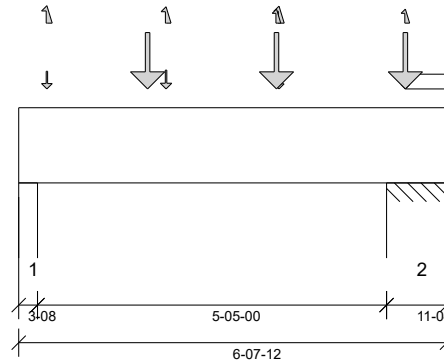|	Customer:	Job Name: **Hall 2024-SAN-075**	**2 Ply Member**	Status:
MiTek®	Street 1: City: Customer Ph...	Level: **1st Floor** Label: **FBM3 - i14** Type: **Beam**	**2.1 RigidLam SP LVL 1-3/4 x 14**	**Design Passed**

Illustration Not to Scale. Pitch: 0/12   Designed by Single Member Design Engine in MiTek® Structure Version 8.7.2.270.Update13.8   Report Version: 2021.03.26   01/28/2025 12:53

DESIGN INFORMATION

Building Code: IRC 2018
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"

Bearing Stress of Support Material:
- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 5'- 9 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	2'- 3 7/16"	D + L	1.00	1848 lb ft	28640 lb ft	Passed - 6%
Max Neg. Moment:	5'- 9 1/2"	D + L	1.00	213 lb ft	28640 lb ft	Passed - 1%
Max Shear:	4'- 6 1/2"	D + L	1.00	1053 lb	9473 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	2'- 11 7/8"	L		0.010"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 11 13/16"	D + L		0.013"	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 + L	1.00	1086 lb		9187 lb	5206 lb	Passed - 21%
2	11-04	D + L	1.00	2064 lb		29531 lb	16734 lb	Passed - 12%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	6'- 7 3/4"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	6'	6'- 7 3/4"	FC1 Floor Decking (Plan View Fill)	Top	3 lb/ft	12 lb/ft	-	-	-
Point	0'- 5 1/4"	0'- 5 1/4"	1F04(c03)	Front	-31 lb	83/-48 lb	-	-	-
Point	2'- 3 7/16"	2'- 3 7/16"	1F04(c02)	Front	-54 lb	110 lb	-	-	-
Point	4'- 1/2"	4'- 1/2"	1F04(c01)	Front	-68 lb	63 lb	-	0 lb	1/0 lb
Point	2'	2'	1F02(c09)	Back	265 lb	710 lb	-	-	-
Point	4'	4'	1F02(c08)	Back	265 lb	710 lb	-	0 lb	0/-1 lb
Point	6'	6'	1F02(c07)	Back	265 lb	710 lb	-	0 lb	0 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"	E7(i6)	201 lb	840/-48 lb	-	-	0 lb/ 0 lb
2	5'- 8 1/2"	6'- 7 3/4"	3(i9)	529 lb	1554 lb	-	-	0 lb/ 0 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00

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.