



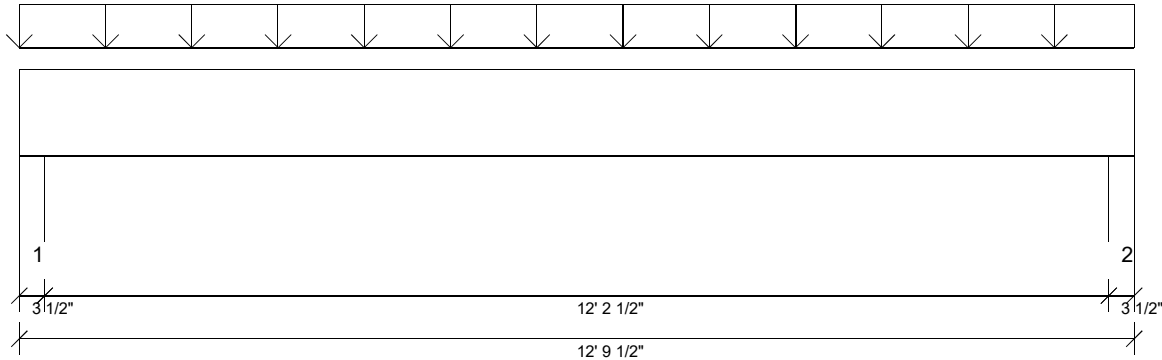
Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **BM3-2 - i145**  
 Type: **Beam**

**2 Ply Member**  
**1-3/4X11-7/8 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12      Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20      Report Version: 2021.03.26      12/29/2022 13:23



**DESIGN INFORMATION**

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

**Bearing Stress of Support Material:**

- 725 psi Wall @ 0'- 2 1/2"
- 725 psi Wall @ 12'- 7"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDf	Design	Limit	Result
Max Pos. Moment:	6'- 4 3/4"	D + Lr	1.25	9979 lb ft	24875 lb ft	Passed - 40%
Max Shear:	11'- 6 1/8"	D + Lr	1.25	2669 lb	9871 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	6'- 4 3/4"	Lr		0.189"	L/360	Passed - L/775
Total Load (TL) Pos. Defl.:	6'- 4 3/4"	D + Lr		0.290"	L/240	Passed - L/505

**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 1/2"	D + Lr	1.25	3338 lb		9187 lb	8881 lb	Passed - 38%
2	3 1/2"	D + Lr	1.25	3338 lb		9187 lb	8881 lb	Passed - 38%

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 9 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	12'- 9 1/2"	User Load	Top	170 lb/ft	-	-	340 lb/ft	-

**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(i52)	1163 lb	-	-	2174 lb	-
2	12'- 6"	12'- 9 1/2"	26(i84)	1163 lb	-	-	2175 lb	-

**DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped 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.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

**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.



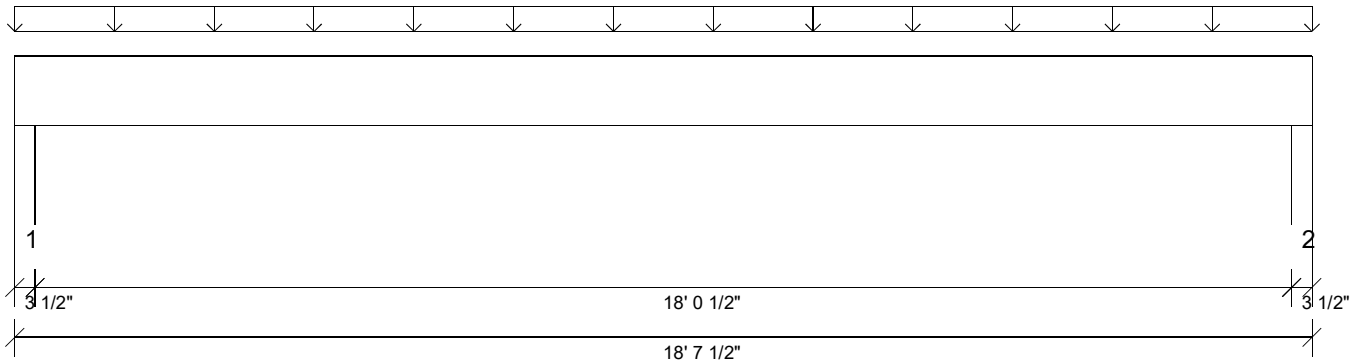
Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **BM2-2 - i133**  
 Type: **Beam**

**2 Ply Member**  
**1-3/4X11-7/8 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12      Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20      Report Version: 2021.03.26      12/29/2022 13:23



### DESIGN INFORMATION

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

#### Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 18'- 5"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 3/4"	D + L	1.00	4635 lb ft	19900 lb ft	Passed - 23%
Max Shear:	17'- 4 1/8"	D + L	1.00	899 lb	7897 lb	Passed - 11%
Live Load (LL) Pos. Defl.:	9'- 3 3/4"	L		0.130"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 3 3/4"	D + L		0.292"	L/240	Passed - L/742

### 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 1/2"	D + L	1.00	1042 lb		9188 lb	5206 lb	Passed - 20%
2	3 1/2"	D + L	1.00	1042 lb		9188 lb	5206 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'	18'- 7 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	18'- 7 1/2"	User Load	Top	50 lb/ft	50 lb/ft	-	-	-

### 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"	34(i94)	576 lb	466 lb	-	-	-
2	18'- 4"	18'- 7 1/2"	E15(i52)	576 lb	466 lb	-	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

### 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.



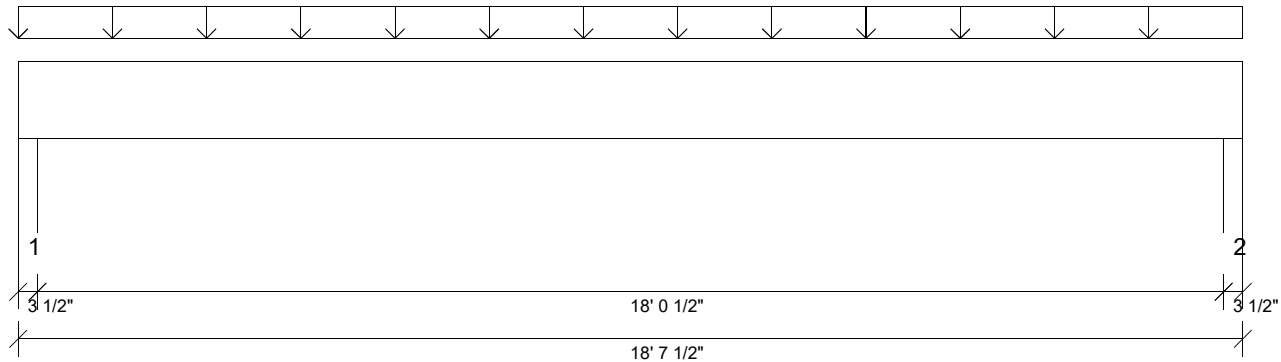
Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **BM4-2 - i134**  
 Type: **Beam**

**2 Ply Member**  
**1-3/4X14 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12      Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20      Report Version: 2021.03.26      12/29/2022 13:23



**DESIGN INFORMATION**

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

**Bearing Stress of Support Material:**

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 18'- 5"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	9'- 3 3/4"	D + L	1.00	10522 lb ft	27030 lb ft	Passed - 39%
Max Shear:	1'- 5 1/2"	D + L	1.00	1995 lb	9310 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	9'- 3 3/4"	L		0.191"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	9'- 3 3/4"	D + L		0.404"	L/240	Passed - L/535

**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 1/2"	D + L	1.00	2366 lb		9188 lb	5206 lb	Passed - 45%
2	3 1/2"	D + L	1.00	2366 lb		9188 lb	5207 lb	Passed - 45%

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 7 1/2"	Self Weight	Top	14 lb/ft	-	-	-	-
Uniform	0'	18'- 7 1/2"	User Load	Top	120 lb/ft	120 lb/ft	-	-	-

**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"	30(i89)	1248 lb	1118 lb	-	-	-
2	18'- 4"	18'- 7 1/2"	E15(i52)	1248 lb	1118 lb	-	-	-

**DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped 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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- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

**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.



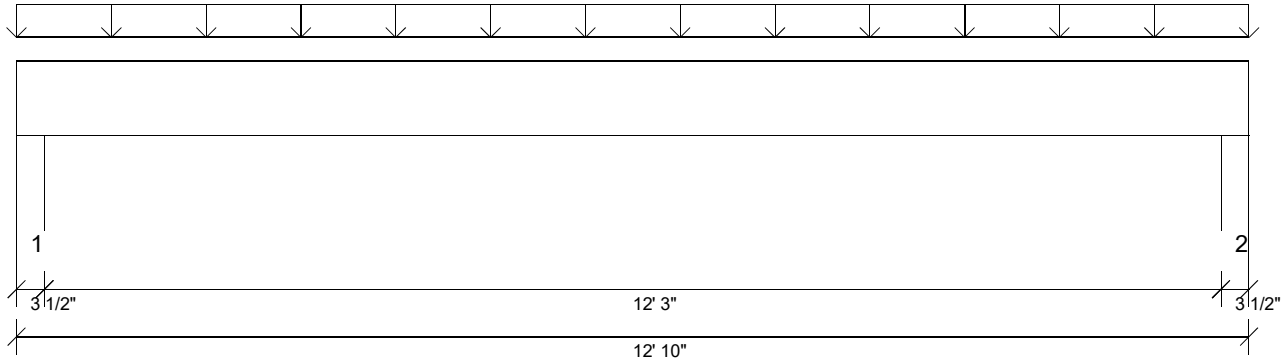
Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **BM1-2 - i147**  
 Type: **Beam**

**2 Ply Member**  
**1-3/4X9-1/4 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12      Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20      Report Version: 2021.03.26      12/29/2022 13:23



**DESIGN INFORMATION**

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

**Bearing Stress of Support Material:**

- 725 psi Wall @ 0'- 2 1/2"
- 725 psi Wall @ 12'- 7 1/2"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 5"	D + L	1.00	5087 lb ft	12416 lb ft	Passed - 41%
Max Shear:	1'- 3/4"	D + L	1.00	1415 lb	6151 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	6'- 5"	L		0.203"	L/360	Passed - L/725
Total Load (TL) Pos. Defl.:	6'- 5"	D + L		0.315"	L/240	Passed - L/466

**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 1/2"	D + L	1.00	1696 lb		9188 lb	8881 lb	Passed - 19%
2	3 1/2"	D + L	1.00	1696 lb		9187 lb	8881 lb	Passed - 19%

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 10"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	0'	12'- 10"	User Load	Top	85 lb/ft	170 lb/ft	-	-	-

**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"	E30(i63)	605 lb	1091 lb	-	-	-
2	12'- 6 1/2"	12'- 10"	E27(i60)	605 lb	1091 lb	-	-	-

**DESIGN NOTES**

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



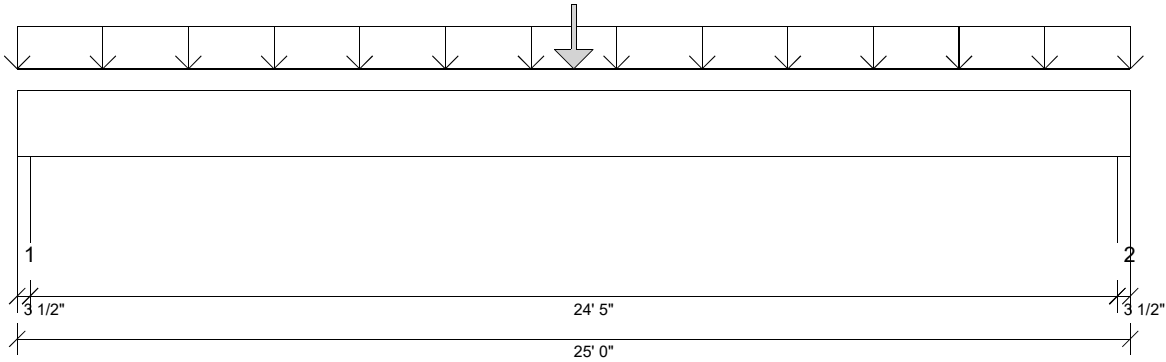
Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **BM5-3 - i138**  
 Type: **Beam**

**3 Ply Member**  
**1-3/4X18 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12      Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20      Report Version: 2021.03.26      12/29/2022 13:23



**DESIGN INFORMATION**

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

**Bearing Stress of Support Material:**

- 425 psi Wall @ 0'- 2 1/2"
- 425 psi Wall @ 24'- 9 1/2"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	12'- 6"	D + L	1.00	43158 lb ft	64662 lb ft	Passed - 67%
Max Shear:	1'- 9 1/2"	D + L	1.00	5962 lb	17955 lb	Passed - 33%
Live Load (LL) Pos. Defl.:	12'- 6"	L		0.564"	L/360	Passed - L/519
Total Load (TL) Pos. Defl.:	12'- 6"	D + L		0.936"	L/240	Passed - L/312

**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 1/2"	D + L	1.00	6924 lb		13781 lb	7809 lb	Passed - 89%
2	3 1/2"	D + L	1.00	6924 lb		13781 lb	7809 lb	Passed - 89%

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	25'	Self Weight	Top	27 lb/ft	-	-	-	-
Uniform	0'	25'	User Load	Top	170 lb/ft	340 lb/ft	-	-	-
Point	12'- 6"	12'- 6"	User Load	Top	423 lb	-	-	845 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"	26(i84)	2674 lb	4250 lb	-	422 lb	-
2	24'- 8 1/2"	25'	E26(i69)	2674 lb	4250 lb	-	422 lb	-

**DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped 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: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **E26\_Hdr1 - i137**  
 Type: **HeaderAsDroppedBeam**

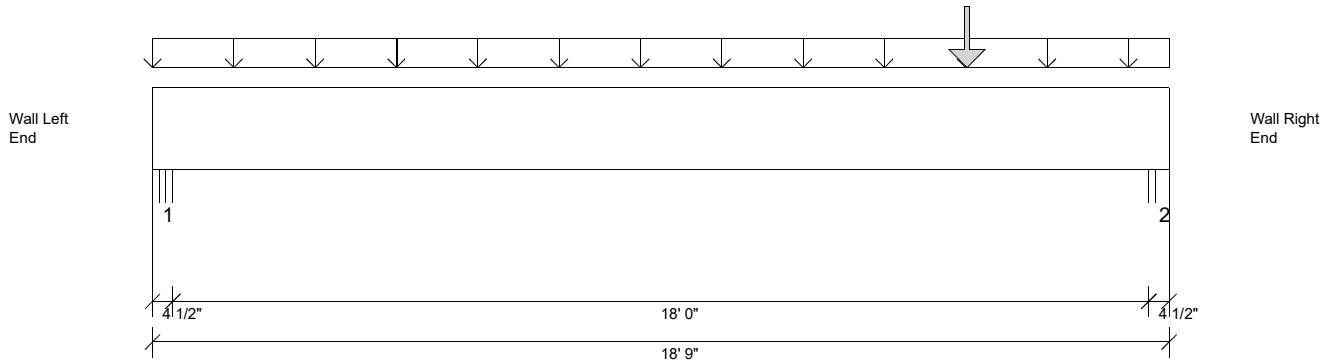
**2 Ply Member**  
**1-3/4X18 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20

Report Version: 2021.03.26 12/29/2022 13:23



### DESIGN INFORMATION

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

#### Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 18'- 5 1/2"

### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	15'- 1/4"	D + L	1.00	22020 lb ft	43108 lb ft	Passed - 51%
Max Shear:	16'- 10 1/2"	D + L	1.00	6425 lb	11970 lb	Passed - 54%
Live Load (LL) Pos. Defl.:	10'- 7/16"	0.75(L + Lr)		0.225"	L/360	Passed - L/959
Total Load (TL) Pos. Defl.:	10'- 3/8"	D + 0.75(L + Lr)		0.401"	L/240	Passed - L/539

### 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 1/2"	D + 0.75(L + Lr)	1.25	3447 lb		11813 lb	11419 lb	Passed - 30%
2	4 1/2"	D + L	1.00	6627 lb		11813 lb	11419 lb	Passed - 58%

### LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	18'- 9"	Self Weight	Top	18 lb/ft	-	-	-	-
Uniform	0'	18'- 9"	User Load	Top	90 lb/ft	-	-	180 lb/ft	-
Point	15'- 1/4"	15'- 1/4"	BM4-3(i138)	Top	2674 lb	4250 lb	-	422 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"	Trimmer	1518 lb	804 lb	-	1767 lb	-
2	18'- 4 1/2"	18'- 9"	Trimmer	3181 lb	3446 lb	-	2030 lb	-

### DESIGN NOTES

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### PLY TO PLY CONNECTION

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Customer: **BRAD CUMMINGS CONSTRUC...**  
 Job Name: **KEANE RESIDENCE**  
 Appwright N... **3303534**  
 Customer P...

Job Name: **3303534\_KEANE**  
 Level: **1st Floor**  
 Label: **E26\_Hdr2 - i136**  
 Type: **HeaderAsDroppedBeam**

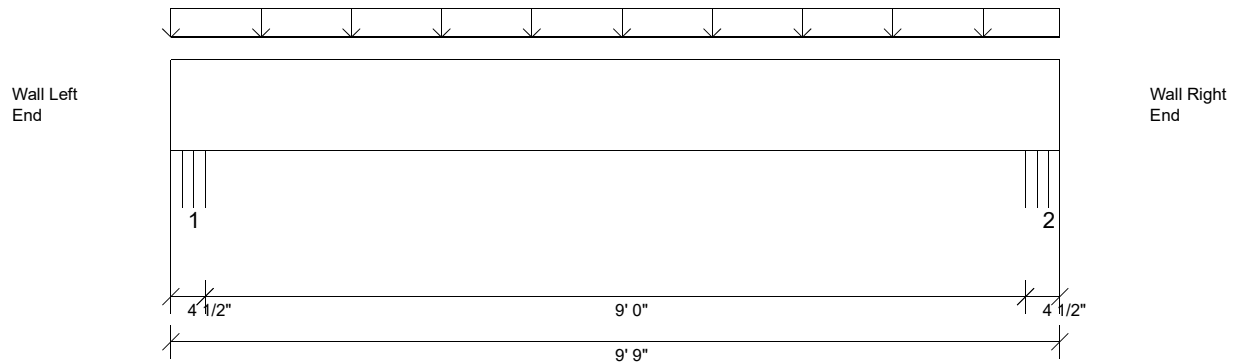
**2 Ply Member**  
**1-3/4X11-7/8 LP-LVL**  
**2900Fb-2.0E**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20

Report Version: 2021.03.26 12/29/2022 13:23



**DESIGN INFORMATION**

Building Code: IRC 2018  
 Design Methodology: ASD  
 Risk Category: II (General Construction) Residential  
 Service Condition: Dry  
 LL Deflection Limit: L/360, 1.00" (absolute)  
 TL Deflection Limit: L/240, 1.50" (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: 0'

**Bearing Stress of Support Material:**

- 725 psi Wall @ 0'- 3 1/2"
- 725 psi Wall @ 9'- 5 1/2"

**ANALYSIS RESULTS**

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	4'- 10 1/2"	D + Lr	1.25	2321 lb ft	24875 lb ft	Passed - 9%
Max Shear:	8'- 4 5/8"	D + Lr	1.25	779 lb	9871 lb	Passed - 8%
Live Load (LL) Pos. Defl.:	4'- 10 1/2"	Lr		0.023"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 10 1/2"	D + Lr		0.037"	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	4 1/2"	D + Lr	1.25	1082 lb		11813 lb	11419 lb	Passed - 9%
2	4 1/2"	D + Lr	1.25	1082 lb		11813 lb	11419 lb	Passed - 9%

**LOADING**

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	9'- 9"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'	9'- 9"	User Load	Top	70 lb/ft	-	-	140 lb/ft	-

**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"	Trimmer	399 lb	-	-	683 lb	-
2	9'- 4 1/2"	9'- 9"	Trimmer	399 lb	-	-	682 lb	-

**DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped 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.
- The unbraced length used in this design was manually input by the user. Install lateral bracing to satisfy the unbraced lengths specified on this report.

**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.