



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM1 - i232**
 Type: **Beam**

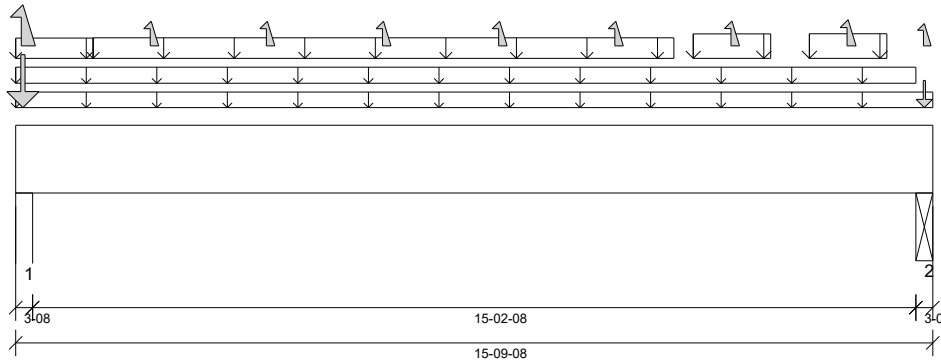
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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: 15'-2 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'-2 1/2"
- 750 psi Beam @ 15'-7"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 11 3/16"	D + 0.75(L + Lr)	1.15	6322 lb ft	33318 lb ft	Passed - 19%
Max Shear:	1'- 5 1/2"	D + 0.75(L + Lr)	1.15	1396 lb	10894 lb	Passed - 13%
Live Load (LL) Pos. Defl.:	7'- 10 15/16"	0.75(L + Lr + 0.6W)		0.083"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 10 15/16"	D + 0.75(L + Lr + 0.6W)		0.193"	L/240	Passed - L/947

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 + Lr)	1.15	2242 lb		9187 lb	5206 lb	Passed - 43%
1	3-08	0.6D + 0.6W	1.60		-42 lb	-	-	
2	3-08	D + 0.75(L + Lr)	1.15	1831 lb		9187 lb	9187 lb	Passed - 20%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	15'- 9 1/2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	15'- 9 1/2"	FC1 Floor Decking (Plan View Fill)	Top	11 lb/ft	43 lb/ft	-	-	-
Uniform	0'	15'- 6"	E27(i19)	Top	65 lb/ft	-	-	-	-
Uniform	0'	1'- 4"	E27(i19)	Top	44 lb/ft	-	21 lb/ft	60 lb/ft	36 lb/ft
Uniform	1'- 4"	11'- 4"	E27(i19)	Top	49 lb/ft	-	21 lb/ft	61 lb/ft	36 lb/ft
Uniform	11'- 8"	13'	E27(i19)	Top	75 lb/ft	-	33 lb/ft	95 lb/ft	53 lb/ft
Uniform	13'- 8"	15'	E27(i19)	Top	69 lb/ft	-	29 lb/ft	107 lb/ft	54 lb/ft
Point	0'- 1 1/2"	0'- 1 1/2"	-	Top	381 lb	-	75 lb	212 lb	126/-559 lb
Point	2'- 4"	2'- 4"	E27(i19)	Top	-	-	-	-	-229 lb
Point	4'- 4"	4'- 4"	E27(i19)	Top	-	-	-	-	-229 lb
Point	6'- 4"	6'- 4"	E27(i19)	Top	-	-	-	-	-229 lb
Point	8'- 4"	8'- 4"	E27(i19)	Top	-	-	-	-	-229 lb
Point	10'- 4"	10'- 4"	E27(i19)	Top	-	-	-	-	-229 lb
Point	12'- 4"	12'- 4"	E27(i19)	Top	-	-	-	-	-233 lb
Point	14'- 4"	14'- 4"	E27(i19)	Top	-	-	-	-30 lb	-231 lb
Point	15'- 7 3/4"	15'- 7 3/4"	E18(i22)	Top	123 lb	-	35 lb	82 lb	39/-183 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"	E2(i3)	1466 lb	339 lb	245 lb	698/-2 lb	629 lb / -1537 lb
2	15'- 6"	15'- 9 1/2"	BM2(i226)	1159 lb	339 lb	190 lb	554/-28 lb	629 lb / -1537 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM2 - i226**
 Type: **Beam**

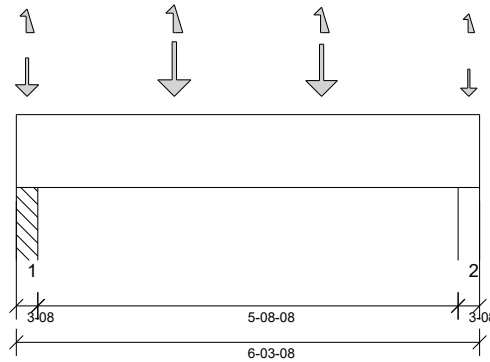
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 11-7/8

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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: 1'- 8 1/2" Bottom: 6'- 1/2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 2 1/2"
- 1323 psi Wall @ 6'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 1 3/4"	D + 0.75(L + Lr)	1.15	5150 lb ft	24470 lb ft	Passed - 21%
Max Neg. Moment:	2'- 1 3/4"	0.6D + 0.6W	1.60	293 lb ft	34045 lb ft	Passed - 1%
Max Shear:	1'- 3 3/8"	D + 0.75(L + Lr)	1.15	2716 lb	9241 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	3'- 1 1/2"	0.75(L + Lr + 0.6W)		0.021"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 1 5/8"	D + 0.75(L + Lr + 0.6W)		0.038"	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	3-08	D + 0.75(L + Lr)	1.15	4559 lb		9187 lb	8881 lb	Passed - 51%
1	3-08	0.6D + 0.6W	1.60		-90 lb	-	-	
2	3-08	D + 0.75(L + Lr)	1.15	3617 lb		9187 lb	16207 lb	Passed - 39%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	6'- 3 1/2"	Self Weight	Top	11 lb/ft	-	-	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	BM1(i232)	Top	1159 lb	339 lb	190 lb	554/-28 lb	164/-939 lb
Point	2'- 1 3/4"	2'- 1 3/4"	F2(c01)	Top	1298 lb	655 lb	413 lb	1234/-73 lb	370/-1310 lb
Point	4'- 1 3/4"	4'- 1 3/4"	F2(c02)	Top	1356 lb	632 lb	369 lb	1063/-54 lb	313/-1090 lb
Point	6'- 1 3/4"	6'- 1 3/4"	F2GE(c01)	Top	652 lb	37/-5 lb	143 lb	341 lb	144/-503 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"	PBO7(i46)	2552 lb	998 lb	595 lb	1751/-96 lb	952 lb/-2696 lb
2	6'	6'- 3 1/2"	E4(i7)	1983 lb	665/-5 lb	520 lb	1441/-59 lb	952 lb/-2696 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM3 - i238**
 Type: **Beam**

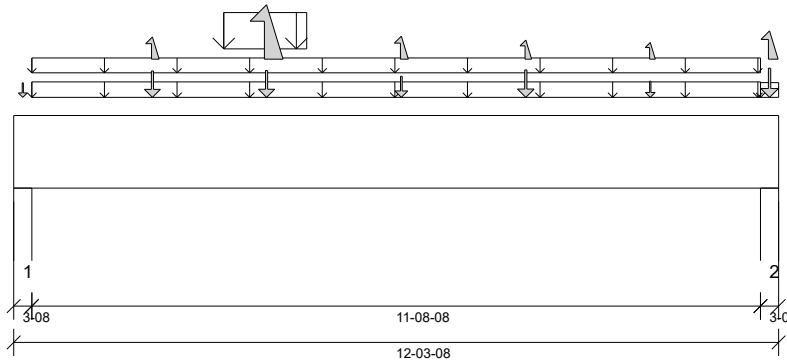
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 12'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 7 11/16"	D + 0.75(L + Lr)	1.15	4206 lb ft	33318 lb ft	Passed - 13%
Max Neg. Moment:	4'- 1/2"	0.6D + 0.6W	1.60	260 lb ft	46355 lb ft	Passed - 1%
Max Shear:	1'- 5 1/2"	D + Lr	1.15	1216 lb	10894 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	5'- 11 5/16"	0.75(L + Lr + 0.6W)		0.030"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 11 11/16"	D + 0.75(L + Lr + 0.6W)		0.071"	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	3-08	D + 0.75(L + Lr)	1.15	1368 lb		9187 lb	5206 lb	Passed - 26%
2	3-08	D + 0.75(L + Lr)	1.15	1282 lb		9188 lb	5206 lb	Passed - 25%
2	3-08	0.6D + 0.6W	1.60		-22 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 3 1/2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'- 3 1/2"	12'	E22(i20)	Top	65 lb/ft	-	-	-	-
Uniform	0'- 3 1/2"	12'	FC1 Floor Decking (Plan View Fill)	Top	9 lb/ft	35 lb/ft	-	-	-
Uniform	3'- 4 1/2"	4'- 8 1/2"	E22(i20)	Top	325 lb/ft	-	95 lb/ft	272 lb/ft	95 lb/ft
Uniform	12'	12'- 3 1/2"	FC1 Floor Decking (Plan View Fill)	Top	-	40 lb/ft	-	-	-
Point	2'- 2 3/4"	2'- 2 3/4"	M04(c01)	Front	-20 lb	-	85 lb	143 lb	61/-175 lb
Point	4'- 3/4"	4'- 3/4"	-	Front	-18 lb	-	88 lb	147 lb	63/-903 lb
Point	6'- 2 3/4"	6'- 2 3/4"	H10(c01)	Front	-	-	-54 lb	32/-90 lb	138/-69 lb
Point	8'- 2 3/4"	8'- 2 3/4"	H09(c01)	Front	92 lb	-	68 lb	120 lb	32/-125 lb
Point	10'- 2 3/4"	10'- 2 3/4"	T01(c01)	Front	-31 lb	-	14 lb	31/-4 lb	14/-35 lb
Point	0'- 1 3/4"	0'- 1 3/4"	E23(i18)	Top	22 lb	-	-	-	-
Point	12'- 1 3/4"	12'- 1 3/4"	E21(i21)	Top	108 lb	-	42 lb	123 lb	77/-332 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"	E16(i29)	824 lb	207 lb	212 lb	521/-45 lb	95 lb/-801 lb
2	12'	12'- 3 1/2"	1(i23)	789 lb	219 lb	157 lb	437/-49 lb	95 lb/-801 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM4 - i228**
 Type: **Beam**

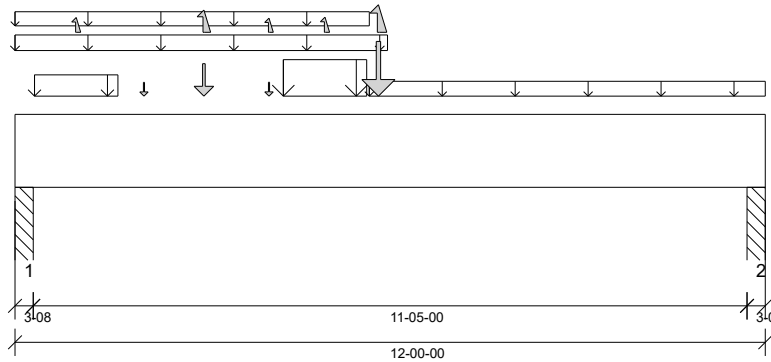
3 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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: 6'- 1/2"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 2 1/2"
- 725 psi Column @ 11'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 9 3/4"	D + Lr	1.15	32634 lb ft	49977 lb ft	Passed - 65%
Max Neg. Moment:	3'- 1/4"	0.6D + 0.6W	1.60	1389 lb ft	69533 lb ft	Passed - 2%
Max Shear:	1'- 5 1/2"	D + Lr	1.15	7950 lb	16341 lb	Passed - 49%
Live Load (LL) Pos. Defl.:	5'- 9 7/16"	Lr		0.137"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 9 11/16"	D + Lr		0.290"	L/240	Passed - L/472

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 + Lr	1.15	8282 lb		13781 lb	13322 lb	Passed - 62%
1	3-08	0.6D + 0.6W	1.60		-498 lb	-	-	
2	3-08	D + Lr	1.15	5552 lb		13781 lb	13322 lb	Passed - 42%
2	3-08	0.6D + 0.6W	1.60		-123 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'	Self Weight	Top	19 lb/ft	-	-	-	-
Uniform	-0'	5'- 11 1/2"	E26(i16)	Top	65 lb/ft	-	-	-	-
Uniform	-0'	5'- 8"	FC1 Floor Decking (Plan View Fill)	Top	-	15 lb/ft	-	-	-
Uniform	0'- 3 3/4"	1'- 7 3/4"	E26(i16)	Top	61 lb/ft	-	44 lb/ft	103 lb/ft	49 lb/ft
Uniform	4'- 3 1/2"	5'- 7 1/2"	E26(i16)	Top	371 lb/ft	-	89 lb/ft	213 lb/ft	95 lb/ft
Uniform	5'- 8"	12'	FC1 Floor Decking (Plan View Fill)	Top	-	40 lb/ft	-	-	-
Point	2'- 3/4"	2'- 3/4"	H07(c01)	Front	-	-	27 lb	-	-
Point	4'- 3/4"	4'- 3/4"	H08(c01)	Front	-2 lb	-	-	-48 lb	66/-80 lb
Point	5'- 9 3/4"	5'- 9 3/4"	-	Front	4439 lb	37/-7 lb	1482 lb	3926/-73 lb	1206/-3678 lb
Point	0'- 11 3/4"	0'- 11 3/4"	E26(i16)	Top	-	-	-	-	-307 lb
Point	3'- 1/4"	3'- 1/4"	E26(i16)	Top	1555 lb	-	686 lb	2074/-127 lb	757/-2197 lb
Point	4'- 11 1/2"	4'- 11 1/2"	E26(i16)	Top	-	-	-	-	-396 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"	PBO11(i234)	4368 lb	152/-4 lb	1457 lb	4020/-168 lb	613 lb/ -5200 lb
2	11'- 8 1/2"	12'	PBO10(i225)	2940 lb	226/-3 lb	925 lb	2507/-82 lb	613 lb/ -5200 lb

DESIGN 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.
- 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.
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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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM5 - i231**
 Type: **Beam**

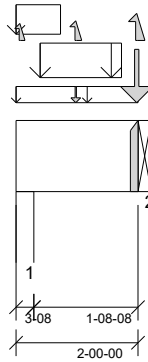
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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'- 1"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 405 psi Beam @ 2'

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	1'- 1/16"	D + 0.75(L + Lr)	1.15	211 lb ft	33318 lb ft	Passed - 1%
Max Shear:	1'- 5 1/2"	D + 0.75(L + Lr)	1.15	173 lb	10894 lb	Passed - 2%

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 + Lr)	1.15	541 lb		9188 lb	5206 lb	Passed - 10%
1	3-08	0.6D + 0.6W	1.60		-102 lb	-	-	
2	1-08	D + Lr	1.15	2078 lb		3937 lb	-	Passed - 53%
2	1-08	0.6D + 0.6W	1.60		-52 lb	-	-	

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	THD410	MiTek	-	38- 16d	20- 10d	-

* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	2'	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	2'	E25(i14)	Top	65 lb/ft	-	-	-	-
Uniform	0'	0'- 8 3/4"	E25(i14)	Top	97 lb/ft	-	45 lb/ft	139 lb/ft	82 lb/ft
Uniform	0'- 4 3/4"	1'- 8 3/4"	E25(i14)	Top	185 lb/ft	-	54 lb/ft	156 lb/ft	81 lb/ft
Point	0'- 11 3/4"	0'- 11 3/4"	-	Front	49 lb	112/-20 lb	-	-	-354 lb
Point	0'- 3/4"	0'- 3/4"	E25(i14)	Top	-	-	-	-	-215 lb
Point	1'- 11 3/4"	1'- 11 3/4"	E25(i14)	Top	937 lb	-	320 lb	846/-16 lb	260/-796 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"	E15(i28)	299 lb	75/-13 lb	64 lb	189 lb	162 lb/ -550 lb
2	2'	2'	BM4(i228)	1161 lb	37/-7 lb	361 lb	966/-16 lb	162 lb/ -550 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM6 - i240**
 Type: **Beam**

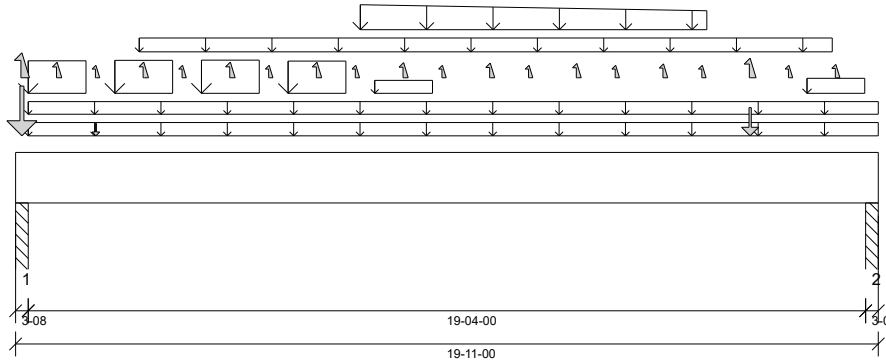
4 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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 1/2"

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'- 10 1/4"	D + Lr	1.15	39308 lb ft	66636 lb ft	Passed - 59%
Max Neg. Moment:	6'- 11 1/2"	0.6D + 0.6W	1.60	1979 lb ft	92711 lb ft	Passed - 2%
Max Shear:	18'- 5 1/2"	D + Lr	1.15	8093 lb	21789 lb	Passed - 37%
Live Load (LL) Pos. Defl.:	9'- 11 5/8"	Lr		0.387"	L/360	Passed - L/600
Total Load (TL) Pos. Defl.:	9'- 11 5/8"	D + Lr		0.877"	L/240	Passed - L/264

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 + Lr	1.15	17574 lb		18375 lb	17763 lb	Passed - 99%
1	3-08	0.6D + 0.6W	1.60		-363 lb	-	-	
2	3-08	D + Lr	1.15	8436 lb		18375 lb	17762 lb	Passed - 47%
2	3-08	0.6D + 0.6W	1.60		-130 lb	-	-	

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	26 lb/ft	-	-	-	-
Uniform	0'- 3 1/2"	19'- 11"	E20(i13)	Top	65 lb/ft	-	-	-	-
Uniform	0'- 3 1/2"	19'- 11"	FC1 Floor Decking (Plan View Fill)	Top	-	15 lb/ft	-	-	-
Uniform	0'- 3 1/2"	1'- 7 1/2"	E20(i13)	Top	530 lb/ft	-	227 lb/ft	553 lb/ft	193 lb/ft
Uniform	2'- 3 1/2"	3'- 7 1/2"	E20(i13)	Top	538 lb/ft	-	233 lb/ft	568 lb/ft	198 lb/ft
Uniform	2'- 10 1/4"	18'- 10 1/4"	Smoothed Load	Front	35 lb/ft	-	20 lb/ft	38 lb/ft	14 lb/ft
Uniform	4'- 3 1/2"	5'- 7 1/2"	E20(i13)	Top	541 lb/ft	-	236 lb/ft	577 lb/ft	199 lb/ft
Uniform	6'- 3 1/2"	7'- 7 1/2"	E20(i13)	Top	526 lb/ft	-	224 lb/ft	533 lb/ft	198 lb/ft
Uniform	8'- 3 1/2"	9'- 7 1/2"	E20(i13)	Top	-	-	-	-	38 lb/ft
Uniform	18'- 3 1/4"	19'- 7 1/4"	E20(i13)	Top	-	-	43 lb/ft	102 lb/ft	48 lb/ft
Tapered	7'- 11 1/2"	15'- 11 1/2"	E20(i13)	Top	338 To 239 lb/ft	-	139 To 55 lb/ft	332 To 133 lb/ft	129 To 62 lb/ft
Point	1'- 10 1/4"	1'- 10 1/4"	M02(c09)	Front	-	-	60 lb	-9 lb	-
Point	3'- 10 1/4"	3'- 10 1/4"	M02(c04)	Front	-	-	-	-10 lb	-
Point	5'- 10 1/4"	5'- 10 1/4"	M02(c05)	Front	-	-	-	-10 lb	-
Point	7'- 10 1/4"	7'- 10 1/4"	M02(c08)	Front	-	-	-	-10 lb	-
Point	9'- 10 1/4"	9'- 10 1/4"	M02(c03)	Front	-	-	-	-10 lb	-
Point	11'- 10 1/4"	11'- 10 1/4"	M02(c01)	Front	-	-	-	-10 lb	-
Point	13'- 10 1/4"	13'- 10 1/4"	M02(c06)	Front	-	-	-	-10 lb	-
Point	15'- 10 1/4"	15'- 10 1/4"	M02(c02)	Front	-	-	-	-10 lb	-
Point	17'- 10 1/4"	17'- 10 1/4"	M02(c07)	Front	-	-	-	-10 lb	-
Point	0'- 1 3/4"	0'- 1 3/4"	E21(i21)	Top	4523 lb	-	1683 lb	4431/-115 lb	1350/-3906 lb
Point	0'- 11 1/2"	0'- 11 1/2"	E20(i13)	Top	-	-	-	-16 lb	-971 lb
Point	2'- 11 1/2"	2'- 11 1/2"	E20(i13)	Top	-	-	-	-16 lb	-1029 lb
Point	4'- 11 1/2"	4'- 11 1/2"	E20(i13)	Top	-	-	-	-19 lb	-1034 lb
Point	6'- 11 1/2"	6'- 11 1/2"	E20(i13)	Top	-	-	-	-	-998 lb
Point	8'- 11 1/2"	8'- 11 1/2"	E20(i13)	Top	-	-	-	-	-870 lb
Point	10'- 11 1/2"	10'- 11 1/2"	E20(i13)	Top	-	-	-	-	-738 lb
Point	12'- 11 1/2"	12'- 11 1/2"	E20(i13)	Top	-	-	-	-	-606 lb
Point	14'- 11 1/2"	14'- 11 1/2"	E20(i13)	Top	-	-	-	-	-474 lb
Point	16'- 11 1/2"	16'- 11 1/2"	E20(i13)	Top	1544 lb	-	684 lb	2065/-126 lb	770/-2184 lb
Point	18'- 11 1/4"	18'- 11 1/4"	E20(i13)	Top	-	-	-	-	-303 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"	PBO12(i237)	9286 lb	154 lb	3316 lb	8342/-222 lb	1728 lb / -9896 lb
2	19'- 7 1/2"	19'- 11"	PBO13(i242)	4552 lb	153 lb	1482 lb	3833/-159 lb	1728 lb / -9896 lb



Customer: **[Building Permit Number]**
Street 1:
City:
Customer P...

Job Name: **A**
Level: **1st Floor**
Label: **BM6 - i240**
Type: **Beam**

4 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

Status:
Design
Passed

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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM7 - i233**
 Type: **Beam**

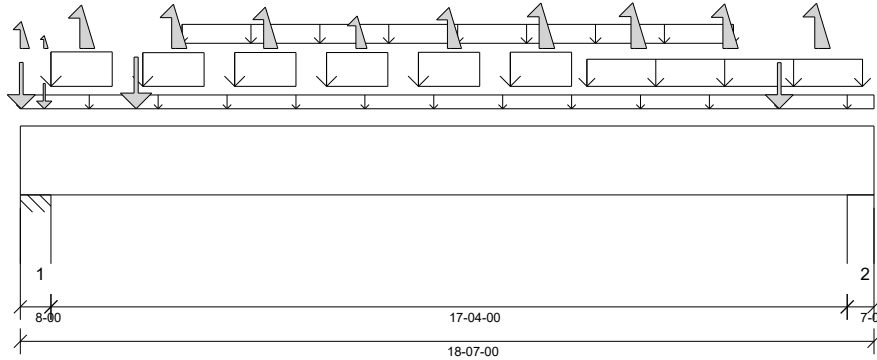
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 18

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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'- 11"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 7"
- 425 psi Wall @ 18'- 1"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 3/8"	D + 0.75(L + Lr)	1.15	41463 lb ft	53375 lb ft	Passed - 78%
Max Neg. Moment:	0'- 7"	D + Lr	1.15	478 lb ft	53375 lb ft	Passed - 1%
Max Shear:	16'- 6"	D + 0.75(L + Lr)	1.15	8252 lb	14007 lb	Passed - 59%
Live Load (LL) Pos. Defl.:	9'- 4 1/8"	0.75(L + Lr + 0.6W)		0.405"	L/360	Passed - L/513
Total Load (TL) Pos. Defl.:	9'- 4 1/16"	D + 0.75(L + Lr + 0.6W)		0.760"	L/240	Passed - L/273

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	8-00	D + 0.75(L + Lr)	1.15	10726 lb		21000 lb	11900 lb	Passed - 90%
2	7-00	D + 0.75(L + Lr)	1.15	9627 lb		18375 lb	10412 lb	Passed - 92%
2	7-00	0.6D + 0.6W	1.60		-135 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 7"	Self Weight	Top	17 lb/ft	-	-	-	-
Uniform	0'	18'- 7"	E18(i22)	Top	65 lb/ft	-	-	-	-
Uniform	0'- 8"	2'	E18(i22)	Top	570 lb/ft	-	232 lb/ft	581 lb/ft	177 lb/ft
Uniform	2'- 8"	4'	E18(i22)	Top	535 lb/ft	-	229 lb/ft	567 lb/ft	173 lb/ft
Uniform	3'- 6 1/4"	15'- 6 1/4"	Smoothed Load	Front	117 lb/ft	317 lb/ft	-	-	-
Uniform	4'- 8"	6'	E18(i22)	Top	537 lb/ft	-	232 lb/ft	571 lb/ft	175 lb/ft
Uniform	6'- 8"	8'	E18(i22)	Top	535 lb/ft	-	231 lb/ft	566 lb/ft	182 lb/ft
Uniform	8'- 8"	10'	E18(i22)	Top	535 lb/ft	-	233 lb/ft	567 lb/ft	196 lb/ft
Uniform	10'- 8"	12'	E18(i22)	Top	536 lb/ft	-	233 lb/ft	569 lb/ft	200 lb/ft
Uniform	12'- 4"	18'- 4"	E18(i22)	Top	359 lb/ft	-	156 lb/ft	380 lb/ft	132 lb/ft
Point	0'- 6 1/4"	0'- 6 1/4"	F4A(c01)	Front	131 lb	271/0 lb	-	-	-
Point	2'- 6 1/4"	2'- 6 1/4"	F4(c05)	Front	311 lb	944 lb	-	-	-
Point	16'- 6 1/4"	16'- 6 1/4"	F5(c02)	Front	276 lb	798 lb	-	-	-
Point	0'- 1/4"	0'- 1/4"	E18(i22)	Top	423 lb	-	154 lb	387/-8 lb	118/-447 lb
Point	1'- 4"	1'- 4"	E18(i22)	Top	-	-	-	-16 lb	-975 lb
Point	3'- 4"	3'- 4"	E18(i22)	Top	-	-	-	-16 lb	-998 lb
Point	5'- 4"	5'- 4"	E18(i22)	Top	-	-	-	-18 lb	-903 lb
Point	7'- 4"	7'- 4"	E18(i22)	Top	-	-	-	-18 lb	-617 lb
Point	9'- 4"	9'- 4"	E18(i22)	Top	-	-	-	-16 lb	-895 lb
Point	11'- 4"	11'- 4"	E18(i22)	Top	-	-	-	-16 lb	-1038 lb
Point	13'- 4"	13'- 4"	E18(i22)	Top	-	-	-	-16 lb	-1047 lb
Point	15'- 4"	15'- 4"	E18(i22)	Top	-	-	-	-16 lb	-1012 lb
Point	17'- 4"	17'- 4"	E18(i22)	Top	-	-	-	-19 lb	-1028 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 8"	E4(i7)	5569 lb	3017 lb	1549 lb	3826/-83 lb	2106 lb/ -5252 lb
2	18'	18'- 7"	E8(i6)	4981 lb	2824 lb	1392 lb	3402/-76 lb	2106 lb/ -5252 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.



Customer: [Building Permit Number]	Job Name: A	2 Ply Member	Status:
Street 1:	Level: 1st Floor	2.0 RigidLam DF LVL 1-3/4 x 18	Design Passed
City:	Label: BM7 - i233		
Customer P...	Type: Beam		

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.
- 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM8 - i224**
 Type: **Beam**

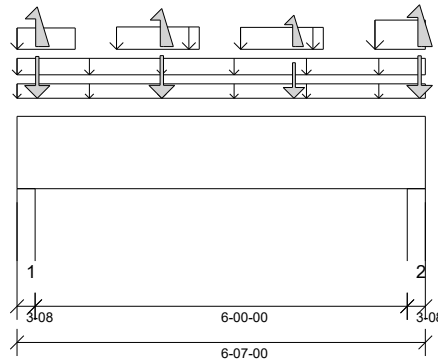
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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: 2'- 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 6'- 4 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 10 13/16"	D + Lr	1.15	1259 lb ft	33318 lb ft	Passed - 4%
Max Shear:	5'- 1 1/2"	D + Lr	1.15	566 lb	10894 lb	Passed - 5%

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 + Lr	1.15	1017 lb		9188 lb	5206 lb	Passed - 20%
1	3-08	0.6D + 0.6W	1.60		-9 lb	-	-	
2	3-08	D + Lr	1.15	1103 lb		9188 lb	5206 lb	Passed - 21%
2	3-08	0.6D + 0.6W	1.60		-5 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	6'- 7"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	6'- 7"	E24(i17)	Top	65 lb/ft	-	-	-	-
Uniform	-0'	6'- 7"	FC1 Floor Decking (Plan View Fill)	Top	4 lb/ft	15 lb/ft	-	-	-
Uniform	0'	0'- 11 1/4"	E24(i17)	Top	59 lb/ft	-	23 lb/ft	71 lb/ft	20 lb/ft
Uniform	1'- 7 1/4"	2'- 11 1/4"	E24(i17)	Top	61 lb/ft	-	23 lb/ft	74 lb/ft	38 lb/ft
Uniform	3'- 7 1/4"	4'- 11 1/4"	E24(i17)	Top	60 lb/ft	-	19 lb/ft	78 lb/ft	29 lb/ft
Uniform	5'- 9 1/4"	6'- 7"	E24(i17)	Top	91 lb/ft	-	43 lb/ft	134 lb/ft	78 lb/ft
Point	0'- 3 15/16"	0'- 3 15/16"	-	Top	117 lb	-	67 lb	114 lb	49/-322 lb
Point	2'- 4"	2'- 4"	-	Top	124 lb	-	68 lb	129 lb	36/-301 lb
Point	4'- 5 9/16"	4'- 5 9/16"	-	Top	104 lb	-	49 lb	91 lb	26/-220 lb
Point	6'- 5 7/8"	6'- 5 7/8"	-	Top	118 lb	-	70 lb	117 lb	50/-348 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"	E15(i28)	635 lb	51 lb	177 lb	393 lb	39 lb/ -653 lb
2	6'- 3 1/2"	6'- 7"	E13(i10)	657 lb	51 lb	189 lb	435 lb	39 lb/ -653 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.



Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **BM9 - i239**
 Type: **Beam**

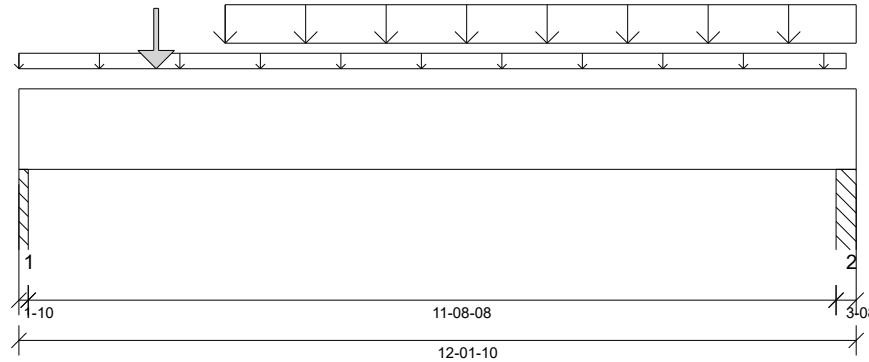
2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 14

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

Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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'- 5/8"
- 725 psi Column @ 11'- 11 1/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	5'- 11 7/8"	D + L	1.00	8240 lb ft	28972 lb ft	Passed - 28%
Max Shear:	1'- 3 5/8"	D + L	1.00	2542 lb	9473 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	5'- 11 5/16"	L		0.095"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 11 3/8"	D + L		0.133"	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	1-10	D + L	1.00	2569 lb		4266 lb	4123 lb	Passed - 62%
2	3-08	D + L	1.00	3173 lb		9188 lb	8881 lb	Passed - 36%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 1 5/8"	Self Weight	Top	13 lb/ft	-	-	-	-
			FC1 Floor Decking (Plan View Fill)	Top	2 lb/ft	7 lb/ft	-	-	-
Uniform	0'	11'- 11 7/8"	Smoothed Load	Back	126 lb/ft	339 lb/ft	-	-	-
Point	1'- 11 7/8"	1'- 11 7/8"	F4(c05)	Back	306 lb	927 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 1 5/8"	PBO14(i244)	723 lb	1840 lb	-	-	-
2	11'- 10 1/8"	12'- 1 5/8"	PBO15(i246)	910 lb	2269 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.



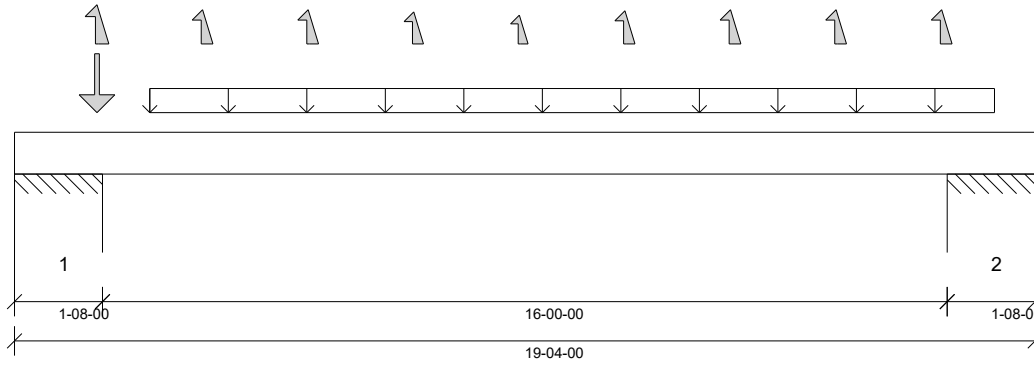
Customer: [Building Permit Number]
 Street 1:
 City:
 Customer P...

Job Name: **A**
 Level: **1st Floor**
 Label: **GDH - i243**
 Type: **Beam**

2 Ply Member
2.0 RigidLam DF LVL 1-3/4
x 9-1/2

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 Report Version: 2020.10.28 06/11/2021 10:34



DESIGN INFORMATION

Building Code: IRC2015
 Design Methodology: ASD
 Risk Category: II (General Construction) Residential
 Service Condition: Dry
 LL Deflection Limit: L/360, 0.75" (absolute)
 TL Deflection Limit: L/240, 1.00" (absolute)

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: 1'- 10 1/2" Bottom: 19'- 4"

Bearing Stress of Support Material:

- 1323 psi Wall @ 0'- 1 1/2"
- 1323 psi Wall @ 1'- 6 1/2"
- 1323 psi Wall @ 17'- 9 1/2"
- 1323 psi Wall @ 19'- 2 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	11'- 6 3/4"	D + S	1.15	2277 lb ft	16014 lb ft	Passed - 14%
Max Neg. Moment:	1'- 6 1/2"	D + S	1.15	3717 lb ft	13604 lb ft	Passed - 27%
Max Shear:	2'- 5 1/2"	D + S	1.15	1170 lb	7393 lb	Passed - 16%
Live Load (LL) Pos. Defl.:	10'- 9 3/16"	S		0.121"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	10'- 4 7/8"	D + S		0.168"	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	446 lb		28304 lb	35886 lb	Passed - 2%
1	7'-12"	D + S	1.15		-2617 lb	-	-	
1	1-00-04	D + S	1.15	4158 lb		32156 lb	56724 lb	Passed - 13%
1	1-00-04	0.6D + 0.6W	1.60		-794 lb	-	-	
2	1-00-04	D + 0.75(L + S + 0.6W)	1.60	2686 lb		32156 lb	56724 lb	Passed - 8%
2	1-00-04	0.6D + 0.6W	1.60		-794 lb	-	-	
2	7'-12"	0.6D + 0.6W	1.60	475 lb		20344 lb	35886 lb	Passed - 2%
2	7'-12"	D + 0.75(L + S + 0.6W)	1.60		-1662 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	9 lb/ft	-	-	-	-
Uniform	2'- 6 3/4"	18'- 6 3/4"	Smoothed Load	Top	53 lb/ft	-	41 lb/ft	69 lb/ft	29 lb/ft
Point	1'- 6 3/4"	1'- 6 3/4"	M02(c09)	Top	130 lb	-	111 lb	186 lb	79/-281 lb
Point	3'- 6 3/4"	3'- 6 3/4"	M02(c04)	Top	-	-	-	-	-224 lb
Point	5'- 6 3/4"	5'- 6 3/4"	M02(c05)	Top	-	-	-	-	-224 lb
Point	7'- 6 3/4"	7'- 6 3/4"	M02(c08)	Top	-	-	-	-	-199 lb
Point	9'- 6 3/4"	9'- 6 3/4"	M02(c03)	Top	-	-	-	-	-162 lb
Point	11'- 6 3/4"	11'- 6 3/4"	M02(c01)	Top	-	-	-	-	-212 lb
Point	13'- 6 3/4"	13'- 6 3/4"	M02(c06)	Top	-	-	-	-	-224 lb
Point	15'- 6 3/4"	15'- 6 3/4"	M02(c02)	Top	-	-	-	-	-224 lb
Point	17'- 6 3/4"	17'- 6 3/4"	M02(c07)	Top	-	-	-	-	-224 lb

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	1'- 8"	E11(i218)	591 lb	-	402 lb	675 lb	476 lb/ -1171 lb
==>	0'- 1 1/2"	0'- 1 1/2"	E11(i218)	-	-	-	-	-
==>	1'- 6 1/2"	1'- 6 1/2"	E11(i218)	591 lb	-	402 lb	675 lb	-
2	17'- 8"	19'- 4"	E10(i11)	557 lb	-	365 lb	615 lb	476 lb/ -1171 lb
==>	17'- 9 1/2"	17'- 9 1/2"	E10(i11)	557 lb	-	365 lb	615 lb	-
==>	19'- 2 1/2"	19'- 2 1/2"	E10(i11)	-	-	-	-	-

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.
- Design of member is based on a released bearing condition at Support. Ensure that the member is allowed to deflect upward at these supports.



Customer: [Building Permit Number]	Job Name: A	2 Ply Member	Status:
Street 1:	Level: 1st Floor	2.0 RigidLam DF LVL 1-3/4	Design
City:	Label: GDH - i243	x 9-1/2	Passed
Customer P...	Type: Beam		

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.