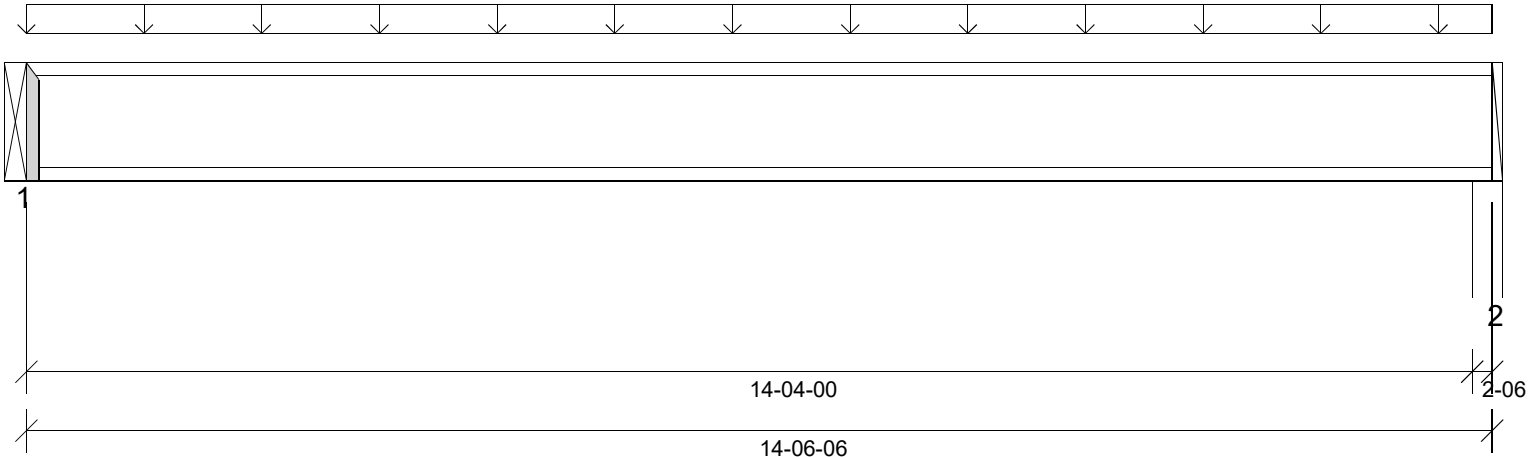




Job:
 Member Type: FloorJoist | Level: 2nd Floor
 Designed by Single Member Design Engine
Member: 1 - 14" NI-40x

Label: FJ16-i416
 Page: 1 of 9
 Date: 08/02/2021 16:08:20
Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 14-06-06
 MemberPitch - 0/12

Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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:	0-00	Bottom:	14-04-00		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	7-02-08	2597.15 lb ft	4530.03 lb ft	Passed - 57%	1.00	D + L	
Critical Shear	0-01	720.19 lb	1730.00 lb	Passed - 42%	1.00	D + L	
Live Load Deflection	7-02-08	0-02	0-12 (L/480)	Passed - L/999	-	L	
Total Load Deflection	7-02-08	0-03	1-00 (L/240)	Passed - L/981	-	D + L	
Max. Reaction	0-00	735.30 lb	Supported Mt 1325.00 lb	0.00 lb	Passed - 55%	1.00	D + L
	14-05-00	741.79 lb	1387.50 lb	5195.25 lb	Passed - 53%	1.00	D + L

Design Notes:

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

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	14-06-06	FC2 Floor Decking	20 lb/ft	80 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	1BM3-2(i331)	147.00 lb	588.00 lb	-	-
2	14-04-00	14-06-06	W18(i17)	148.00 lb	593.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			With Seal Length	Other Information
			Top	Face	Member		
1		ITS2.56/14	-	-	-	N/A	Connector manually specified by the user.

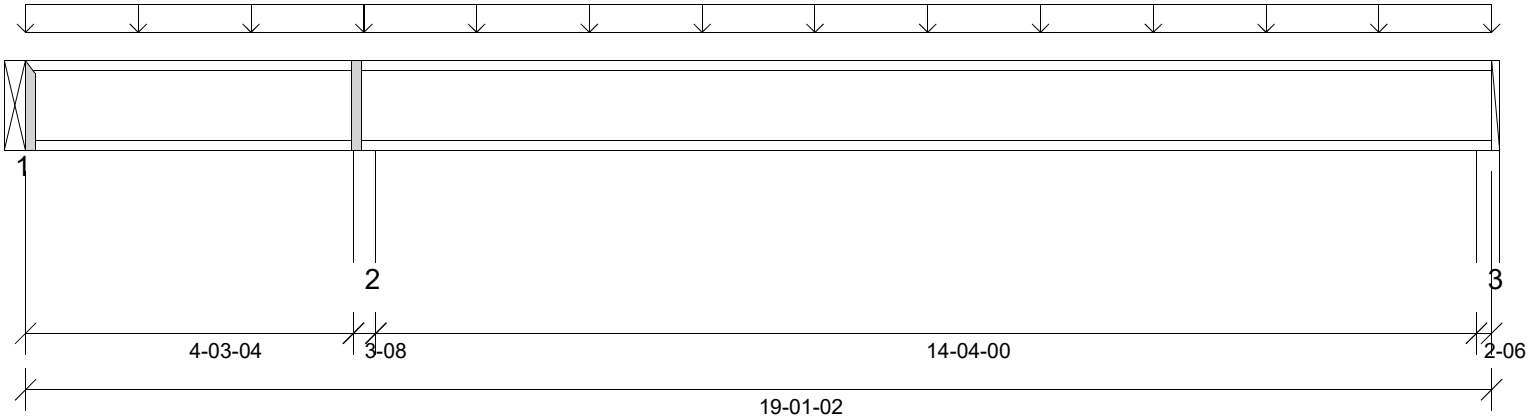
Errors, Warnings & Notes:

- * 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.
- * 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.



Job:
 Member Type: FloorJoist | Level: 2nd Floor
 Designed by Single Member Design Engine
Member: 1 - 14" NI-40x

Label: FJ20-i345
 Page: 2 of 9
 Date: 08/02/2021 16:08:21
Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 19-01-02
 MemberPitch - 0/12

Design Information:

Building Code: IRC2015	Floor Dead Load: 10.0 lb/ft ²	Roof Dead Load: 10.0 lb/ft ²	Ground Snow Load: 20.0 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: 0-00	Bottom: 14-04-00	

Design Results:

	Location	Design	Control	Result	LDf	Load Combination	
Critical Moment (Pos)	13-01-03	1726.06 lb ft	4530.03 lb ft	Passed - 38%	1.00	D + L	
Critical Moment (Neg)	4-05-00	-2090.04 lb ft	4530.03 lb ft	Passed - 46%	1.00	D + L	
Critical Shear	4-06-13	856.42 lb	1730.00 lb	Passed - 50%	1.00	D + L	
Live Load Deflection	12-05-03	0-01	0-12 (L/480)	Passed - L/999	-	L	
Total Load Deflection	12-05-04	0-02	1-00 (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0-00	126.33 lb	Supported Mt/ 1325.00 lb	Supporting Mt/ 0.00 lb	Passed - 10%	1.00	D + L
	0-00	-416.69 lb	0.00 lb	-	1.00	D + L	
	4-05-00	1565.57 lb	3130.00 lb	7656.18 lb	Passed - 50%	1.00	D + L
	18-11-12	608.67 lb	1387.50 lb	5195.35 lb	Passed - 44%	1.00	D + L

Design Notes:

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

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	19-01-02	FC2 Floor Decking	20 lb/ft	80 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	FJ6(i405)	-48.00 lb	175.00/-368.00 lb	-	-
2	4-03-04	4-06-12	W26(i26)	313.00 lb	1253.00 lb	-	-
3	18-10-12	19-01-02	W18(i17)	121.00 lb	488.00/-3.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			Min Seal Length	Other Information
			Top	Face	Member		
1		ITS2.56/14	-	-	-	N/A	Connector manually specified by the user.

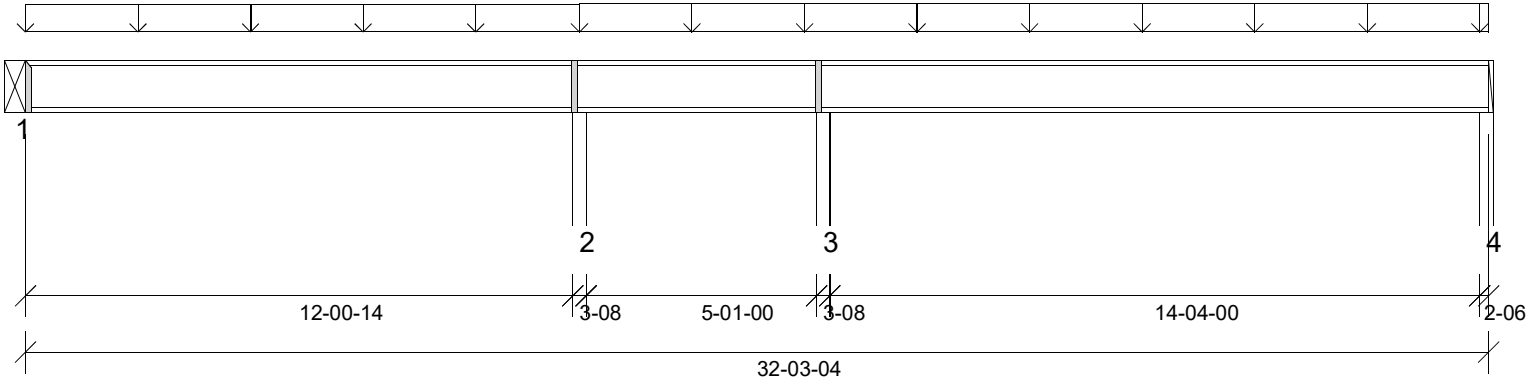
Errors, Warnings & Notes:

- * 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.
- * 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.



Job:
 Member Type: FloorJoist | Level: 2nd Floor
 Designed by Single Member Design Engine
Member: 1 - 14" NI-40x

Label: FJ34-i412
 Page: 3 of 9
 Date: 08/02/2021 16:08:21
Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 32-03-04
 MemberPitch - 0/12

Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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:	0-00	Bottom:	14-04-00		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	26-01-08	1824.98 lb ft	4530.03 lb ft	Passed - 40%	1.00	D + L
Critical Moment (Neg)	17-07-02	-2037.58 lb ft	4530.03 lb ft	Passed - 45%	1.00	D + L
Critical Shear	17-08-15	856.54 lb	1730.00 lb	Passed - 50%	1.00	D + L
Live Load Deflection	25-05-14	0-01	0-12 (L/480)	Passed - L/999	-	L
Total Load Deflection	25-06-00	0-02	1-00 (L/240)	Passed - L/999	-	D + L
Max. Reaction			<u>Supported Mt/</u> <u>Supporting Mt/</u>			
	0-00	503.94 lb	1325.00 lb / 0.00 lb	Passed - 38%	1.00	D + L
	12-02-10	771.18 lb	3130.00 lb / 7656.18 lb	Passed - 25%	1.00	D + L
	17-07-02	1512.76 lb	3130.00 lb / 7656.18 lb	Passed - 48%	1.00	D + L
	32-01-14	626.95 lb	1387.51 lb / 5195.45 lb	Passed - 45%	1.00	D + L

Design Notes:

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

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	12-02-10	FC2 Floor Decking	19 lb/ft	75 lb/ft	-	-
Uniform	12-02-10	32-03-04	FC2 Floor Decking	20 lb/ft	80 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	1BM2(i317)	100.00 lb	404.00/-15.00 lb	-	-
2	12-00-14	12-04-06	W25(i24)	154.00 lb	978.00 lb	-	-
3	17-05-06	17-08-14	W26(i26)	259.00 lb	1130.00/-1.00 lb	-	-
4	32-00-14	32-03-04	W18(i17)	124.00 lb	505.00/-5.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			MII Seal Length	Other Information
			Top	Face	Member		
1		ITS2.56/14	-	-	-	N/A	Connector manually specified by the user.

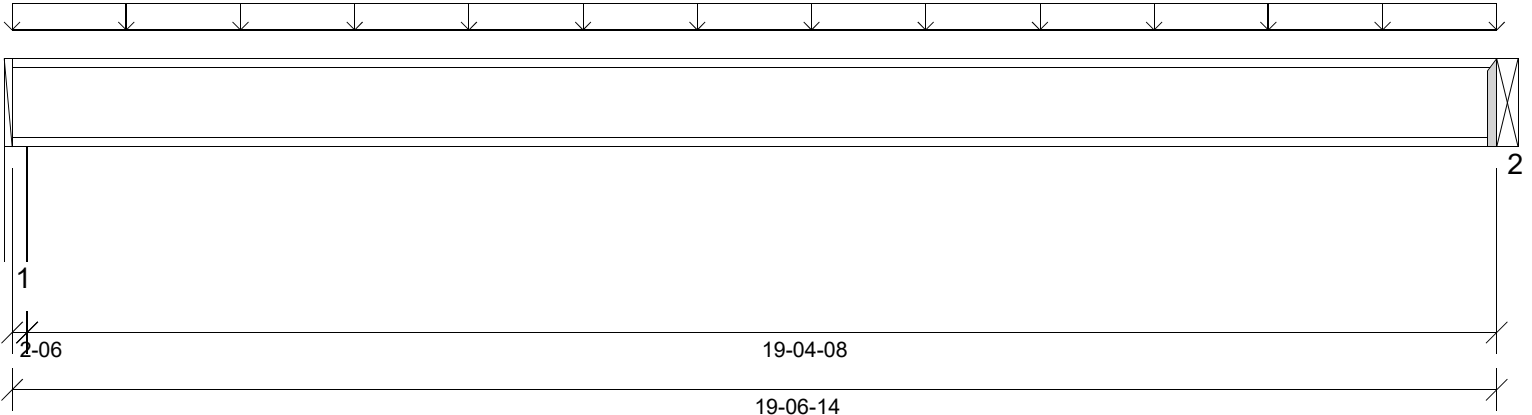
Errors, Warnings & Notes:

- * 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.
- * 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.



Job:
 Member Type: FloorJoist | Level: 2nd Floor
 Designed by Single Member Design Engine
Member: 1 - 14" NI-40x

Label: FJ20-i377
 Page: 4 of 9
 Date: 08/02/2021 16:08:21
Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 19-06-14
 MemberPitch - 0/12

Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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:	0-00	Bottom:	19-04-08		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	9-10-02	3154.66 lb ft	4530.03 lb ft	Passed - 70%	1.00	D + L	
Critical Shear	19-06-13	648.20 lb	1730.00 lb	Passed - 37%	1.00	D + L	
Live Load Deflection	9-10-02	0-05	0-12 (L/480)	Passed - L/781	-	L	
Total Load Deflection	9-10-02	0-06	1-00 (L/240)	Passed - L/625	-	D + L	
Max. Reaction			Supported Mt	Supporting Mt			
	1-06	662.56 lb	1387.50 lb	5195.29 lb	Passed - 48%	1.00	D + L
	19-06-14	658.27 lb	1325.00 lb	0.00 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)
- *

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	19-06-14	FC2 Floor Decking	13 lb/ft	53 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	2-06	W16(i22)	133.00 lb	530.00 lb	-	-
2	19-06-14	19-06-14	1BM3-2(i331)	132.00 lb	527.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			With Seal Length	Other Information
			Top	Face	Member		
2		ITS2.56/14	-	-	-	N/A	Connector manually specified by the user.

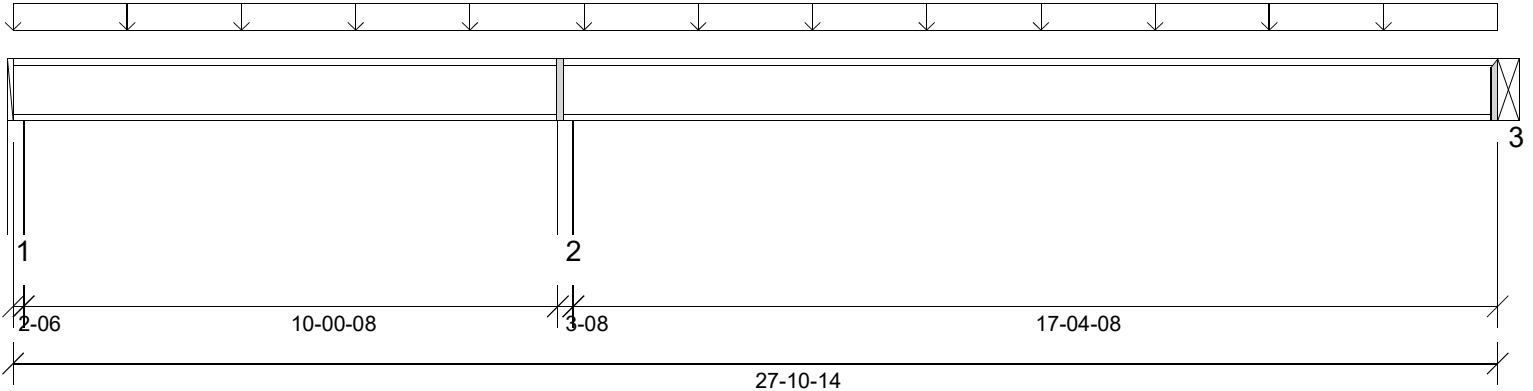
Errors, Warnings & Notes:

- * 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.
- * 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.



Job:
 Member Type: FloorJoist | Level: 2nd Floor
 Designed by Single Member Design Engine
Member: 1 - 14" NI-40x

Label: FJ28-i406
 Page: 5 of 9
 Date: 08/02/2021 16:08:21
Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 27-10-14
 MemberPitch - 0/12

Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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: 0-00	Bottom:	17-04-08		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	20-07-00	1788.10 lb ft	4530.03 lb ft	Passed - 39%	1.00	D + L	
Critical Moment (Neg)	10-04-10	-1937.43 lb ft	4530.03 lb ft	Passed - 43%	1.00	D + L	
Critical Shear	10-06-07	684.54 lb	1730.00 lb	Passed - 40%	1.00	D + L	
Live Load Deflection	19-09-11	0-02	0-12 (L/480)	Passed - L/999	-	L	
Total Load Deflection	19-10-03	0-03	1-00 (L/240)	Passed - L/999	-	D + L	
Max. Reaction			<u>Supported Mt!</u>	<u>Supporting Mt!</u>			
	1-06	293.35 lb	1387.50 lb	5195.33 lb	Passed - 21%	1.00	D + L
	1-06	-92.07 lb	0.00 lb	-		1.00	D + L
	10-04-10	1225.49 lb	3130.00 lb	7656.28 lb	Passed - 39%	1.00	D + L
	27-10-14	498.00 lb	1325.00 lb	0.00 lb	Passed - 38%	1.00	D + L

Design Notes:

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

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	27-10-14	FC2 Floor Decking	13 lb/ft	53 lb/ft	-	-

Support Information:

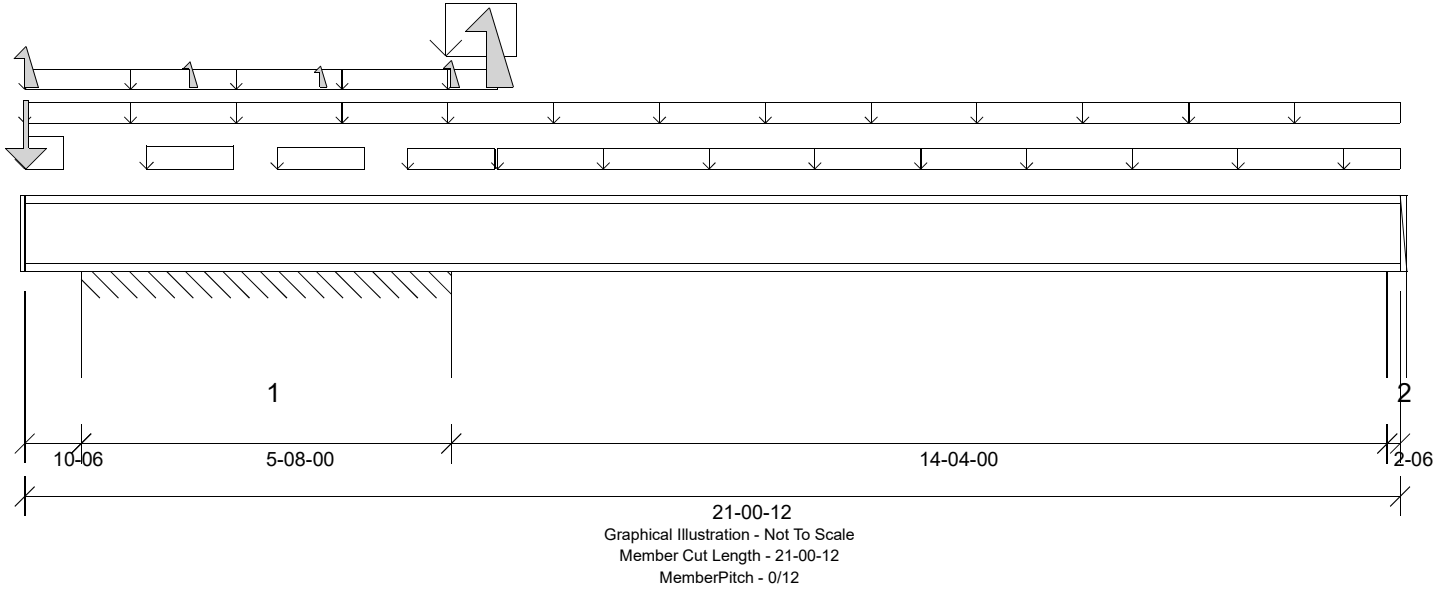
Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	2-06	W14(i14)	34.00 lb	260.00/-126.00 lb	-	-
2	10-02-14	10-06-06	W41(i41)	245.00 lb	980.00 lb	-	-
3	27-10-14	27-10-14	1BM3-2(i331)	97.00 lb	401.00/-15.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			Min Seal Length	Other Information
			Top	Face	Member		
3		ITS2.56/14	-	-	-	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.
- * 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.



Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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:	0-00	Bottom:	13-05-00		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	14-10-01	1194.66 lb ft	4530.03 lb ft	Passed - 26%	1.00	D + L	
Critical Moment (Neg)	6-04-14	-1366.69 lb ft	4530.03 lb ft	Passed - 30%	1.00	D + L	
Critical Shear	6-06-07	1104.86 lb	1989.50 lb	Passed - 56%	1.15	D + 0.75(L + Lr)	
Live Load Deflection	14-04-04	0-01	0-12 (L/480)	Passed - L/999	-	L	
Total Load Deflection	14-02-14	0-01	1-00 (L/240)	Passed - L/999	-	D + L	
Max. Reaction			<u>Supported Mt</u>	<u>Supporting Mt</u>			
	11-14	793.47 lb	3530.00 lb	45937.50 lb	Passed - 22%	1.00	D + L
	6-04-14	1396.57 lb	3530.00 lb	45937.50 lb	Passed - 40%	1.60	D + 0.75(L + Lr + 0.6W)
	6-04-14	-301.91 lb	0.00 lb	-	1.60	0.6D + 0.6W	
	20-11-06	404.76 lb	1387.50 lb	5195.35 lb	Passed - 29%	1.00	D + L

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.
 *

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Uniform	0-00	21-00-12	FC2 Floor Decking	6 lb/ft	23 lb/ft	-	-
Uniform	0-00	7-02-14	FC2 Floor Decking	-	4 lb/ft	-	-
Uniform	-0-00	7-02	W38(i37)	98 lb/ft	-	166 lb/ft	70 lb/ft
Uniform	1-10-06	3-02-06	W38(i37)	51 lb/ft	-	32 lb/ft	11 lb/ft
Uniform	3-10-06	5-02-06	W38(i37)	28 lb/ft	-	-	-
Uniform	5-10-06	7-02-06	W38(i37)	-	-	5 lb/ft	-
Uniform	6-05-06	7-06-06	W38(i37)	441 lb/ft	-	348 lb/ft	146 lb/ft
Uniform	7-02-14	21-00-12	FC2 Floor Decking	7 lb/ft	29 lb/ft	-	-
Point	0-04	0-04	-	660.00 lb	-	16.00 lb	7.00 lb
Point	2-06-06	2-06-06	W38(i37)	-	-	-	-
Point	4-06-06	4-06-06	W38(i37)	-	-	-15.00 lb	-5.00 lb
Point	6-06-06	6-06-06	W38(i37)	-97.00 lb	-	-0.20 lb	-
Point	7-01-06	7-01-06	W38(i37)	-	-	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	10-06	6-06-06	W21(i18)	1906.00/-543.00 lb	1265.00/-607.00 lb	663.00/-136.00 lb	260.00/-43.00 lb
==>	11-14	11-14	W21(i18)	1131.00 lb	174.00 lb	181.00 lb	75.00 lb
==>	2-04-02	5-00-10	W21(i18)	-201.00 lb/ft	33.00/-224.00 lb/ft	12.00/-48.00 lb/ft	-16.00 lb/ft
==>	6-04-14	6-04-14	W21(i18)	775.00 lb	1002.00 lb	450.00/-5.00 lb	185.00 lb
2	20-10-06	21-00-12	W18(i17)	77.00 lb	303.00 lb	2.00 lb	1.00 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.

- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.



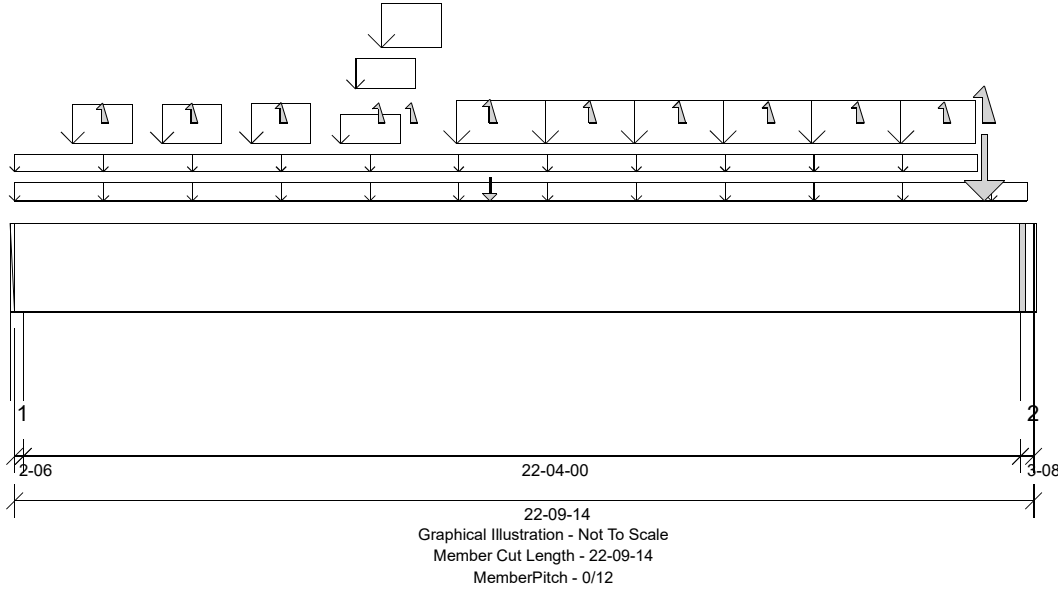
Job:
Member Type: Beam | Level: 2nd Floor

Label: 1BM1-2-i43

Page: 7 of 9
Date: 08/02/2021 16:08:22

Member: 2 - 1 3/4" x 23 7/8" LVL

Status: Load Distribution Complete



Design Information:

Building Code: IRC2015	Floor Dead Load: 10.0 lb/ft ²	Roof Dead Load: 10.0 lb/ft ²	Ground Snow Load: 20.0 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: 0-00	Bottom: 11-01-06	

Design Notes:

- * Member was not designed due to missing strength properties. If possible select a new material or change the orientation of the member.
- *

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	22-09-14	Self Weight	24 lb/ft	-	-	-
Uniform	0-00	22-08-02	FC2 Floor Decking	9 lb/ft	35 lb/ft	-	-
Uniform	0-00	21-06-14	FC2 Floor Decking	-	6 lb/ft	-	-
Uniform	1-03-10	2-07-10	W40(i34)	222 lb/ft	-	239 lb/ft	100 lb/ft
Uniform	3-03-10	4-07-10	W40(i34)	222 lb/ft	-	239 lb/ft	100 lb/ft
Uniform	5-03-10	6-07-10	W40(i34)	227 lb/ft	-	249 lb/ft	104 lb/ft
Uniform	7-03-10	8-07-10	W40(i34)	158 lb/ft	-	110 lb/ft	46 lb/ft
Uniform	7-07-10	8-11-10	W40(i34)	185 lb/ft	-	115 lb/ft	48 lb/ft
Uniform	8-02-10	9-06-10	W40(i34)	321 lb/ft	-	269 lb/ft	113 lb/ft
Uniform	9-10-13	21-06-06	W40(i34)	275 lb/ft	-	285 lb/ft	119 lb/ft
Point	10-07-12	10-07-12	-	205.00 lb	897.00/-210.00 lb	-	-
Point	1-11-10	1-11-10	W40(i34)	-	-	-	-
Point	3-11-10	3-11-10	W40(i34)	-	-	-	-
Point	5-11-10	5-11-10	W40(i34)	-	-	-	-
Point	8-01-14	8-01-14	-	-	-	-	-
Point	8-10-10	8-10-10	W40(i34)	-	-	-	-
Point	12-10-10	12-10-10	W40(i34)	-	-	-	-
Point	14-10-10	14-10-10	W40(i34)	-	-	-	-
Point	16-10-10	16-10-10	W40(i34)	-	-	-	-
Point	18-10-10	18-10-10	W40(i34)	-	-	-	-
Point	20-09-14	20-09-14	W40(i34)	-	-	-	-
Point	21-08-10	21-08-10	W40(i34)	2956.00 lb	-	2909.00/-21.00 lb	1201.00 lb

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	2-06	W14(i14)	2918.00 lb	960.00/-114.00 lb	2369.00/-1.00 lb	989.00 lb
2	22-06-06	22-09-14	W25(i24)	6007.00 lb	875.00/-96.00 lb	5482.00/-20.00 lb	2281.00 lb

Errors, Warnings & Notes:

- * 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.
- * 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. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.



Job:

Member Type: Beam | Level: 2nd Floor

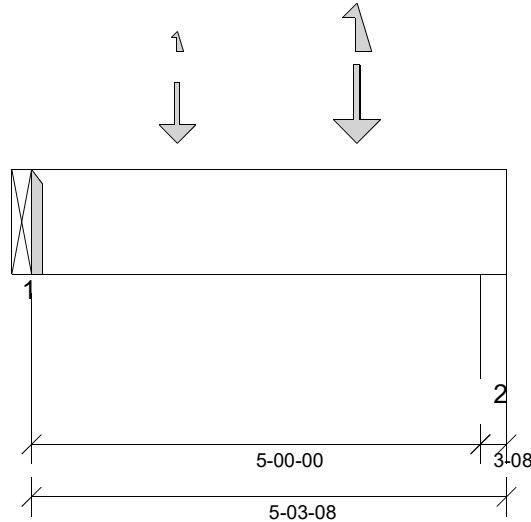
Designed by Single Member Design Engine

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

Label: 1BM2-i317

Page: 8 of 9
Date: 08/02/2021 16:08:22

Status: Design Passed



Graphical Illustration - Not To Scale
Member Cut Length - 5-03-08
MemberPitch - 0/12

Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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: 0-00	Bottom:	1-09-08		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	3-07-08	1963.76 lb ft	14472.78 lb ft	Passed - 14%	1.00	D + L	
Critical Moment (Neg)	3-07-08	-431.96 lb ft	14472.78 lb ft	Passed - 3%	1.00	D + L	
Critical Shear	3-10-00	1342.95 lb	4655.00 lb	Passed - 29%	1.00	D + L	
Live Load Deflection	2-07-04	0-00	0-12 (L/360)	Passed - L/999	-	L	
Total Load Deflection	2-07-02	0-00	1-00 (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0-00	1101.43 lb	Supported Mt/	0.00 lb	Passed - 100%	1.00	D + L
	0-00	-5.80 lb	Supporting Mt/	-	1.00	D + L	
	5-01-00	1353.37 lb	4593.73 lb	5359.35 lb	Passed - 29%	1.00	D + L
	5-01-00	-289.40 lb	0.00 lb	-	1.00	D + L	

Design Notes:

*

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	5-03-08	Self Weight	7 lb/ft	-	-	-
Point	1-07-08	1-07-08	-	197.00 lb	794.00/-15.00 lb	-	-
Point	3-07-08	3-07-08	-	183.00 lb	1243.00/-698.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	1BM1-2(i43)	205.00 lb	897.00/-210.00 lb	-	-
2	5-00-00	5-03-08	W24(i25)	213.00 lb	1140.00/-503.00 lb	-	-

Connector Information:

Support	Manufacturer	Model	Nailing Requirements			Min Seal Length	Other Information
			Top	Face	Member		
1		IUS1.81/14	-	-	-	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.



Job:

Member Type: Beam | Level: 2nd Floor

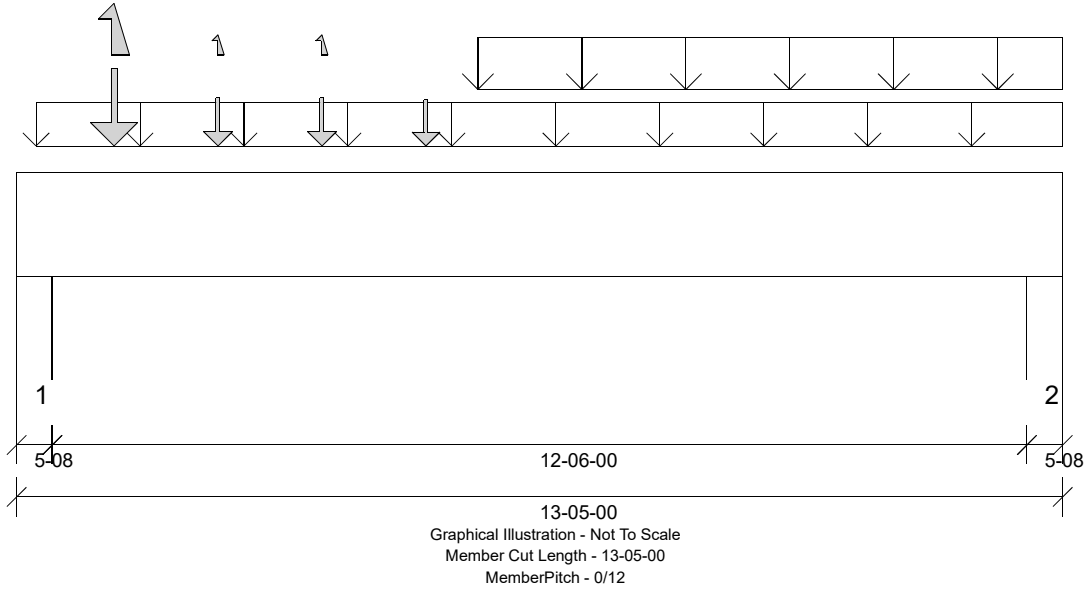
Designed by Single Member Design Engine

Member: 2 - 1 3/4" x 16" (2.0E 3100) LVL

Label: 1BM3-2-i331

Page: 9 of 9
Date: 08/02/2021 16:08:22

Status: Design Passed



Design Information:

Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	20.0 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:	0-00	Bottom:	1-01-12		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	6-07-00	16695.13 lb ft	37034.88 lb ft	Passed - 45%	1.00	D + L
Critical Moment (Neg)	13-00-08	-291.57 lb ft	37034.88 lb ft	Passed - 1%	1.00	D + L
Critical Shear	11-07-08	4930.75 lb	10640.00 lb	Passed - 46%	1.00	D + L
Live Load Deflection	6-08-10	0-03	0-12 (L/360)	Passed - L/919	-	L
Total Load Deflection	6-08-10	0-03	1-00 (L/240)	Passed - L/723	-	D + L
Max. Reaction	4-08	5429.08 lb	Supported Mtl: 14437.43 lb Supporting Mtl: 16843.66 lb	Passed - 38%	1.00	D + L
	13-00-08	6354.01 lb	14437.49 lb 16843.74 lb	Passed - 44%	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:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	13-05-00	Self Weight	16 lb/ft	-	-	-
Uniform	3-00	13-05-00	-	78 lb/ft	313 lb/ft	-	-
Uniform	5-11-00	13-05-00	Smoothed Load	106 lb/ft	422 lb/ft	-	-
Point	1-03-00	1-03-00	FJ28(i386)	139.00 lb	868.00/-558.00 lb	-	-
Point	2-07-00	2-07-00	FJ28(i406)	97.00 lb	401.00/-15.00 lb	-	-
Point	3-11-00	3-11-00	FJ28(i415)	97.00 lb	401.00/-15.00 lb	-	-
Point	5-03-00	5-03-00	FJ20(i383)	92.00 lb	370.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0-00	5-08	W26(i26)	1116.00 lb	4336.00/-543.00 lb	-	-
2	12-11-08	13-05-00	W27(i27)	1349.00 lb	4982.00/-45.00 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.

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

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