

Member: 1 - 11-7/8" LPI 20Plus

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#### Graphical Illustration - Not To Scale Member Cut Length - 34'- 9 7/16" MemberPitch - 0/12

<b>Design Inform</b>	nation:									
Building Code: I	RC2015 Floor Dead Load: 10.0 lb/ft <sup>2</sup>		10.0 lb/ft <sup>2</sup>	Roof Dead Load: 10.0 lb/f		10.0 lb/ft <sup>2</sup>	Ground S	Snow Load:	0.0 lb/ft <sup>2</sup>	
Design Methodology: A	ASD I	loor Live Load:	40.0 lb/ft <sup>2</sup>	Roof Li	ve Load:	20.0 lb/ft <sup>2</sup>				
	ı	Jnbraced Length	Тор: 0'	Bottom	: 17'- 5 5/8"					
Design Resul	lts:									
	Location	Des	<u>sign</u>	<u>Co</u>	ntrol		<u>Result</u>	LDF	Load Combination	
Critical Moment (Pos)	7'- 11 7/16"	2255.8	36 lb ft	3755	02 lb ft		Passed - 60%	1.00	D + L	
Critical Moment (Neg)	18'- 1 1/2"	-2889.3	27 lb ft	3755.02 lb ft			Passed - 77%	1.00	D + L	
Critical Shear	17'- 11 11/16	" 858.	53 lb	1485.00 lb			Passed - 58%	1.00	D + L	
Live Load Deflection	8'- 9 3/16"	0'- 1	1/4"	0'- 3/4" (L/480)			Passed - L/786	-	L	
<b>Total Load Deflection</b>	8'- 7 13/16"	0'- 5	/16"	0'- 1" (L/240)			Passed - L/654	-	D + L	
Max. Reaction			S	upported Mtl	Supporting	Mtl				
	0'- 5 1/8"	643.8	34 lb	1160.00 lb	6507.80 I	lb	Passed - 56%	1.00	D + L	
	18'- 1 1/2"	1697.	26 lb	2330.20 lb	6562.44 I	lb	Passed - 73%	1.00	D + L	
	34'- 4 5/16"	594.0	D1 lb	1160.00 lb	6507.78 I	lb	Passed - 51%	1.00	D + L	
Loading:										
							Maximum Loa	ad Magnitu	<u>udes</u>	
Type	<u>Start</u>	End	<u>Source</u>		Dead		Floor Live	Roo	f Live Snov	N
Uniform	0'	34'- 9 7/16"	FC1 Floor Mate	erial	16 lb/ft		64 lb/ft			
Support Infor	mation:									
						Maximum Ana	lysis Reac	<u>tions</u>		
Support	<u>Start</u>	End	<u>Source</u>		Dead		Floor Live	Roo	f Live Snov	N
1	0'	0'- 6 1/8"	W15(i15)		117.00 lb	5	26.00/-57.00 lb			
2	17'- 11 3/4"	18'- 3 1/4"	DBM1(i633)		339.00 lb		1358.00 lb			
3	34'- 3 5/16"	34'- 9 7/16"	W4(i6)		103.00 lb	4	91.00/-80.00 lb			

103.00 lb

491.00/-80.00 lb

## Errors, Warnings & Notes:

34'- 3 5/16"

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

34'- 9 7/16"

\* 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.

W4(i6)

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



Member: 1 - 11-7/8" LPI 20Plus

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#### Graphical Illustration - Not To Scale Member Cut Length - 33'- 2 13/16" MemberPitch - 0/12

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Design Infor	<u>mation:</u>										
Building Code:	IRC2015	Floor Dead Load:	10.0 lb/ft <sup>2</sup>	Roof Dead Load: 10		10.0 lb/ft <sup>2</sup>	).0 lb/ft <sup>2</sup> Ground Snow Lo		0.0 lb/ft <sup>2</sup>		
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft <sup>2</sup>	Roof Liv	/e Load:	20.0 lb/ft <sup>2</sup>					
		Unbraced Length	Тор: 0'	Bottom:	16'- 1/16"						
Design Resu	l <u>lts:</u>										
	Location	Des	<u>sign</u>	<u>Cor</u>	<u>ntrol</u>		<u>Result</u>	<u>LDF</u>	Load Combination	<u>on</u>	
Critical Moment (Pos	) 25'- 10 3/4"	1899.0	)5 lb ft	3755.	02 lb ft		Passed - 51%	1.00	D + L		
Critical Moment (Neg	) 16'- 6 7/8"	-2615.	70 lb ft	3755.	02 lb ft		Passed - 70%	1.00	D + L		
Critical Shear		" 797.	71 lb	1485	.00 lb		Passed - 54%	1.00	D + L		
Live Load Deflection	25'- 1 5/8"	0'- 3	/16"	0'- 3/4" (L/480)			Passed - L/989	-	L		
Total Load Deflection	a 25'- 3 1/16"	' 0'- 1	1/4"	0'- 1" (	(L/240)		Passed - L/826	-	D + L		
Max. Reaction			Su	pported Mtl	Supporting	Mtl					
	0'- 5 1/8"	591.4	47 lb 1	160.00 lb	6507.83	lb	Passed - 51%	1.00	D + L		
	16'- 6 7/8"	1616.	98 lb 23	330.20 lb	6562.53	lb	Passed - 69%	1.00	D + L		
	32'- 9 11/16	" 594.4	41 lb 1 <sup>-</sup>	160.00 lb	6507.78	lb	Passed - 51%	1.00	D + L		
Loading:											
					Maximum Load Magnitudes						
Type	<u>Start</u>	End	Source		Dead		Floor Live	Roo	f Live	Snow	
Uniform	0'	33'- 2 13/16"	FC1 Floor Materi	al	16 lb/ft		64 lb/ft		-	-	
Support Info	rmation:										
		Maximum Analysis Reactions									
Support	<u>Start</u>	End	<u>Source</u>		Dead		Floor Live	Roo	f Live	Snow	
1	0'	0'- 6 1/8"	W13(i12)		105.00 lb	4	86.00/-65.00 lb		-	-	
2	16'- 5 1/8"	16'- 8 5/8"	DBM1(i633)	:	323.00 lb		1294.00 lb		-	-	

106.00 lb

488.00/-64.00 lb

Errors, Warnings & Notes:

32'- 8 11/16"

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33'- 2 13/16"

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W4(i6)

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



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# Member: 1 - 11-7/8" LPI 20Plus



#### Graphical Illustration - Not To Scale Member Cut Length - 38'- 10 1/8" MemberPitch - 0/12

<b>Design Infor</b>	mation:								
Building Code:	IRC2015	Floor Dead Load: 10	0.0 lb/ft <sup>2</sup> Roo	f Dead Load:	10.0 lb/ft <sup>2</sup>	Ground S	now Load:	0.0 lb/ft <sup>2</sup>	
Design Methodology:	ASD	Floor Live Load: 40	0.0 lb/ft <sup>2</sup> Roo	f Live Load:	20.0 lb/ft <sup>2</sup>				
		Unbraced Length Top:	0' Botte	om: 19'- 5 7/16"					
Design Resu	lts:								
	Locatio	<u>n Design</u>	<u>(</u>	<u>Control</u>		<u>Result</u>	<u>LDF</u>	Load Combination	
<b>Critical Moment (Pos</b>	) 8'- 10 3/1	6" 2825.76 lb	ft 37	'55.02 lb ft		Passed - 75%	1.00	D + L	
Critical Moment (Neg	) 20'- 1 13/1	6" -3160.32 lb	ft 37	'55.02 lb ft		Passed - 84%	1.00	D + L	
Critical Shear	20'	936.63 lb	14	485.00 lb		Passed - 63%	1.00	D + L	
Live Load Deflection	9'- 8 3/8	" 0'- 3/8"	0'- 3	3/4" (L/480)		Passed - L/582	-	L	
Total Load Deflection	9'- 7 3/8	" 0'- 1/2"	0'-	1" (L/240)		Passed - L/479	-	D + L	
Max. Reaction			Supported N	Mtl Supporting	Mtl				
	0'- 5 1/8	" 715.31 lb	1160.00 lb	6507.92	lb	Passed - 62%	1.00	D + L	
	20'- 1 13/1	6" 1686.19 II	2330.20 lb	6562.53	lb	Passed - 72%	1.00	D + L	
	36'- 7 1/4	" 645.10 lb	2595.00 lb	7703.19	lb	Passed - 25%	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:

				Maximum Load Magnitudes								
Type	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow	-				
Uniform	0'	20'- 13/16"	FC1 Floor Material	16 lb/ft	64 lb/ft	-	-					
Uniform	20'- 13/16"	38'- 10 1/8"	FC1 Floor Material	14 lb/ft	55 lb/ft	-	-					
Support Information:												
				Maximum Analysis Reactions								
Support	<u>Start</u>	End	Source	Dead	Floor Live	Roof Live	Snow	-				
1	0'	0'- 6 1/8"	W11(i9)	134.00 lb	578.00/-43.00 lb	-	-					
2	20'- 1/16"	20'- 3 9/16"	DBM1(i633)	337.00 lb	1362.00 lb	-	-					
3	36'- 3 5/8"	36'- 10 7/8"	W4(i6)	109.00 lb	537.00 lb	-	-					
Erroro Worr	sings 8 Note	~										

# Errors, Warnings & Notes:

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