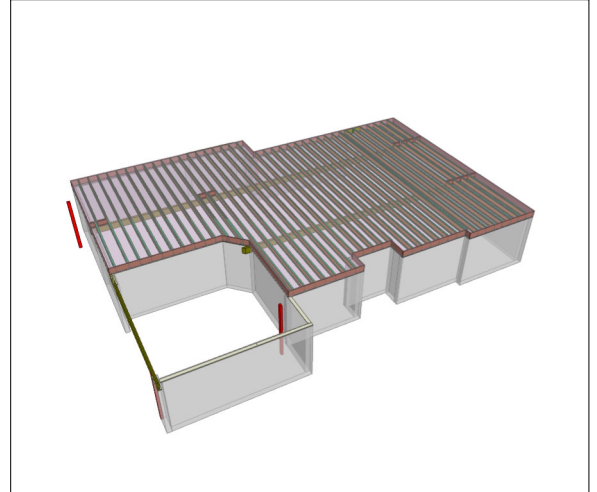




Kempsville Chesapeake Component Plant
3300 Business Center Drive
Chesapeake, VA 23323

Phone #: 757-485-8590

Builder: MITCHELL HOMES
Project: WINCHESTER MODEL -
SPENCER

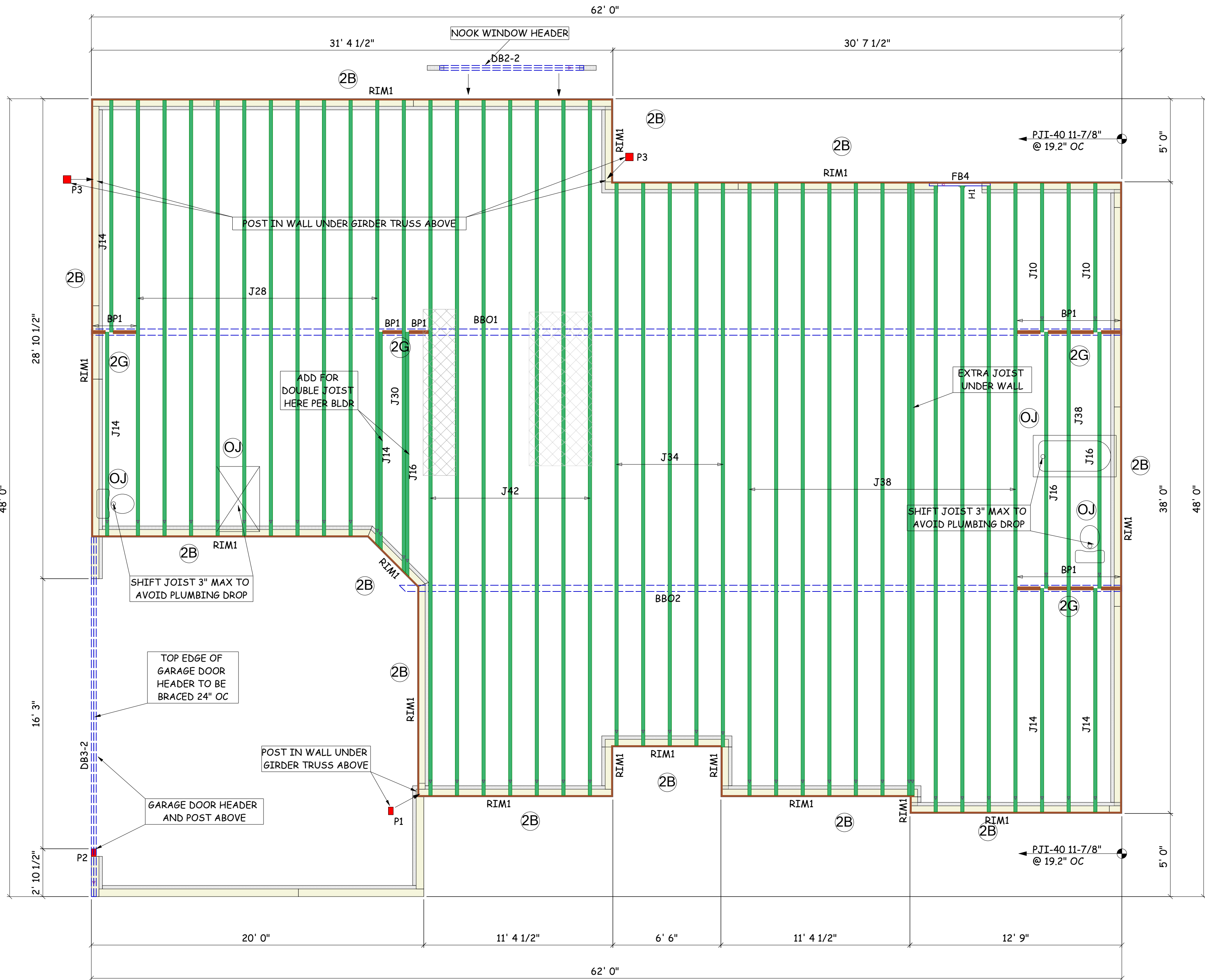


THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for component installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.

General Notes: ** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** LVL AND JOISTS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.



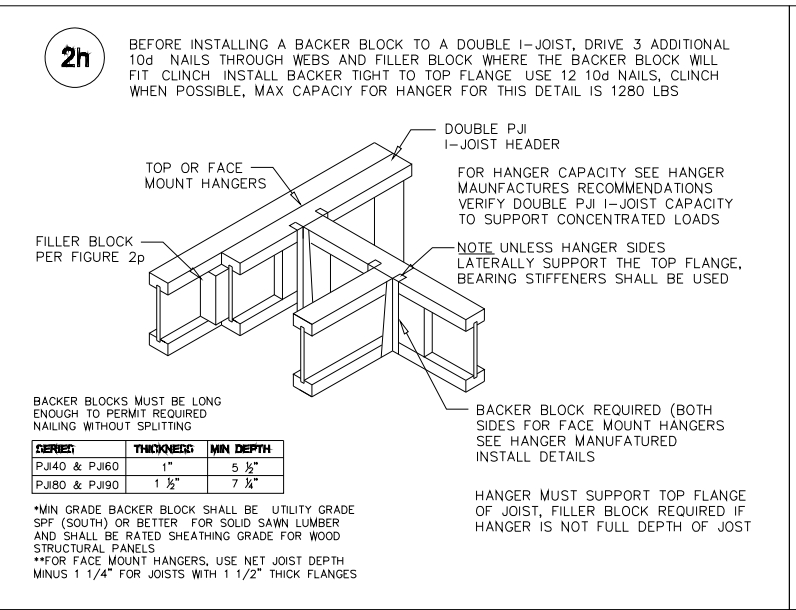
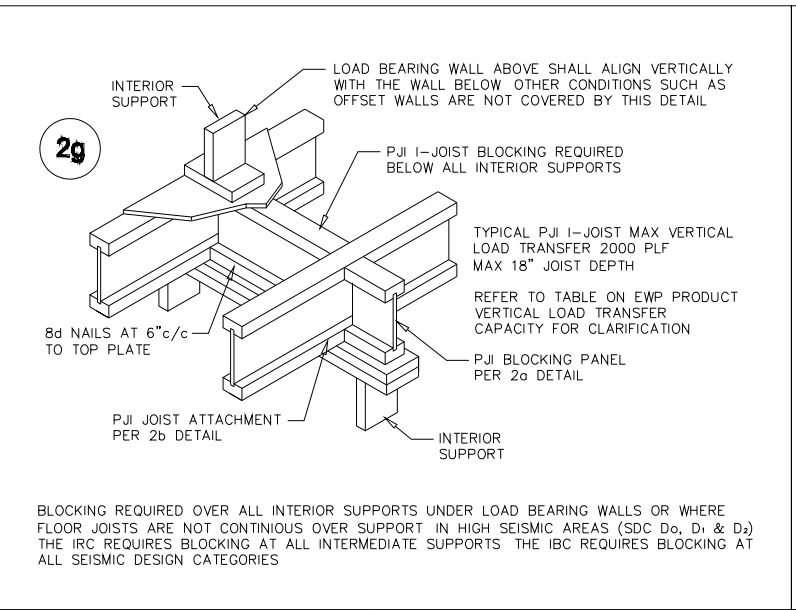
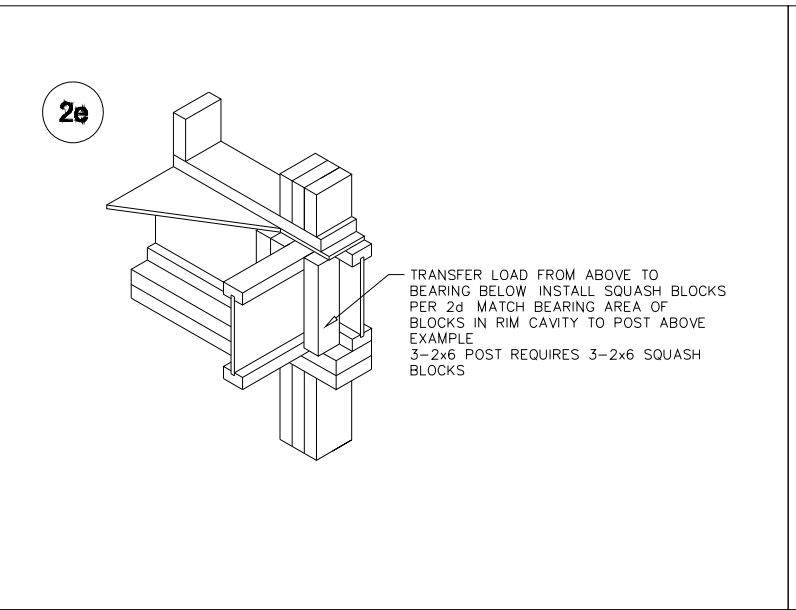
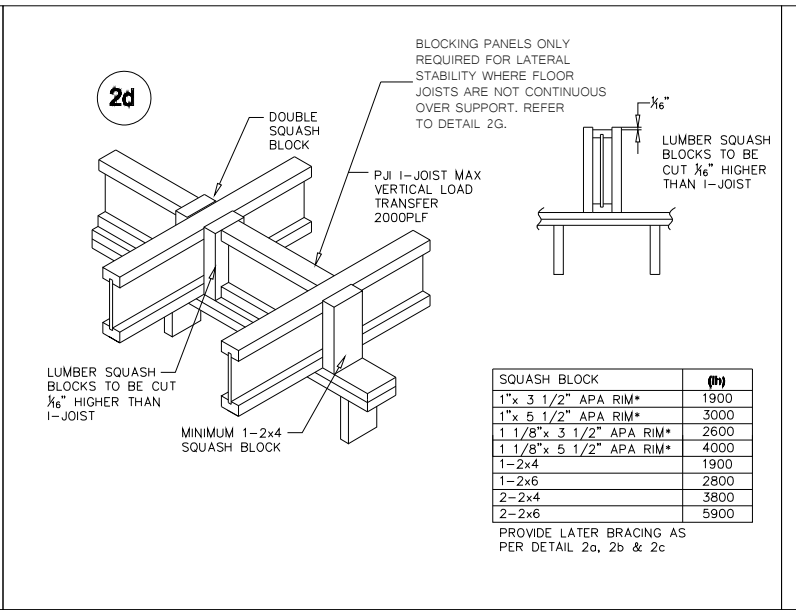
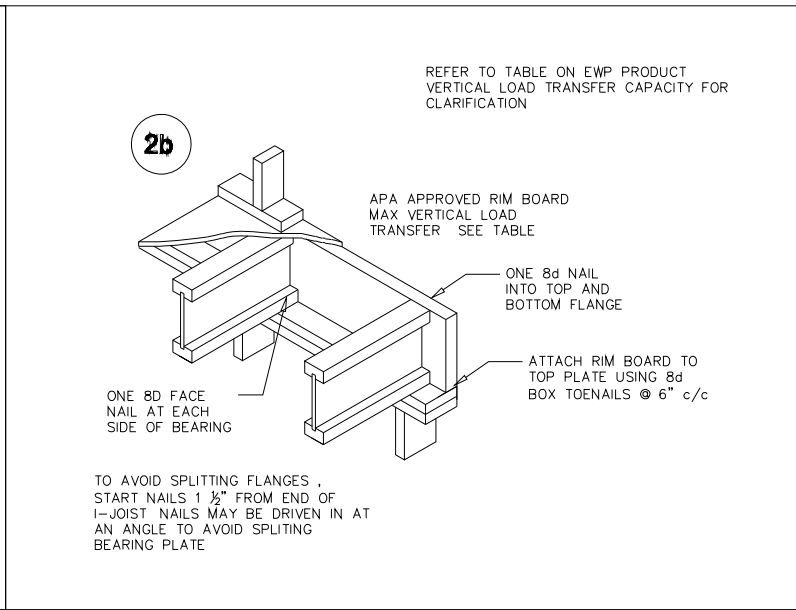
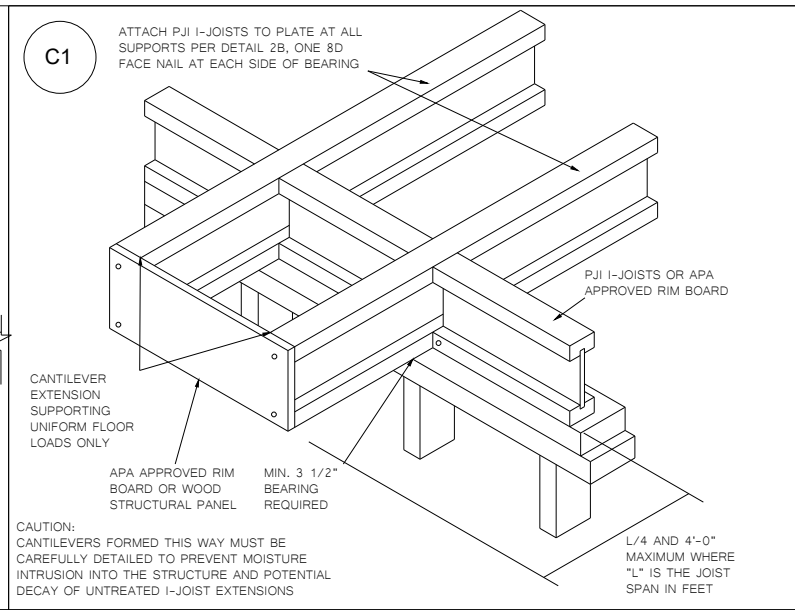
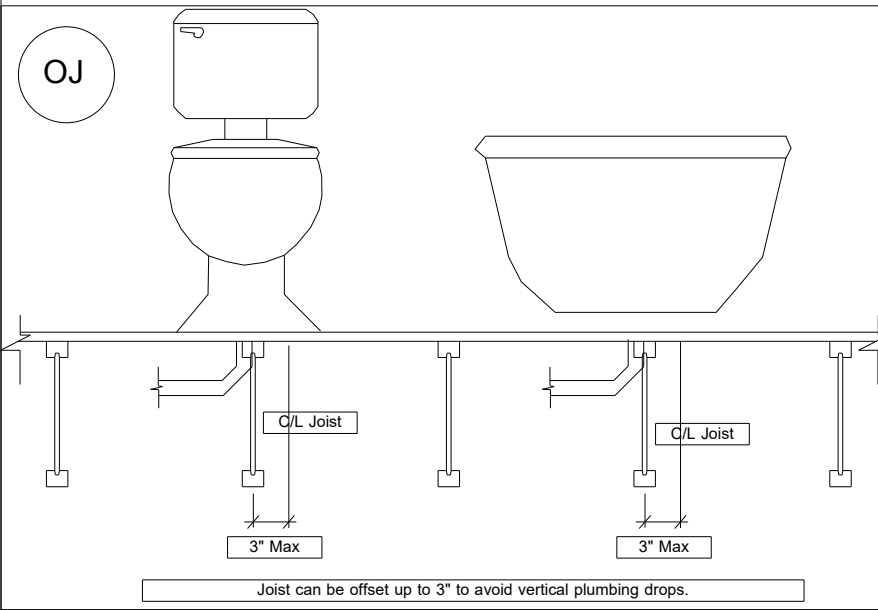
Products				
PlotID	Length	Product	Plies	Net Qty
J42	42' 0"	11 7/8" PJI-40	1	7
J38	38' 0"	11 7/8" PJI-40	1	13
J34	34' 0"	11 7/8" PJI-40	1	5
J30	30' 0"	11 7/8" PJI-40	1	1
J28	28' 0"	11 7/8" PJI-40	1	10
J16	16' 0"	11 7/8" PJI-40	1	3
J14	14' 0"	11 7/8" PJI-40	1	5
J10	10' 0"	11 7/8" PJI-40	1	2
DB2-2	10' 0"	2.1 RigidLam SP LVL 1-3/4 x 9-1/4	2	2
FB4	4' 0"	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	1	1
DB3-2	22' 0"	2.1 RigidLam SP LVL 1-3/4 x 14	2	2
RIM1	12' 0"	1 1/8" x 11 7/8" APA Rim Board	1	18
BP1	2' 0"	11 7/8" PJI-40	1	8
P1	10' 0"	3.5x5.5 AFP Combination 50 Power Col.	1	1
P2	10' 0"	3.5x5.5 AFP Combination 50 Power Col.	1	1
P3	10' 0"	5.5x5.5 AFP Combination 50 Power Col.	1	2

Connector Summary					
PlotID	Qty	Manuf	Product	Backer Blocks	Web Stiff
H1	1	Simpson	ITS2.56/11.88	No	No

BLOCK SOLID UNDER ALL
POST/POINT LOADS FROM ABOVE -
TYPICAL AT ALL LOCATIONS

1ST FLOOR LAYOUT

DRAWING SCALE : 1/4" = 1'-0"



LABEL LEGEND	
BBO	= Beam by Others
PBO	= Post by Others
GBO	= Girder by Others
J	= I-Joist
FB	= Flush Beam
DB	= Dropped Beam
RB	= Roof Beam
BP	= Blocking Panels
SB	= Squash Blocks

** PLUMBING DROPS NOTED ARE IN APPROXIMATE LOCATIONS PER PLAN. BUILDER MUST VERIFY LOCATIONS BEFORE SETTING JOISTS.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

** REFER TO INSTALLATION GUIDE FOR PLY TO PLY CONNECTIONS.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH. ** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS. ** DAMAGED FLOOR JOISTS SHOULD NOT BE INSTALLED UNLESS APPROVED BY COMPONENT PLANT.

Revisions	
5/6/24	CDH
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

This is an I-Joist Placement Plan Only. All designs of I-Joists follow the IBC/IRC Code Requirements along with Manufacturer's guidelines. This is NOT an engineered placement plan. This placement plan is created from plans provided by the customer using Manufacturer's guidelines. It is the responsibility of the EOR, or builder to review and approve all bearing conditions, connections, spans, loading, product usage and quantities. Do not notch or drill holes in beams or flanges on joists without prior approval from the manufacturing Representative unless following hole guidelines in the installation guide of product. Builder takes full responsibility for doing so and NO Back charge will be accepted.



MITCHELL HOMES
WINCHESTER MODEL
SPENCER

Scale: 1/4" = 1'-0"
Date: 3/4/2025
Designer: CDH
Project #: 25020278
Sheet Number:
1 / 1



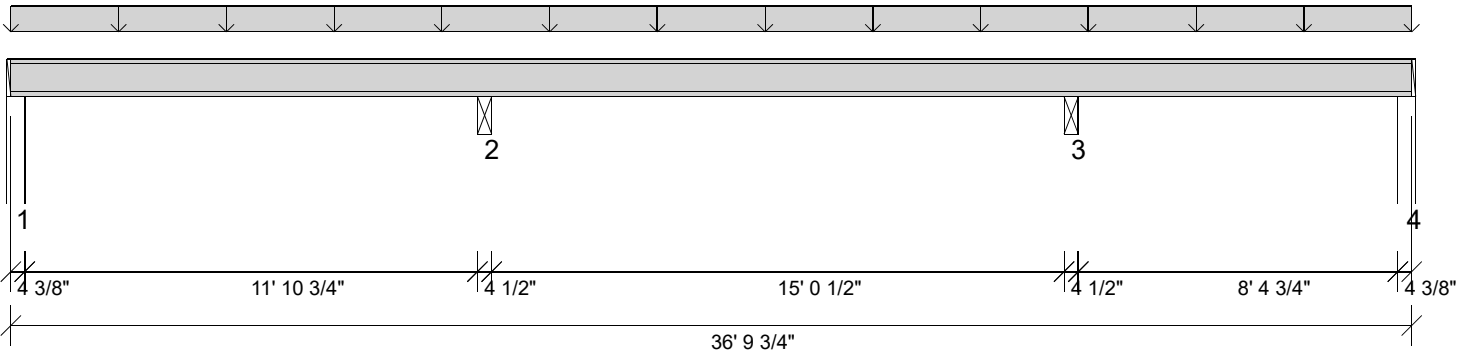
Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: J38 - i331
Type: FloorJoist

1 Ply Member
11 7/8" PJI-40

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26 Report Version: 2023.09.18 03/04/2025 07:53



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Live Load: 40.0 psf
System Dead Load: 10.0 psf
System Spacing: 19.2" c.c
LL Deflection Limit: L/480, 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'- 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 565 psi Beam @ 12'- 5 3/8"
- 565 psi Beam @ 27'- 10 3/8"
- 425 psi Wall @ 36'- 6 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	20'- 15/16"	D + L	1.00	1209 lb ft	3545 lb ft	Passed - 34%
Max Neg. Moment:	12'- 5 3/8"	D + L	1.00	1691 lb ft	3545 lb ft	Passed - 48%
Max Shear:	12'- 7 11/16"	D + L	1.00	644 lb	1620 lb	Passed - 40%
Live Load (LL) Pos. Defl.:	20'- 5/8"	L		0.102"	L/480	Passed - L/999
Live Load (LL) Neg. Defl.:	7'- 3 11/16"	L		0.031"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	20'- 1 1/4"	D + L		0.118"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	31'- 4 1/4"	D + L		0.020"	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 3/8"	D + L	1.00	449 lb		1430 lb	4648 lb	Passed - 31%
2	4 1/2"	D + L	1.00	1259 lb		3000 lb	6356 lb	Passed - 42%
3	4 1/2"	D + L	1.00	1157 lb		3000 lb	6356 lb	Passed - 39%
4	4 3/8"	D + L	1.00	342 lb		1430 lb	4649 lb	Passed - 24%
4	4 3/8"	D + L	1.00		-65 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	36'- 9 3/4"	FC1 Floor Decking (Plan View Fill)	Top	16 lb/ft	64 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 3/8"	W12(i13)	77 lb	372/-65 lb	-	-	-
2	12'- 3 1/8"	12'- 7 5/8"	BBO2(i18)	252 lb	1033 lb	-	-	-
3	27'- 8 1/8"	28'- 5/8"	BBO1(i17)	217 lb	940 lb	-	-	-
4	36'- 5 3/8"	36'- 9 3/4"	W24(i327)	46 lb	295/-111 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
- Bearing length at support 1, 4 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: J34 - i347
Type: FloorJoist

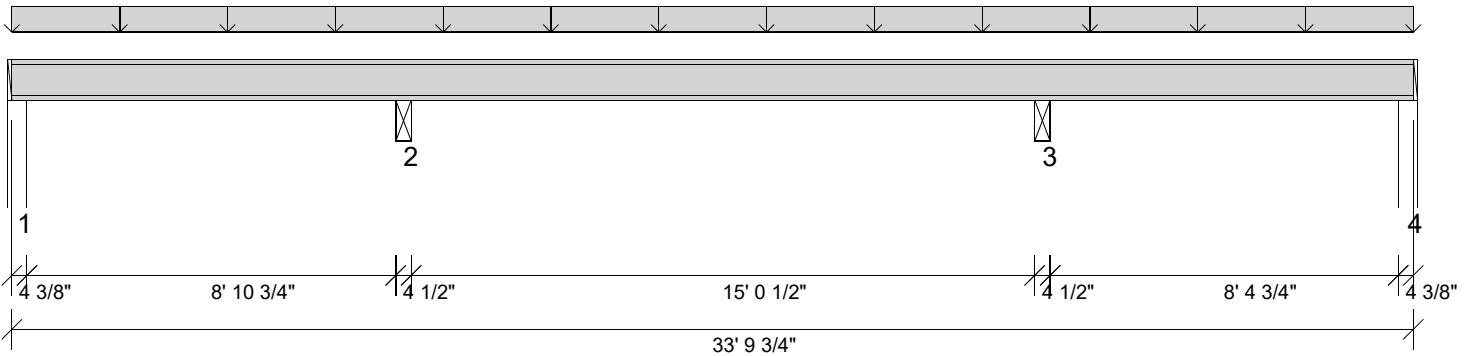
1 Ply Member
11 7/8" PJI-40

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18 03/04/2025 07:53



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Live Load: 40.0 psf
System Dead Load: 10.0 psf
System Spacing: 19.2" c.c
LL Deflection Limit: L/480, 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'- 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 565 psi Beam @ 9'- 5 3/8"
- 565 psi Beam @ 24'- 10 3/8"
- 425 psi Wall @ 33'- 6 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	17'- 1 11/16"	D + L	1.00	1189 lb ft	3545 lb ft	Passed - 34%
Max Neg. Moment:	9'- 5 3/8"	D + L	1.00	1455 lb ft	3545 lb ft	Passed - 41%
Max Shear:	9'- 7 11/16"	D + L	1.00	624 lb	1620 lb	Passed - 38%
Live Load (LL) Pos. Defl.:	17'- 1 11/16"	L		0.097"	L/480	Passed - L/999
Live Load (LL) Neg. Defl.:	5'- 6 7/8"	L		0.020"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	17'- 1 3/4"	D + L		0.116"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	5'- 9 9/16"	D + L		0.020"	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 3/8"	D + L	1.00	345 lb		1430 lb	4648 lb	Passed - 24%
1	4 3/8"	D + L	1.00		-49 lb	-	-	
2	4 1/2"	D + L	1.00	1135 lb		3000 lb	6357 lb	Passed - 38%
3	4 1/2"	D + L	1.00	1150 lb		3000 lb	6356 lb	Passed - 38%
4	4 3/8"	D + L	1.00	329 lb		1430 lb	4649 lb	Passed - 23%
4	4 3/8"	D + L	1.00		-63 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	33'- 9 3/4"	FC1 Floor Decking (Plan View Fill)	Top	16 lb/ft	64 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 3/8"	W10(i7)	49 lb	296/-98 lb	-	-	-
2	9'- 3 1/8"	9'- 7 5/8"	BBO2(i18)	227 lb	937 lb	-	-	-
3	24'- 8 1/8"	25'- 5/8"	BBO1(i17)	223 lb	927 lb	-	-	-
4	33'- 5 3/8"	33'- 9 3/4"	W24(i327)	44 lb	284/-107 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
- Bearing length at support 1, 4 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



Customer: **MITCHELL HOMES**
Job Name: **WINCHESTER**
Address:
City/ State:

Job Name: **WINCHESTER**
Level: **1ST FLOOR**
Label: **J42 - i409**
Type: **FloorJoist**

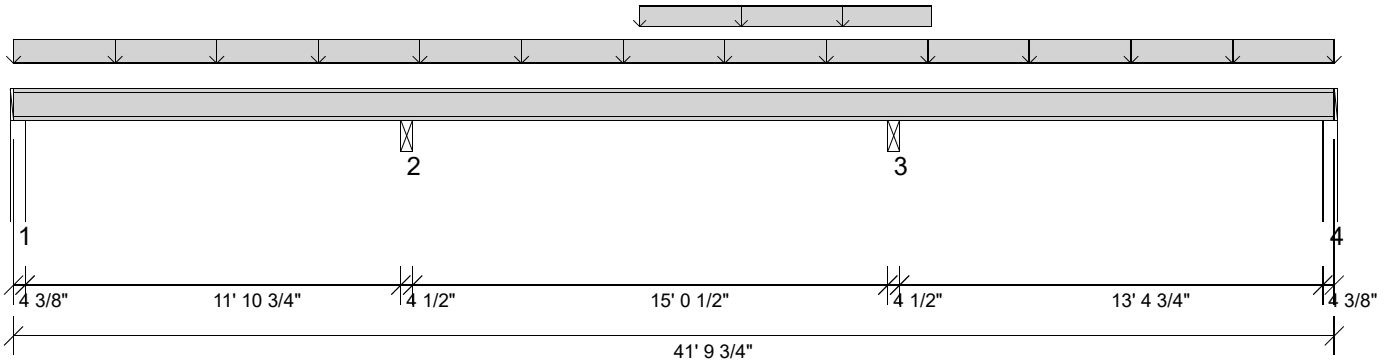
1 Ply Member
11 7/8" PJI-40

Status:
Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18 03/04/2025 07:53



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Live Load: 40.0 psf
System Dead Load: 10.0 psf
System Spacing: 19.2" c.c
LL Deflection Limit: L/480, 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'- 1/2"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 565 psi Beam @ 12'- 5 3/8"
- 565 psi Beam @ 27'- 10 3/8"
- 425 psi Wall @ 41'- 6 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	20'- 7 3/8"	D + L	1.00	1547 lb ft	3545 lb ft	Passed - 44%
Max Neg. Moment:	27'- 10 3/8"	D + L	1.00	2153 lb ft	3545 lb ft	Passed - 61%
Max Shear:	27'- 8 1/16"	D + L	1.00	853 lb	1620 lb	Passed - 53%
Live Load (LL) Pos. Defl.:	34'- 11 13/16"	L		0.111"	L/480	Passed - L/999
Live Load (LL) Neg. Defl.:	20'- 6"	L		0.059"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	20'- 3 7/8"	D + L		0.152"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	32'- 9 7/8"	D + L		0.039"	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 3/8"	D + L	1.00	449 lb		1430 lb	4648 lb	Passed - 31%
1	4 3/8"	D + L	1.00		-5 lb	-	-	
2	4 1/2"	D + L	1.00	1286 lb		3000 lb	6356 lb	Passed - 43%
3	4 1/2"	D + L	1.00	1615 lb		3000 lb	6356 lb	Passed - 54%
4	4 3/8"	D + L	1.00	490 lb		1430 lb	4648 lb	Passed - 34%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	41'- 9 3/4"	FC1 Floor Decking (Plan View Fill)	Top	16 lb/ft	64 lb/ft	-	-	-
Uniform	19'- 9 7/8"	29'- 7/8"	FC1 Floor Decking (Plan View Fill)	Top	32 lb/ft	-	-	-	-

UNFACTORED REACTIONS

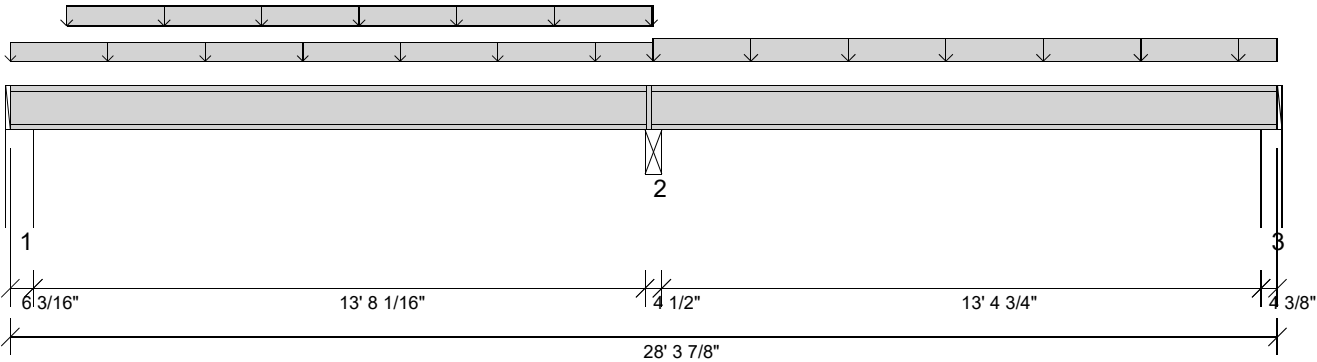
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W8(i2)	64 lb	385/-69 lb	-	-	-
2	12'- 3 1/8"	12'- 7 5/8"	BBO2(i18)	318 lb	1048 lb	-	-	-
3	27'- 8 1/8"	28'- 5/8"	BBO1(i17)	513 lb	1102 lb	-	-	-
4	41'- 5 3/8"	41'- 9 3/4"	W4(i4)	72 lb	417/-57 lb	-	-	-

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
- Beam Stability Factor used in the calculation for Allowable Max Neg Moment (CL) = 1.00
- Bearing length at support 1, 4 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.

	Customer: MITCHELL HOMES Job Name: WINCHESTER Address: City/ State:	Job Name: WINCHESTER Level: 1ST FLOOR Label: J30 - i411 Type: FloorJoist	1 Ply Member 11 7/8" PJI-40	Status: Design Passed
---	--	---	--	-------------------------------------

Illustration Not to Scale. Pitch: 0/12
 Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26
 Report Version: 2023.09.18
 03/04/2025 07:54



DESIGN INFORMATION a	
Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction)
	Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	19.2" c.c
LL Deflection Limit:	L/480, 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'- 1 1/4" Bottom: 13'- 8 1/16"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 5 3/16"
- 565 psi Beam @ 14'- 4 1/2"
- 425 psi Wall @ 28'- 1/2"

ANALYSIS RESULTS							
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
Max Pos. Moment:	22'- 1 5/8"	D + L	1.00	1389 lb ft	3545 lb ft	Passed - 39%	
Max Neg. Moment:	14'- 4 1/2"	D + L	1.00	1413 lb ft	3545 lb ft	Passed - 40%	
Max Shear:	14'- 6 13/16"	D + L	1.00	636 lb	1620 lb	Passed - 39%	
Live Load (LL) Pos. Defl.:	21'- 6 15/16"	L		0.102"	L/480	Passed - L/999	
Live Load (LL) Neg. Defl.:	8'- 5 13/16"	L		0.038"	L/480	Passed - L/999	
Total Load (TL) Pos. Defl.:	21'- 7 9/16"	D + L		0.123"	L/240	Passed - L/999	
Total Load (TL) Neg. Defl.:	8'- 11 11/16"	D + L		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	6 3/16"	D + L	1.00	217 lb		1430 lb	6574 lb	Passed - 15%
1	6 3/16"	D + L	1.00		-20 lb	-	-	
2	4 1/2"	D + L	1.00	1031 lb		3000 lb	6356 lb	Passed - 34%
3	4 3/8"	D + L	1.00	502 lb		1430 lb	4648 lb	Passed - 35%

LOADING										
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)	
Uniform	0'	14'- 4 1/2"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	4 lb/ft	-	-	-	
Uniform	1'- 3 1/8"	14'- 4 1/2"	FC1 Floor Decking (Plan View Fill)	Top	7 lb/ft	28 lb/ft	-	-	-	
Uniform	14'- 4 1/2"	28'- 3 7/8"	FC1 Floor Decking (Plan View Fill)	Top	16 lb/ft	64 lb/ft	-	-	-	

UNFACTORED REACTIONS										
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)		
1	0'	0'- 6 3/16"	W18(i20)	33 lb	185/-53 lb	-	-	-		
2	14'- 2 1/4"	14'- 6 3/4"	BBO1(i17)	208 lb	823 lb	-	-	-		
3	27'- 11 1/2"	28'- 3 7/8"	W4(i4)	95 lb	407/-29 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
- Bearing length at support 1, 3 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.

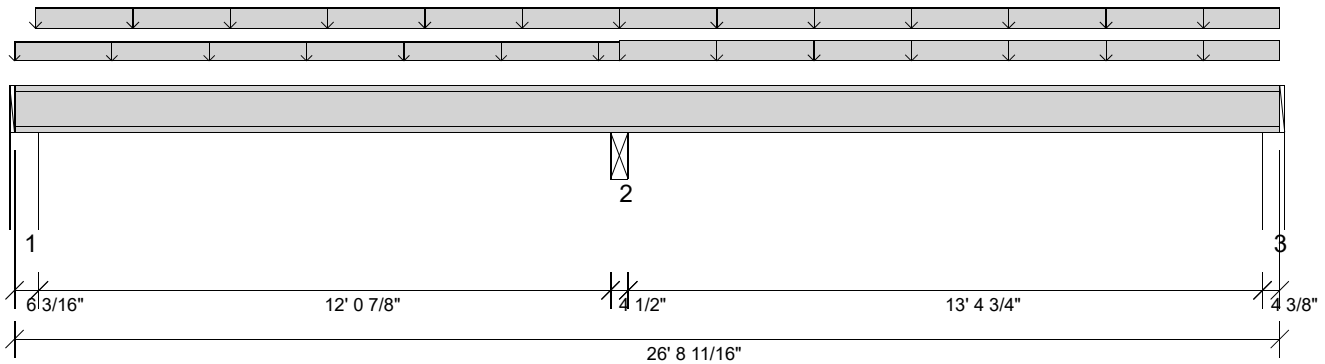
Customer: MITCHELL HOMES	Job Name: WINCHESTER	1 Ply Member 11 7/8" PJI-40	Status:
Job Name: WINCHESTER	Level: 1ST FLOOR		Design Passed
Address:	Label: J28 - i321		
City/ State:	Type: FloorJoist		

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18

03/04/2025 07:54



DESIGN INFORMATION a

Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Live Load:	40.0 psf
System Dead Load:	10.0 psf
System Spacing:	19.2" c.c
LL Deflection Limit:	L/480, 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'- 1 1/4" Bottom: 13'- 4 3/4"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 5 3/16"
- 565 psi Beam @ 12'- 9 5/16"
- 425 psi Wall @ 26'- 5 5/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	20'- 6 7/8"	D + L	1.00	1372 lb ft	3545 lb ft	Passed - 39%
Max Neg. Moment:	12'- 9 5/16"	D + L	1.00	1388 lb ft	3545 lb ft	Passed - 39%
Max Shear:	12'- 11 5/8"	D + L	1.00	632 lb	1620 lb	Passed - 39%
Live Load (LL) Pos. Defl.:	20'- 1/8"	L		0.100"	L/480	Passed - L/999
Live Load (LL) Neg. Defl.:	7'- 6 11/16"	L		0.032"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	20'- 11/16"	D + L		0.120"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	7'- 10 15/16"	D + L		0.032"	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	6 3/16"	D + L	1.00	234 lb		1430 lb	6574 lb	Passed - 16%
1	6 3/16"	D + L	1.00		-30 lb	-	-	
2	4 1/2"	D + L	1.00	1039 lb		3000 lb	6356 lb	Passed - 35%
3	4 3/8"	D + L	1.00	499 lb		1430 lb	4648 lb	Passed - 35%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	12'- 9 5/16"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	4 lb/ft	-	-	-
Uniform	0'- 5 5/16"	26'- 8 11/16"	FC1 Floor Decking (Plan View Fill)	Top	8 lb/ft	32 lb/ft	-	-	-
Uniform	12'- 9 5/16"	26'- 8 11/16"	FC1 Floor Decking (Plan View Fill)	Top	8 lb/ft	32 lb/ft	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 3/16"	W18(i20)	34 lb	201/-64 lb	-	-	-
2	12'- 7 1/16"	12'- 11 9/16"	BBO1(i17)	208 lb	831 lb	-	-	-
3	26'- 4 5/16"	26'- 8 11/16"	W4(i4)	95 lb	404/-24 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
- Bearing length at support 1, 3 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: J28 - i382
Type: FloorJoist

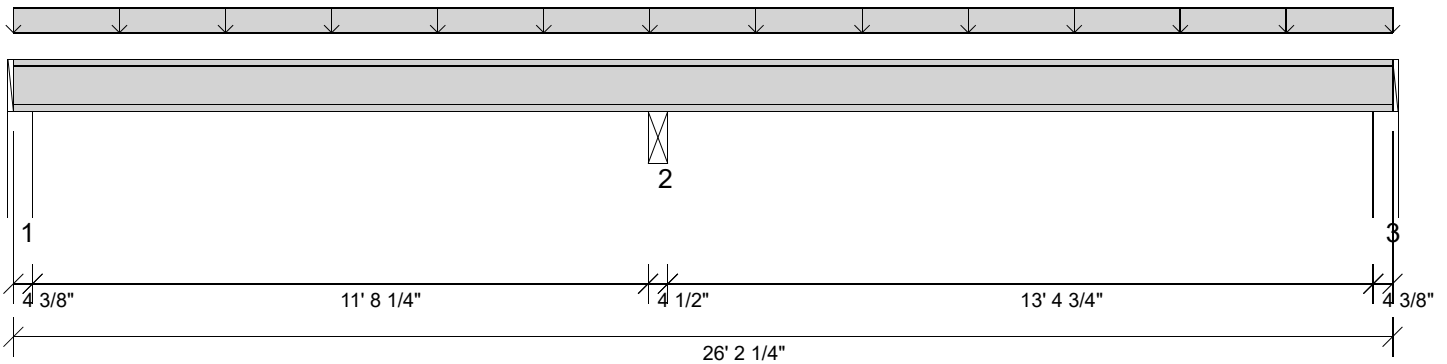
1 Ply Member
11 7/8" PJI-40

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18 03/04/2025 07:54



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Live Load: 40.0 psf
System Dead Load: 10.0 psf
System Spacing: 19.2" c.c
LL Deflection Limit: L/480, 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: 13'- 4 3/4"

Bearing Stress of Support Material:

- 425 psi Wall @ 0'- 3 3/8"
- 565 psi Beam @ 12'- 2 7/8"
- 425 psi Wall @ 25'- 10 7/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	20'- 1 3/16"	D + L	1.00	1343 lb ft	3545 lb ft	Passed - 38%
Max Neg. Moment:	12'- 2 7/8"	D + L	1.00	1661 lb ft	3545 lb ft	Passed - 47%
Max Shear:	12'- 5 3/16"	D + L	1.00	652 lb	1620 lb	Passed - 40%
Live Load (LL) Pos. Defl.:	19'- 5 3/4"	L		0.099"	L/480	Passed - L/999
Live Load (LL) Neg. Defl.:	7'- 2 1/4"	L		0.030"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	19'- 6 11/16"	D + L		0.117"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	7'- 9 7/8"	D + L		0.026"	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 3/8"	D + L	1.00	436 lb		1430 lb	4648 lb	Passed - 31%
2	4 1/2"	D + L	1.00	1285 lb		3000 lb	6356 lb	Passed - 43%
3	4 3/8"	D + L	1.00	495 lb		1430 lb	4648 lb	Passed - 35%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	26'- 2 1/4"	FC1 Floor Decking (Plan View Fill)	Top	16 lb/ft	64 lb/ft	-	-	-

UNFACTORED REACTIONS

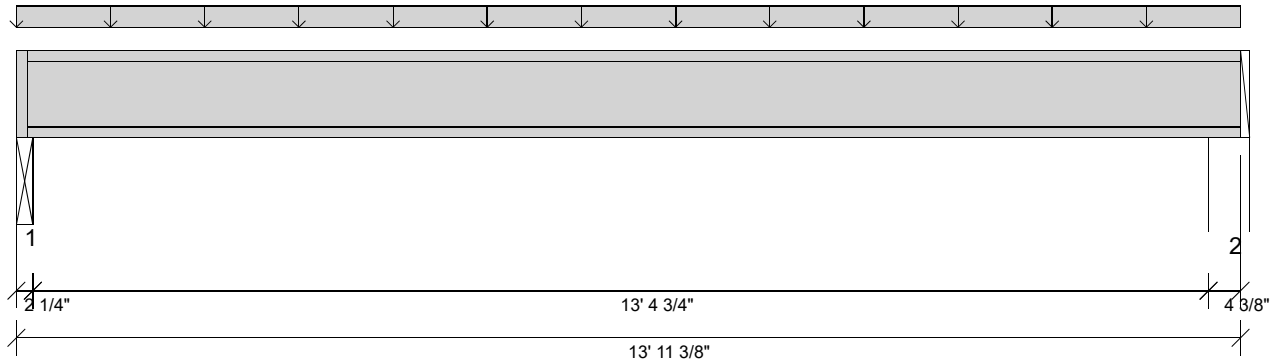
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 4 3/8"	W17(i21)	74 lb	362/-67 lb	-	-	-
2	12'- 5/8"	12'- 5 1/8"	BBO1(i17)	257 lb	1028 lb	-	-	-
3	25'- 9 7/8"	26'- 2 1/4"	W4(i4)	91 lb	403/-39 lb	-	-	-

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
- Bearing length at support 1, 3 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



03/04/2025 07:54



ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 10 9/16"	D + L	1.00	1607 lb ft	3545 lb ft	Passed - 45%
Max Shear:	13'- 6 15/16"	D + L	1.00	469 lb	1620 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	6'- 10 5/8"	L		0.122"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 10 5/8"	D + L		0.152"	L/240	Passed - L/999

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	2 1/4"	D + L	1.00	482 lb		1251 lb	3178 lb	Passed - 38%
2	4 3/8"	D + L	1.00	501 lb		1430 lb	4648 lb	Passed - 35%

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	13'- 11 3/8"	FC1 Floor Decking (Plan View Fill)	Top	14 lb/ft	56 lb/ft	-	-	-

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 2 1/4"	BBO1(i17)	96 lb	385 lb	-	-	-
2	13'- 7"	13'- 11 3/8"	W4(i4)	100 lb	401 lb	-	-	-

- 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
- Bearing length at support 2 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.

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: 13'- 4 3/4"

- 565 psi Beam @ 0'- 1 1/4"
- 425 psi Wall @ 13'- 8"



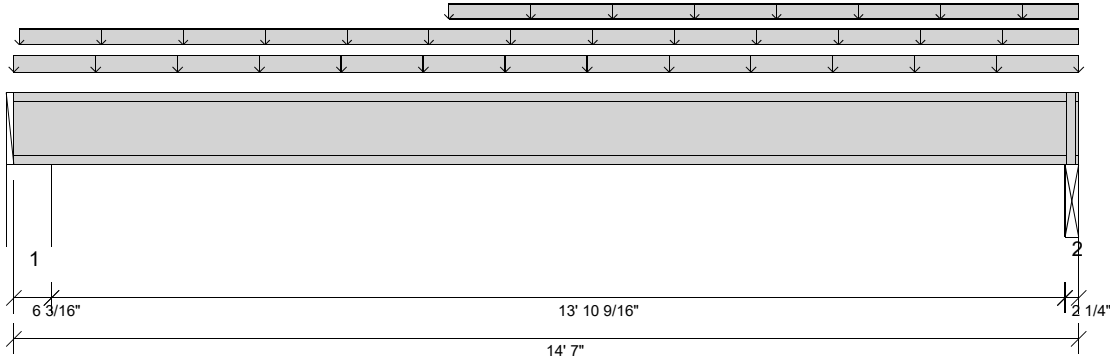
Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: J16 - i399
Type: FloorJoist

1 Ply Member
11 7/8" PJI-40

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26 Report Version: 2023.09.18 03/04/2025 07:54



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Live Load: 40.0 psf
System Dead Load: 10.0 psf
System Spacing: 19.2" c.c
LL Deflection Limit: L/480, 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'- 1 1/4" Bottom: 13'- 10 9/16"

Bearing Stress of Support Material:
• 425 psi Wall @ 0'- 5 3/16"
• 565 psi Beam @ 14'- 5 3/4"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	7'- 6"	D + L	1.00	1008 lb ft	3545 lb ft	Passed - 28%
Max Shear:	14'- 4 11/16"	D + L	1.00	285 lb	1620 lb	Passed - 18%
Live Load (LL) Pos. Defl.:	7'- 5 1/2"	L		0.079"	L/480	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 5 5/8"	D + L		0.101"	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	6 3/16"	D + L	1.00	306 lb		1430 lb	6574 lb	Passed - 21%
2	2 1/4"	D + L	1.00	293 lb		1251 lb	3178 lb	Passed - 23%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Uniform	0'	14'- 7"	FC1 Floor Decking (Plan View Fill)	Top	7 lb/ft	28 lb/ft	-	-	-
Uniform	0'- 15/16"	14'- 7"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	4 lb/ft	-	-	-
Uniform	5'- 11 1/2"	14'- 7"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	-	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6 3/16"	W18(i20)	64 lb	242 lb	-	-	-
2	14'- 4 3/4"	14'- 7"	BBO1(i17)	65 lb	228 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
- Bearing length at support 1 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



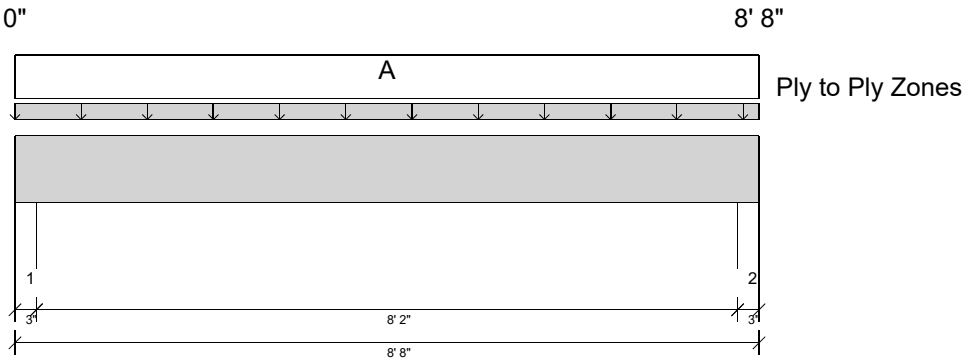
Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: DB2-2 - i278
Type: Beam

2 Ply Member
2.1 RigidLam SP LVL 1-3/4
x 9-1/4

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26 Report Version: 2023.09.18 03/04/2025 07:54



DESIGN INFORMATION a	
Building Code:	IRC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
System Spacing:	-
LL Deflection Limit:	L/480, 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: 8'- 8" Bottom: 8'- 8"	

- Bearing Stress of Support Material:**
- 725 psi Wall @ 0'- 2"
 - 725 psi Wall @ 8'- 6"

ANALYSIS RESULTS									
Design Criteria		Location	Load Combination	LDF	Design	Limit	Result		
Max Pos. Moment:		4'- 4"	D + S	1.15	941 lb ft	8766 lb ft	Passed - 11%		
Max Shear:		1'- 1/4"	D + S	1.15	360 lb	7198 lb	Passed - 5%		
Live Load (LL) Pos. Defl.:		4'- 4"	S		0.017"	L/480	Passed - L/999		
Total Load (TL) Pos. Defl.:		4'- 4"	D + S		0.027"	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"	D + S	1.15	470 lb		7875 lb	7613 lb	Passed - 6%	
2	3"	D + S	1.15	470 lb		7875 lb	7613 lb	Passed - 6%	
LOADING									
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	8'- 8"	Self Weight	Top	9 lb/ft	-	-	-	-
Uniform	-0'	8'- 8"	User Load	Top	40 lb/ft	-	60 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"	W21(i160)	211 lb	-	260 lb	-	-	
2	8'- 5"	8'- 8"	W22(i161)	210 lb	-	260 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) = 0.56
- PLY TO PLY CONNECTION**
- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 18. Row = 2, Spacing = 12"
12d (0.131"x3.25") nails properties: D = 0.131" , L = 3.25". Fastener capacity = 105 lbs. X1 = 2" , Y1 = 0.75" , Y2 = 1.5"
Install fasteners from one face.
X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.



Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

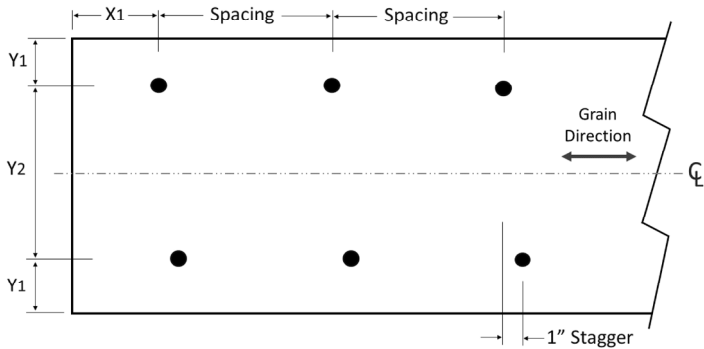
Job Name: WINCHESTER
Level: 1ST FLOOR
Label: DB2-2 - i278
Type: Beam

2 Ply Member
2.1 RigidLam SP LVL 1-3/4
x 9-1/4

Status:
Design
Passed

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)





Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: DB3-2 - i351
Type: Beam

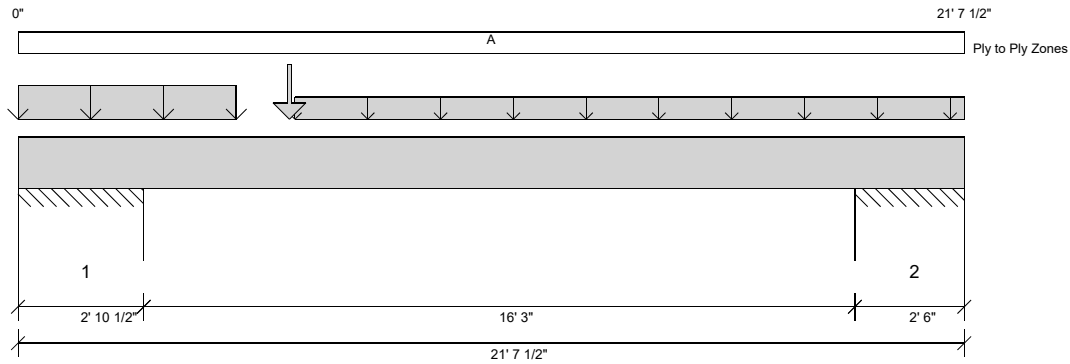
2 Ply Member
2.1 RigidLam SP LVL 1-3/4
x 14

Status:
Design
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version
8.7.3.303.Update13.26

Report Version: 2023.09.18 03/04/2025 07:54



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Spacing: -
LL Deflection Limit: L/450, 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: 16'- 3"

Bearing Stress of Support Material:

- 725 psi Wall @ 2'- 9"
- 725 psi Wall @ 19'- 3"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 2 7/16"	D + S	1.15	27245 lb ft	32936 lb ft	Passed - 83%
Max Neg. Moment:	2'- 9"	D + S	1.15	1958 lb ft	7248 lb ft	Passed - 27%
Max Shear:	4'- 1/2"	D + S	1.15	8562 lb	10894 lb	Passed - 79%
Live Load (LL) Pos. Defl.:	10'- 1 1/4"	S		0.407"	L/450	Passed - L/479
Total Load (TL) Pos. Defl.:	10'- 2 9/16"	D + S		0.713"	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	1 1/2"	D	0.90		-82 lb	-	-	
1	1' 9"	D + S	1.15	10507 lb		55125 lb	53288 lb	Passed - 20%
2	1' 9"	D + S	1.15	3970 lb		55125 lb	53288 lb	Passed - 7%
2	1 1/2"	D	0.90		-105 lb	-	-	

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	21'- 7 1/2"	Self Weight	Top	13 lb/ft	-	-	-	-
Uniform	0'	5'	User Load	Top	179 lb/ft	-	269 lb/ft	-	-
Uniform	6'- 3 15/16"	21'- 7 1/2"	User Load	Top	120 lb/ft	-	60 lb/ft	-	-
Point	6'- 2 7/16"	6'- 2 7/16"	User Load	Top	3607 lb	-	5410 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	2'- 10 1/2"	-	4462 lb	-	5895 lb	-	-
++>	0'	2'- 5"	W15(i15)	-	-	-	-	-
++>	2'- 9"	2'- 9"	P2(i354)	4462 lb	-	5895 lb	-	-
2	19'- 1 1/2"	21'- 7 1/2"	W23(i285)	2155 lb	-	1778 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.
- Design of member is based on a released bearing condition at Support. Ensure that the member is allowed to deflect upward at these supports.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00
- 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

- Zone A: Factored load = 0 plf. Use 12d (0.131"x3.25") nails. LDF = 1.00. Qty = 66. Row = 3, Spacing = 12"
12d (0.131"x3.25") nails properties: D = 0.131" , L = 3.25". Fastener capacity = 105 lbs. X1 = 2" , Y1 = 0.75" , Y2 = 1.5"
Install fasteners from one face.
X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.



Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

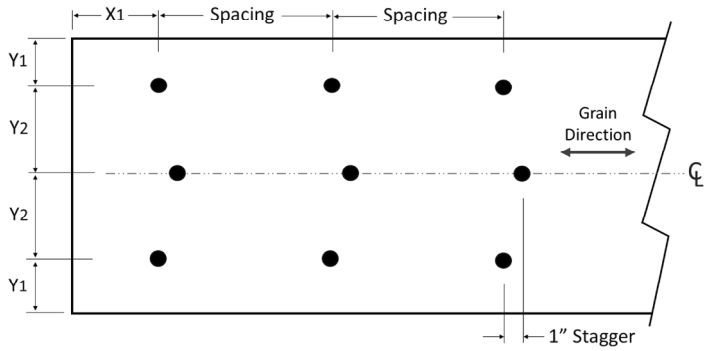
Job Name: WINCHESTER
Level: 1ST FLOOR
Label: DB3-2 - i351
Type: Beam

2 Ply Member
2.1 RigidLam SP LVL 1-3/4
x 14

Status:
Design
Passed

PLY TO PLY CONNECTION

FASTENER INSTALLATION – 3 ROWS (FROM ONE FACE)





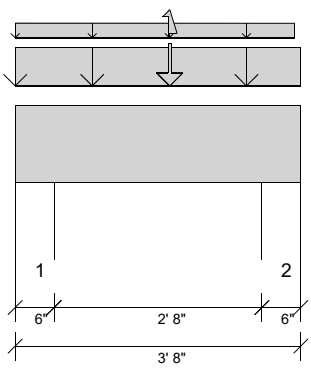
Customer: MITCHELL HOMES
Job Name: WINCHESTER
Address:
City/ State:

Job Name: WINCHESTER
Level: 1ST FLOOR
Label: FB4 - i355
Type: Beam

1 Ply Member
2.1 RigidLam SP 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 8.7.3.303.Update13.26 Report Version: 2023.09.18 03/04/2025 07:54



DESIGN INFORMATION a

Building Code: IRC 2018
Design Methodology: ASD
Risk Category: II (General Construction)
Residential
Service Condition: Dry
System Spacing: -
LL Deflection Limit: L/480, 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'- 4 11/16"

Bearing Stress of Support Material:
• 425 psi Wall @ 0'- 5"
• 425 psi Wall @ 3'- 3"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	1'- 11 7/16"	D + 0.75(L + S)	1.15	1038 lb ft	12245 lb ft	Passed - 8%
Max Neg. Moment:	0'- 5"	D + S	1.15	95 lb ft	11903 lb ft	Passed - 1%
Max Shear:	2'- 2 1/8"	D + 0.75(L + S)	1.15	468 lb	4620 lb	Passed - 10%

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	6"	D + S	1.15	2033 lb		7875 lb	4462 lb	Passed - 46%
2	6"	D + S	1.15	2037 lb		7876 lb	4463 lb	Passed - 46%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	3'- 8"	Self Weight	Top	5 lb/ft	-	-	-	-
Uniform	0'	3'- 8"	User Load	Top	485 lb/ft	-	607 lb/ft	-	-
Tapered	0'	3'- 7"	FC1 Floor Decking (Plan View Fill)	Top	-	5 To 1 lb/ft	-	-	-
Point	1'- 11 13/16"	1'- 11 13/16"	J38(i337)	Front	43 lb	284/-110 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 6"	W24(i327)	920 lb	133/-49 lb	1113 lb	-	-
2	3'- 2"	3'- 8"	W20(i22)	924 lb	160/-61 lb	1113 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



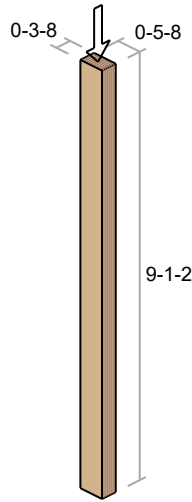
Client: MITCHELL HOMES
Project:
Address:

Date: 3/4/2025
Input by: CDH
Job Name: WINCHESTER MODEL
Project #:

Page 1 of 3

P1 Anthony Power Column 3.500" X 5.500" - PASSED

Level: Level



Design Method: ASD
Building Code: IRC 2018
Importance: Normal - II
Application: Column Free Standing
Service Condition: Dry
Load Sharing: No

Design OK.
Design Notes

1. Axial load eccentricity of 1/6 side dimension in both cross-section axes, each axis analyzed separately.
2. Designed in accordance with NDS 2018, ASCE7 and IRC 2018.
3. Top and bottom ends of the member must be supported to prevent lateral movement and rotation.
4. Holes and notches are not allowed in member.

Analysis

Design Properties

	Actual	Allowed	Capacity	Load Combination	E:	1900000	Fc:	2300
Slenderness	31.2	50.0	62%		Ey:	1900000	Fv:	0
Axial (lb.)	8478	14184	60%	D+S	Fb:	2100	Fvy:	0
Axial + Bending	0.80	1	80%	D+S	Fby:	2300		
Bearing SP (lb.)	8525	10876	78%	D+S				
LL Deflection	0.142 (in.) L/767	0.303 (in.) L/360	47%	S				

Applied Loads

ID	Load Type	Location	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
Axial								
1	Point	9-1-2	3391 lb	0 lb	5087 lb	0 lb	0 lb	

Manufacturer Info

Anthony Forest Products Co
309 North Washington
El Dorado, AR 71730
(800) 221-2326
www.anthonystore.com

KEMPSVILLE BUILDING
MATERIALS, VA

This design is valid until 9/3/2027



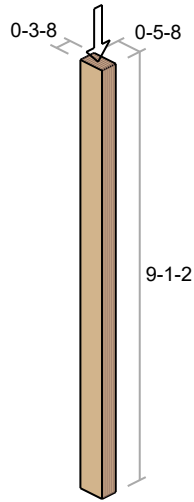
Client: MITCHELL HOMES
Project:
Address:

Date: 3/4/2025
Input by: CDH
Job Name: WINCHESTER MODEL
Project #:

Page 2 of 3

P2 Anthony Power Column 3.500" X 5.500" - PASSED

Level: Level



Design Method: ASD
Building Code: IRC 2018
Importance: Normal - II
Application: Column Free Standing
Service Condition: Dry
Load Sharing: No

Design OK.
Design Notes

1. No axial load eccentricity.
2. Designed in accordance with NDS 2018, ASCE7 and IRC 2018.
3. Top and bottom ends of the member must be supported to prevent lateral movement and rotation.
4. Holes and notches are not allowed in member.

Analysis

Design Properties

	Actual	Allowed	Capacity	Load Combination	E:	1900000	Fc:	2300
Slenderness	31.2	50.0	62%		Ey:	1900000	Fv:	0
Axial (lb.)	10357	14184	73%	D+S	Fb:	2100	Fvy:	0
Bearing SP (lb.)	10404	10876	96%	D+S	Fby:	2300		
LL Deflection	0.000 (in.) L/O	0.000 (in.) L/O	0%	??				

Applied Loads

ID	Load Type	Location	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
Axial								
1	Point	9-1-2	4462 lb	0 lb	5895 lb	0 lb	0 lb	

Manufacturer Info

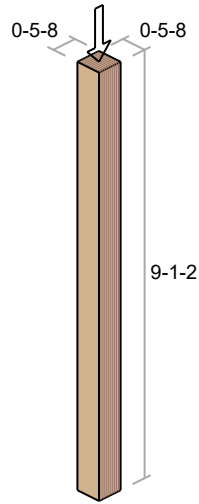
Anthony Forest Products Co
309 North Washington
El Dorado, AR 71730
(800) 221-2326
www.anthonyforest.com

KEMPSVILLE BUILDING
MATERIALS, VA

This design is valid until 9/3/2027

P3 Anthony Power Column 5.500" X 5.500" - PASSED

Level: Level



Design Method: ASD
Building Code: IRC 2018
Importance: Normal - II
Application: Column Free Standing
Service Condition: Dry
Load Sharing: No

Design OK.
Design Notes

1. Axial load eccentricity of 1/6 side dimension in both cross-section axes, each axis analyzed separately.
2. Designed in accordance with NDS 2018, ASCE7 and IRC 2018.
3. Top and bottom ends of the member must be supported to prevent lateral movement and rotation.
4. Holes and notches are not allowed in member.

Analysis

Design Properties

	Actual	Allowed	Capacity	Load Combination	E:	1900000	Fc:	2300
Slenderness	19.8	50.0	40%		Ey:	1900000	Fv:	0
Axial (lb.)	14038	49268	28%	D+S	Fb:	2100	Fvy:	0
Axial + Bending	0.35	1	35%	D+S	Fby:	2300		
Bearing SP (lb.)	14113	17091	83%	D+S				
LL Deflection	0.085 (in.) L/1277	0.303 (in.) L/360	28%	S				

Applied Loads

ID	Load Type	Location	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
Axial								
1	Point	9-1-2	5615 lb	0 lb	8423 lb	0 lb	0 lb	

Manufacturer Info

Anthony Forest Products Co
309 North Washington
El Dorado, AR 71730
(800) 221-2326
www.anthonystorm.com

KEMPSVILLE BUILDING
MATERIALS, VA

This design is valid until 9/3/2027