MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **GDH2 - i89** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.0.207.Update5.FT.1

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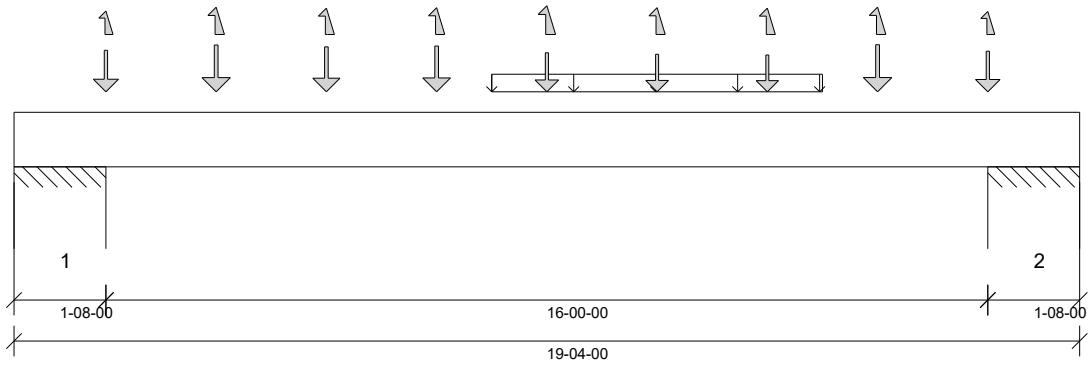

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/480,
TL Deflection Limit:	L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 19'- 4" Bottom: 19'- 4"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 1 1/2"
- 725 psi Wall @ 1'- 6 1/2"
- 725 psi Wall @ 17'- 9 1/2"
- 725 psi Wall @ 19'- 2 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 8"	D + Lr	1.15	1419 lb ft	18314 lb ft	Passed - 8%
Max Neg. Moment:	17'- 9 1/2"	D + Lr	1.15	2308 lb ft	18314 lb ft	Passed - 13%
Max Shear:	16'- 8 1/8"	D + Lr	1.15	784 lb	9241 lb	Passed - 8%
Live Load (LL) Pos. Defl.:	9'- 8"	Lr		0.023"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 8"	D + Lr		0.045"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	7-12	0.6D + 0.6W	1.60	167 lb		28304 lb	19666 lb	Passed - 1%
1	7-12	D + Lr	1.15		-1619 lb	-	-	
1	1-00-04	D + Lr	1.15	2618 lb		32156 lb	31084 lb	Passed - 8%
1	1-00-04	0.6D + 0.6W	1.60		-243 lb	-	-	
2	1-00-04	D + Lr	1.15	2619 lb		32156 lb	31084 lb	Passed - 8%
2	1-00-04	0.6D + 0.6W	1.60		-242 lb	-	-	
2	7-12	0.6D + 0.6W	1.60	167 lb		28304 lb	19666 lb	Passed - 1%
2	7-12	D + Lr	1.15		-1620 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	19'- 4"	Self Weight	Top	11 lb/ft	-	-	-	-
Uniform	8'- 8"	14'- 8"	Smoothed Load	Top	44 lb/ft	-	-	-	-
Point	1'- 8"	1'- 8"	DE(Cond01)	Top	77 lb	-	70 lb	111 lb	26/-89 lb
Point	3'- 8"	3'- 8"	DE(Cond01)	Top	90 lb	-	98 lb	114 lb	39/-130 lb
Point	5'- 8"	5'- 8"	DE(Cond01)	Top	87 lb	-	91 lb	107 lb	36/-120 lb
Point	7'- 8"	7'- 8"	DE(Cond01)	Top	89 lb	-	94 lb	108 lb	39/-125 lb
Point	9'- 8"	9'- 8"	DE(Cond01)	Top	-	-	105 lb	130 lb	22/-146 lb
Point	11'- 8"	11'- 8"	DE(Cond01)	Top	-	-	94 lb	108 lb	39/-125 lb
Point	13'- 8"	13'- 8"	DE(Cond01)	Top	-	-	91 lb	107 lb	35/-120 lb
Point	15'- 8"	15'- 8"	DE(Cond01)	Top	91 lb	-	99 lb	115 lb	39/-131 lb
Point	17'- 8"	17'- 8"	DE(Cond01)	Top	75 lb	-	65 lb	110 lb	24/-84 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 8"	E14(i49)	1286/-791 lb	-	1095/-689 lb	1316/-811 lb	213 lb/ -622 lb
==>	0'- 1 1/2"	0'- 1 1/2"	E14(i49)	-791 lb	-	-689 lb	-811 lb	-
==>	1'- 6 1/2"	1'- 6 1/2"	E14(i49)	1286 lb	-	1095 lb	1316 lb	-
2	17'- 8"	19'- 4"	E13(i13)	1286/-793 lb	-	1092/-691 lb	1318/-813 lb	213 lb/ -622 lb
==>	17'- 9 1/2"	17'- 9 1/2"	E13(i13)	1286 lb	-	1092 lb	1318 lb	-
==>	19'- 2 1/2"	19'- 2 1/2"	E13(i13)	-793 lb	-	-691 lb	-813 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- 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.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **GDH2 - i89** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 11-7/8**	Status: **Design Passed**

PLY TO PLY CONNECTION

- 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.

MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **BM3 - i94** Type: **Beam**	**3 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.0.207.Update5.FT.1

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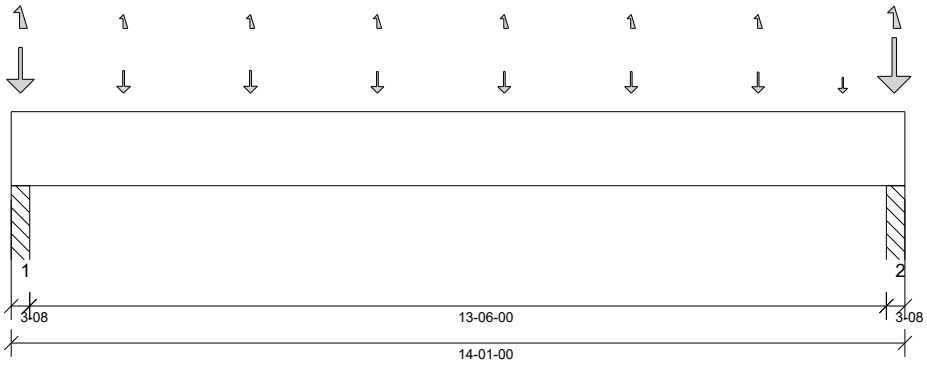

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/480,
TL Deflection Limit:	L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 8 1/2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 2 1/2"
- 725 psi Column @ 13'- 10 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 9 1/4"	D + L	1.00	19357 lb ft	43458 lb ft	Passed - 45%
Max Neg. Moment:	13'- 10 1/2"	D + S	1.15	300 lb ft	49977 lb ft	Passed - 1%
Max Shear:	1'- 5 1/2"	D + L	1.00	5440 lb	14210 lb	Passed - 38%
Live Load (LL) Pos. Defl.:	7'- 3/16"	L		0.204"	L/480	Passed - L/792
Total Load (TL) Pos. Defl.:	7'- 1/8"	D + L		0.280"	L/240	Passed - L/578

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3-08	D + L	1.00	7584 lb		13781 lb	13322 lb	Passed - 57%
2	3-08	D + L	1.00	8475 lb		13779 lb	13320 lb	Passed - 64%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	14'- 1"	Self Weight	Top	19 lb/ft	-	-	-	-
Point	1'- 9 1/4"	1'- 9 1/4"	-	Front	486 lb	1310/-2 lb	-	-	-
Point	3'- 9 1/4"	3'- 9 1/4"	-	Front	493 lb	1339/-2 lb	-	-	-
Point	5'- 9 1/4"	5'- 9 1/4"	-	Front	403 lb	1186/-12 lb	-	-	-
Point	7'- 9 1/4"	7'- 9 1/4"	-	Front	403 lb	1186/-12 lb	-	-	-
Point	9'- 9 1/4"	9'- 9 1/4"	-	Front	403 lb	1186/-12 lb	-	-	-
Point	11'- 9 1/4"	11'- 9 1/4"	-	Front	383 lb	1104/-12 lb	-	-	-
Point	13'- 1 1/4"	13'- 1 1/4"	F1(Cond02)	Back	130 lb	284 lb	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	-	Top	2115 lb	-	2022 lb	1959/-4 lb	436/-1798 lb
Point	13'- 11"	13'- 11"	-	Top	2680 lb	694/-12 lb	2354 lb	2301/-5 lb	512/-1705 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	P6(i98)	3685 lb	3925/-21 lb	2054 lb	1991/-4 lb	138 lb/ -2310 lb
2	13'- 9 1/2"	14'- 1"	P7(i99)	4084 lb	4364/-43 lb	2325 lb	2273/-5 lb	138 lb/ -2310 lb

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- 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.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

PLY TO PLY CONNECTION

- 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.

MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **BM4 - i91** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 14**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.0.207.Update5.FT.1

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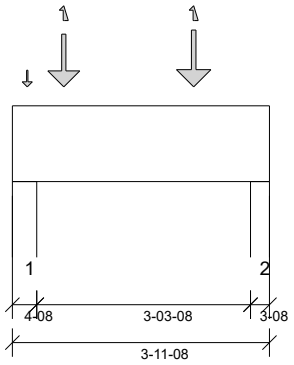

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/480,
TL Deflection Limit:	L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 8 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 1/2"
- 425 psi Wall @ 3'- 9"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 9 1/2"	D + L	1.00	1468 lb ft	28972 lb ft	Passed - 5%
Max Shear:	1'- 6 1/2"	D + 0.75(L + S)	1.15	1525 lb	10894 lb	Passed - 14%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	4-08	D + L	1.00	1999 lb		11812 lb	6694 lb	Passed - 30%
2	3-08	D + L	1.00	1541 lb		9187 lb	5206 lb	Passed - 30%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	3'- 11 1/2"	Self Weight	Top	13 lb/ft	-	-	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	F4(Cond01)	Front	49 lb	55 lb	-	-	-
Point	0'- 9 1/2"	0'- 9 1/2"	-	Front	434 lb	1172 lb	2/-11 lb	3/-12 lb	12/-4 lb
Point	2'- 9 1/2"	2'- 9 1/2"	-	Front	468 lb	1310 lb	2/-12 lb	3/-12 lb	13/-4 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 1/2"	7(i47)	580 lb	1425 lb	-10 lb	3/-14 lb	14 lb/ -3 lb
2	3'- 8"	3'- 11 1/2"	6(i42)	422 lb	1112 lb	-9 lb	2/-10 lb	14 lb/ -3 lb

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- 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.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

PLY TO PLY CONNECTION

- 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.

MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **BM5 - i95** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 18**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.0.207.Update5.FT.1

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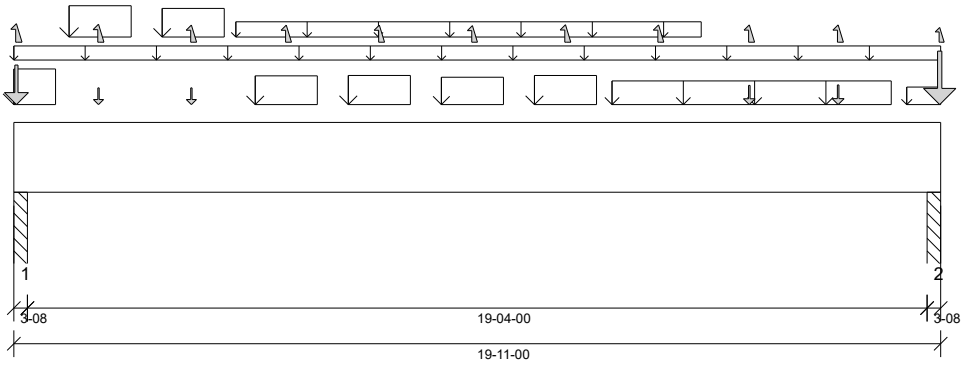

DESIGN INFORMATION

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/480,
TL Deflection Limit:	L/240,

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 10 1/4"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 2 1/2"
- 725 psi Column @ 19'- 8 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 9 7/16"	D + 0.75(L + S)	1.15	33489 lb ft	53375 lb ft	Passed - 63%
Max Neg. Moment:	19'- 8 1/2"	D	0.90	273 lb ft	41772 lb ft	Passed - 1%
Max Shear:	18'- 1 1/2"	D + 0.75(L + S)	1.15	5899 lb	14007 lb	Passed - 42%
Live Load (LL) Pos. Defl.:	9'- 11 9/16"	0.75(L + S + 0.6W)		0.388"	L/480	Passed - L/598
Total Load (TL) Pos. Defl.:	9'- 11 7/16"	D + 0.75(L + S + 0.6W)		0.751"	L/240	Passed - L/308

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3-08	D + 0.75(L + S)	1.15	8815 lb		9187 lb	8881 lb	Passed - 99%
2	3-08	D + 0.75(L + S)	1.15	8202 lb		9188 lb	8881 lb	Passed - 92%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	19'- 11"	Self Weight	Top	17 lb/ft	-	-	-	-
Uniform	0'	19'- 11"	E21(i33)	Top	65 lb/ft	-	-	-	-
Uniform	0'	0'- 10 3/4"	E21(i33)	Top	698 lb/ft	-	621 lb/ft	597 lb/ft	44 lb/ft
Uniform	1'- 2 1/4"	2'- 6 1/4"	E21(i33)	Top	460 lb/ft	-	545 lb/ft	525 lb/ft	48 lb/ft
Uniform	3'- 2 1/4"	4'- 6 1/4"	E21(i33)	Top	420 lb/ft	-	452 lb/ft	434 lb/ft	36 lb/ft
Uniform	4'- 9 1/4"	14'- 9 1/4"	Smoothed Load	Back	15 lb/ft	150 lb/ft	-	-	-
Uniform	5'- 2 1/4"	6'- 6 1/4"	E21(i33)	Top	423 lb/ft	-	458 lb/ft	440 lb/ft	32 lb/ft
Uniform	7'- 2 1/4"	8'- 6 1/4"	E21(i33)	Top	430 lb/ft	-	471 lb/ft	454 lb/ft	33 lb/ft
Uniform	9'- 2 1/4"	10'- 6 1/4"	E21(i33)	Top	399 lb/ft	-	408 lb/ft	394 lb/ft	31 lb/ft
Uniform	11'- 2 1/4"	12'- 6 1/4"	E21(i33)	Top	423 lb/ft	-	470 lb/ft	454 lb/ft	38 lb/ft
Uniform	12'- 10 1/4"	18'- 10 1/4"	E21(i33)	Top	277 lb/ft	-	302 lb/ft	291 lb/ft	37 lb/ft
Uniform	19'- 2 1/4"	19'- 11"	E21(i33)	Top	-	-	176 lb/ft	173 lb/ft	19 lb/ft
Point	1'- 9 13/16"	1'- 9 13/16"	-	Back	-	166 lb	-	-	-231 lb
Point	3'- 9 13/16"	3'- 9 13/16"	-	Back	-	166 lb	-	-	-189 lb
Point	15'- 9 5/8"	15'- 9 5/8"	-	Back	-	290 lb	-1 lb	-1 lb	-195 lb
Point	17'- 8 9/16"	17'- 8 9/16"	-	Back	-	312 lb	-1 lb	-1 lb	-195 lb
Point	0'- 11/16"	0'- 11/16"	-	Top	1294 lb	-	-	-	-257 lb
Point	5'- 10 1/4"	5'- 10 1/4"	E21(i33)	Top	-	-	-	-	-186 lb
Point	7'- 10 1/4"	7'- 10 1/4"	E21(i33)	Top	-	-	-	-	-186 lb
Point	9'- 10 1/4"	9'- 10 1/4"	E21(i33)	Top	-	-	-	-	-161 lb
Point	11'- 10 1/4"	11'- 10 1/4"	E21(i33)	Top	-	-	-	-	-206 lb
Point	13'- 10 1/4"	13'- 10 1/4"	E21(i33)	Top	-	-	-	-	-196 lb
Point	19'- 10 3/4"	19'- 10 3/4"	E21(i33)	Top	1433 lb	-	256 lb	252 lb	41/-70 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 3 1/2"	P5(i96)	5414 lb	1145 lb	3404 lb	3278 lb	1505 lb/ -4211 lb
2	19'- 7 1/2"	19'- 11"	P4(i92)	4910 lb	1289 lb	3085 lb	2982/-2 lb	1505 lb/ -4211 lb

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

MiTek	Customer: Job Name: City: Customer P...	Job Name: **B** Level: **1st Floor** Label: **BM5 - i95** Type: **Beam**	**2 Ply Member** **2.0 RigidLam DF LVL 1-3/4 x 18**	Status: **Design Passed**

DESIGN NOTES

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- 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.
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PLY TO PLY CONNECTION

- 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.