reaction			Supported Mtl Supporting Mtl			
	0-00	695.30 lb	1325.00 lb 0.00 lb	Passed - 52%	1.00	D + L
	17-01-0	4 700.46 lb	1387.50 lb 5195.25 lb	Passed - 50%	1.00	D + L

#### **Design Notes:**

\* The required bearing length for this member is the same for both with and without web stiffeners (112)

Lc	ad	lin	<b>q:</b>	

<u>nou anigi</u>							
					Maximum Lo	ad Magnitudes	
<u>Type</u>	<u>Start</u>	<u>End</u>	Source	Dead	Floor Live	Roof Live	Snow
Uniform	0-00	17-02-10	FC1 Floor Decking	16 lb/ft	64 lb/ft	-	-
Support In	formation:						
					Maximum Ana	alysis Reactions	
Support	Start	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>
1	0-00	0-00	1BM2-2(i1269)	139.00 lb	556.00 lb	-	-
2	17-00-04	17-02-10	W26(i33)	140.00 lb	560.00 lb	-	-
Connector	r Information	<u>.</u>					
				Nailing Requirements			
Support	Manufacturer	Model	<u>Top</u>	Face	Member	<u>I ength</u>	Other Information
1		ITS2.56/14	-	-	-	N/A	Connector manually specified by the user.
							specified by the user.

# Errors, Warnings & Notes:

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



Member Type: FloorJoist | Level: 2nd Floor Designed by Single Member Design Engine

Member: 1 - 14" NI-40x

1						2
2-06			18-08-00			1 3-

#### 19-01-14

#### Graphical Illustration - Not To Scale Member Cut Length - 19-01-14 MemberPitch - 0/12

<b>Design Infor</b>	mation:									
Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft <sup>2</sup>	Roof De	ad Load: 1	0.0 lb/ft <sup>2</sup>	Ground Sr	now Load:	20.0 lb/ft <sup>2</sup>	
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft <sup>2</sup>	Roof Liv	/e Load: 2	0.0 lb/ft <sup>2</sup>				
		Unbraced Length	Top: 0-00	Bottom:	18-08-00					
Design Resu	<u>ults:</u>									
	Locatio	n <u>De</u>	<u>sign</u>	<u>Cor</u>	<u>ntrol</u>		<u>Result</u>	<u>LDF</u>	Load Combination	
Critical Moment (Pos	s) 9-06-06	3070.	60 lb ft	4530.0	03 lb ft		Passed - 68%	1.00	D + L	
Critical Shear	2-07	646.	.22 lb	1730	.00 lb		Passed - 37%	1.00	D + L	
Live Load Deflection	<b>9-06-06</b>	0-	04	0-12 (	L/480)		Passed - L/819	-	L	
Total Load Deflection	n 9-06-06	0-	05	1-00 (	L/240)		Passed - L/655	-	D + L	
Max. Reaction				Supported Mtl	Supporting M	<u>tl</u>				
	1-06	666.	79 lb	1387.50 lb	5195.30 lb		Passed - 48%	1.00	D + L	
	18-11-06	656.	.57 lb	1500.00 lb	7656.23 lb		Passed - 44%	1.00	D + L	

#### **Design Notes:**

# Loading:

				Maximum Load Magnitudes									
Type	<u>Start</u>	End	Source	<u>Dead</u>	Floor Live	Roof Live	<u>Snow</u>						
Uniform	0-00	19-00-02	FC1 Floor Decking	14 lb/ft	55 lb/ft	-	-						
Support Infor	rmation:												
				Maximum Analysis Reactions									
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>						
1	0-00	2-06	W23(i25)	134.00 lb	535.00 lb	-	-						
2	18-10-06	19-01-14	W39(i39)	131.00 lb	524.00 lb	-	-						

# Errors, Warnings & Notes:

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

\* A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.

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

Member Type: FloorJoist | Level: 2nd Floor Designed by Single Member Design Engine

Member: 1 - 14" NI-40x

Status: Design Passed

-08		 	1	7-04-08	 	 	
		 		7-10-06			/

# 17-10-06

#### Graphical Illustration - Not To Scale Member Cut Length - 17-10-06 MemberPitch - 0/12

Design Information:											
Building Code:	IRC2015	Floor Dead Load: 10.0 lb/	t <sup>2</sup> Roof Dead Load: 10.0	0 lb/ft <sup>2</sup> Ground Snc	w Load:	20.0 lb/ft <sup>2</sup>					
Design Methodology:	ASD	Floor Live Load: 40.0 lb/	t <sup>2</sup> Roof Live Load: 20.0	0 lb/ft <sup>2</sup>							
		Unbraced Length Top: 0-00	Bottom: 17-04-08								
Design Results:											
	Locatio	on <u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	Load Combination					
Critical Moment (Pos	s) 8-11-12	2 3845.43 lb ft	4530.03 lb ft	Passed - 85%	1.00	D + L					
Critical Shear	17-07-1	5 868.32 lb	1730.00 lb	Passed - 50%	1.00	D + L					
Live Load Deflection	ı 8-11-12	2 0-05	0-12 (L/480)	Passed - L/724	-	L					
Total Load Deflection	n 8-11-12	2 0-06	1-00 (L/240)	Passed - L/579	-	D + L					
Max. Reaction			Supported Mtl Supporting Mtl								
	2-08	883.25 lb	1500.00 lb 7656.21 lb	Passed - 59%	1.00	D + L					
	17-09-0	0 898.00 lb	1387.50 lb 5195.30 lb	Passed - 65%	1.00	D + L					

#### **Design Notes:**

# Loading:

				Maximum Load Magnitudes				
<u>Type</u>	<u>Start</u>	End	Source	<u>Dead</u>	Floor Live	Roof Live	<u>Snow</u>	
Uniform	1-12	17-10-06	FC1 Floor Decking	20 lb/ft	80 lb/ft	-	-	
Support Information:								
				Maximum Analysis Reactions				
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>	
1	0-00	3-08	W39(i39)	176.00 lb	704.00 lb	-	-	
2	17-08-00	17-10-06	W29(i31)	180.00 lb	721.00 lb	-	-	

### Errors, Warnings & Notes:

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

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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.

\* A load bearing wall is supported by the I-joist at a location where the I-joist is supported by a member below. Please see manufacturer installation guidelines for requirements of blocking/squash blocks.

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



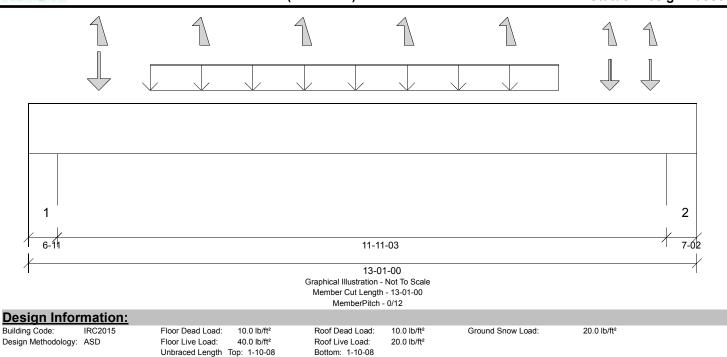


# Member Type: Beam | Level: 3rd Floor Designed by Single Member Design Engine

# Member: 2 - 1 3/4" x 11 7/8" (2.0E 3100) LVL

# Label: 2BM6-2-i1130

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<u>Design Results:</u>								
	Location	<u>Design</u>	<u>Cor</u>	<u>ntrol</u>	<u>Result</u>	LDF	Load Combination	
Critical Moment (Pos)	7-04-09	12235.02 lb ft	24437	.95 lb ft	Passed - 50%	1.15	D + Lr	
Critical Moment (Neg)	7-04-09	-4068.24 lb ft	34000	.63 lb ft	Passed - 12%	1.60	0.6D + 0.6W	
Critical Shear	11-06-00	3928.19 lb	9081	.41 lb	Passed - 43%	1.15	D + Lr	
Live Load Deflection	6-06-04	0-04	0-12 (	L/360)	Passed - L/652	-	0.6W	
Total Load Deflection	6-06-05	0-06	1-00 (	L/240)	Passed - L/412	-	D + 0.75(L + Lr + 0.6W)	
Max. Reaction			Supported Mtl	Supporting Mtl				
	5-11	4191.86 lb	17586.81 lb	20517.95 lb	Passed - 24%	1.60	D + 0.75(L + Lr + 0.6W)	
	5-11	-1391.66 lb	0.00 lb	-		1.60	0.6D + 0.6W	
	12-06-14	4724.26 lb	18673.47 lb	21785.72 lb	Passed - 25%	1.60	D + 0.75(L + Lr + 0.6W)	
	12-06-14	-1415.25 lb	0.00 lb	-		1.60	0.6D + 0.6W	

#### **Design Notes:**

\* Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

#### Loading:

				Maximum Load Magnitudes				
<u>Type</u>	<u>Start</u>	End	Source	<u>Dead</u>	Floor Live	Roof Live	<u>Snow</u>	
Self Weight	0-00	13-01-00	Self Weight	12 lb/ft	-	-	-	
Uniform	2-04-09	10-04-09	Smoothed Load	327 lb/ft	-	321 lb/ft	135 lb/ft	
Point	1-04-09	1-04-09	A3(c01)	673.00 lb	-	679.00 lb	284.00 lb	
Point	3-04-09	3-04-09	A3(c02)	-	-	-	-	
Point	5-04-09	5-04-09	A4(c01)	-	-	-0.80 lb	-	
Point	7-04-09	7-04-09	A4(c02)	-	-	-0.70 lb	-	
Point	9-04-09	9-04-09	A4(c03)	-	-	-0.70 lb	-	
Point	11-04-09	11-04-09	A4(c04)	570.00 lb	-	472.00/-0.50 lb	198.00 lb	
Point	12-02-01	12-02-01	A4(c05)	566.00 lb	-	465.00/-0.50 lb	195.00 lb	

# Support Information:

			_			_		
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	<u>Snow</u>	-
1	0-00	6-11	-	2117.00 lb	-	2006.00/-1.00 lb	841.00 lb	
++>	2-02	2-02	W49(i343)	1335.00 lb	-	1265.00/-1.00 lb	530.00 lb	
++>	6-00	6-00	W50(i333)	782.00 lb	-	741.00 lb	311.00 lb	
2	12-05-14	13-01-00	-	2467.00 lb	-	2178.00/-2.00 lb	914.00 lb	
++>	12-06-10	12-06-10	W52(i339)	858.00 lb	-	758.00/-1.00 lb	318.00 lb	
++>	12-10-11	12-10-11	W53(i345)	1609.00 lb	-	1420.00/-1.00 lb	596.00 lb	

# Errors, Warnings & Notes:

CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.

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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.

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