

Job site

Address: 1154 Clairmount Ave.  
Napoleon OH

Contractor: Homes by Josh Doyko

Work Type:  New

Replacement

**HEATING, VENTILATION & AIR CONDITIONING SYSTEM DESCRIPTIONS (select items as listed)**

1. Furnace location: Basement Garage Attic Other \_\_\_\_\_

2. Water heater location: Basement Garage Attic Other \_\_\_\_\_

3. Condensing unit location: Rear yard Side yard (left) (right)

4. Furnace / water-heater capacity: BTU's 60,000

5. Fuel type: Natural gas L.P. Electric

6. Furnace AFUE rating: 80% 90%+

7. Ductwork type: Sheet metal Duct board

8. Air conditioner capacity: 3 Ton

9. Air conditioning SEER rating: 11 12 13 14 15 16

10. Location of gas meter: Front yard Rear yard Side yard (left) (right)

11. Location of vent terminations for: (Dryer: front/rear/side yard/other) (left) (right)

(Furnace: front/rear/side yard/other) Power Vent

(Water heater: front/rear/side yard/other)

**PLUMBING SYSTEM DESCRIPTION**

Description		Description		Description	
Description	Count	Description	Count	Description	Count
Water closets	<u>3</u>	Dishwashers	<u>1</u>	Sewage grinders	—
Lavatory sinks	<u>3</u>	Garbage disposals	<u>1</u>	Bidets	—
Whirlpool tubs	—	Drinking fountains	—	Bar sinks	—
Hot tubs	—	Kitchen sinks	<u>1</u>	Hot water dispensers	—
Showers	<u>2</u>	Shampoo bowls	—	Water heaters	<u>1</u>
Floor drains	—	Oil/sand intercept.	—	Backflow devices	<u>1</u>
Laundry tubs	<u>1</u>	Floor sinks	—	Washers, automatic	<u>1</u>
Select size below for building main drain:					
3 inch	<u>4</u> inch	6 inch		Sump pumps	<u>1</u>

**ELECTRICAL SYSTEM DESCRIPTION (write in sizes required and select items listed below)**

Underground service	<input checked="" type="checkbox"/>	Single phase	<input checked="" type="checkbox"/>
Overhead service	<input type="checkbox"/>	Three phase	<input type="checkbox"/>
Service conductor size:	<u>4/0</u>	Number of 120 volt circuits:	<u>36</u>
Service conductor type:	<u>(aluminum)</u> (copper)	Number of 240 volt circuits:	<u>2</u>
Grounding electrode conductor size:	[#6] <u>(#4)</u> [#2] [1/0]	Service size:	<u>200AMP</u>
Grounding electrode conductor type:	(aluminum) (copper)	Service location:	<u>Basement/side yard</u>

Approved by \_\_\_\_\_

Date \_\_\_\_\_

# PLOT PLAN

OF LOT 71, GERKEN-HOEFFEL SIXTH ADDITION  
 PART OF THE SOUTHWEST 1/4, SECTION 14, TOWN 5 NORTH,  
 RANGE 6 EAST, NAPOLEON, TOWNSHIP, HENRY COUNTY OHIO

PREPARED FOR AND AT THE REQUEST OF  
 HOMES BY JOSH DOYLE

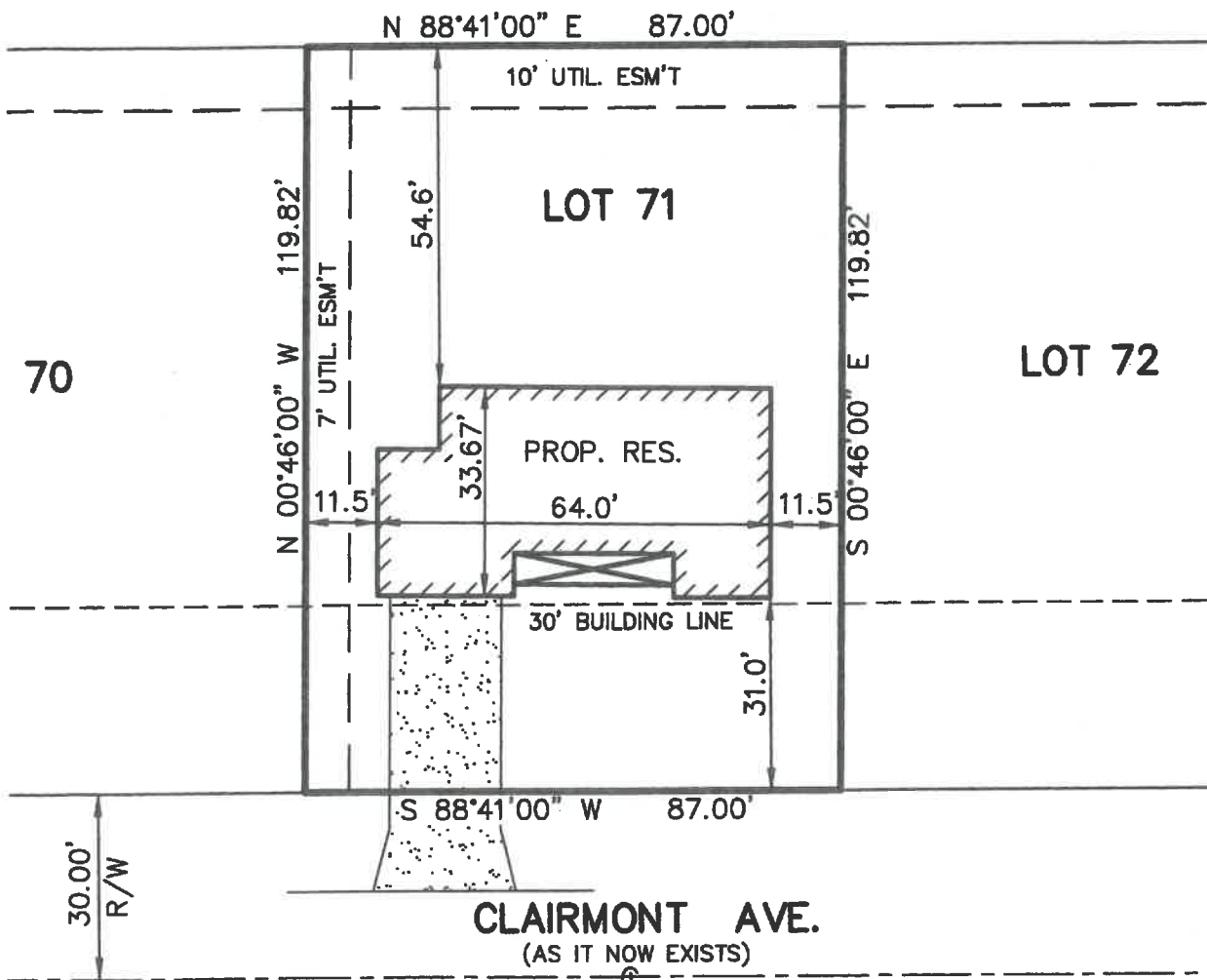


*1154 Clairmont*

## GRAPHIC SCALE



( IN FEET )  
 1 inch = 30' ft.

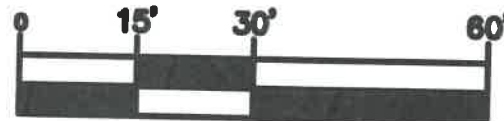


Duane E. Heck  
 Professional Surveyor No. 7432  
 DATE: 03/28/2017  
 PROJECT# 174S02880

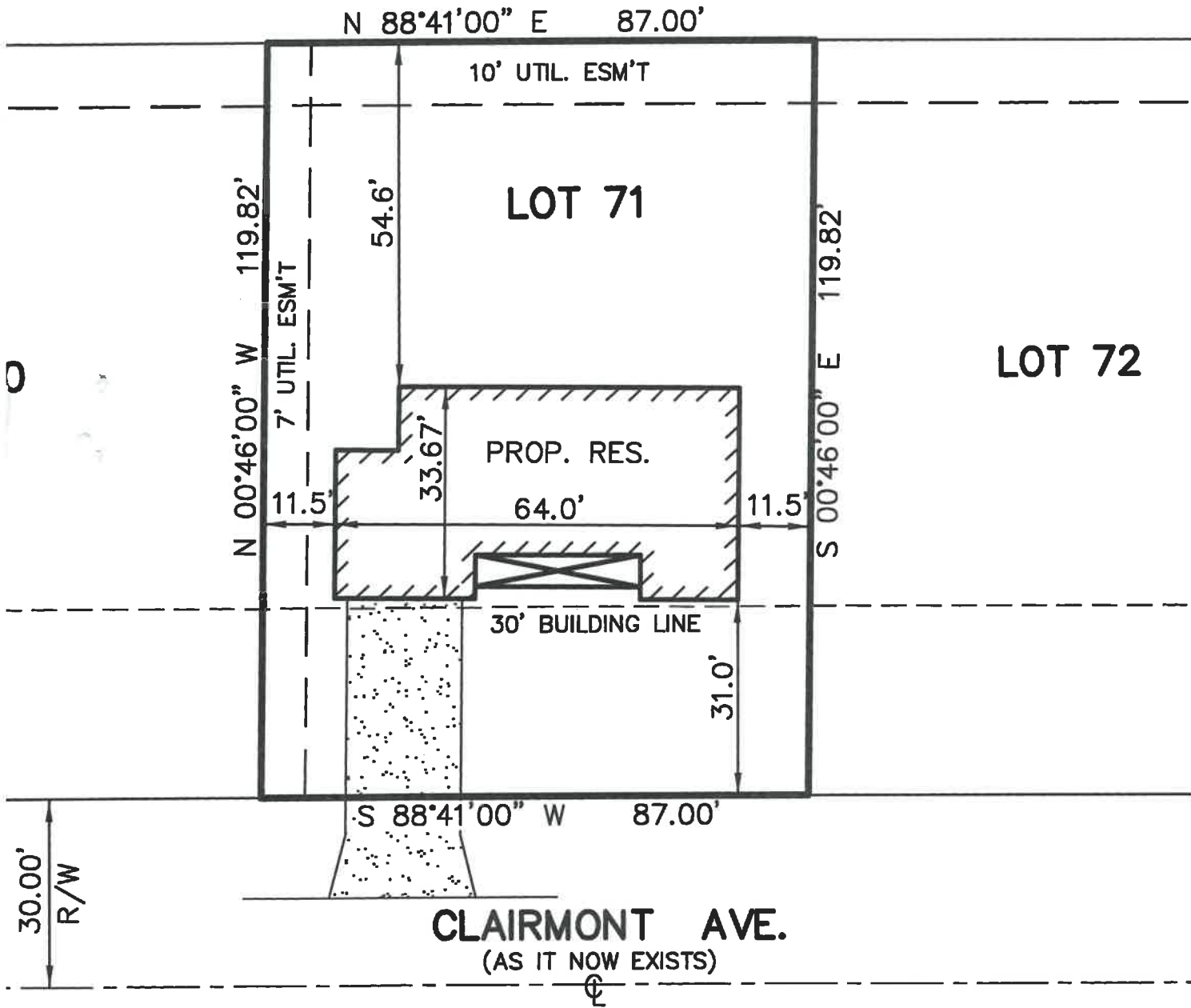
Date:

P.O. Box 2628  
 Whitehouse, OH 43571  
 Phone: (419) 877-0400  
 Fax: (419) 877-1140

# GRAPHIC SCALE



( IN FEET )  
1 inch = 30' ft.



Heck \_\_\_\_\_ Date: \_\_\_\_\_  
 Professional Surveyor No. 7432  
 1/28/2017  
 174S02880



P.O. Box 2628  
 Whitehouse, OH 43571  
 Phone: (419) 877-0400  
 Fax: (419) 877-1140



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**MiTek USA, Inc.**

16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

Re: 17040060  
HBJD- Harman

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Carter Components-Millbury, OH.

Pages or sheets covered by this seal: I29490338 thru I29490389

My license renewal date for the state of Ohio is December 31, 2017.



April 6, 2017

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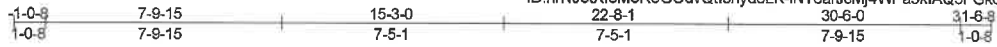
Galinski, John

**IMPORTANT NOTE:** Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job 17040060	Truss GE1	Truss Type Common Structural Gable	Qty 1	Ply 1	HBJD- Harman	I2949G338
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:24 2017 Page 1  
ID:hrNJOtXl8MoR5G0dvQit5hyd6LK-iNT6arJcMj4WPa5kIAQ5FGkd1NKdYIAanvunRBzTTjL



7x18 MT18HS II

Scale = 1:71.9

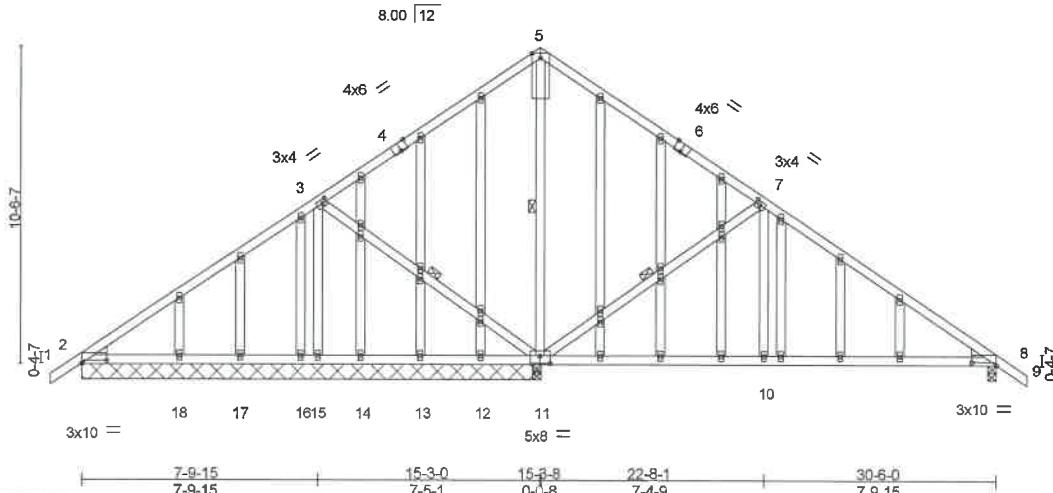


Plate Offsets (X, Y)--	[2:0-10-0-0-1-2], [3:0-1-12-0-1-8], [4:0-3-0 Edge], [6:0-3-0 Edge], [7:0-1-12-0-1-8], [8:0-10-0-0-1-2], [11:0-4-0-0-3-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.78	Vert(LL) 0.12	10-48	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.53	Vert(CT) -0.21	10-48	>856	180	MT18HS	197/144
BCLL 0.0	Rep Stress Incr YES	WB 0.29	Horz(CT) 0.01	8	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS					Weight: 196 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-8-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:  
10-0-0 oc bracing: 10-11,8-10.  
WEBS 1 Row at midpt 5-11, 7-11, 3-11

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 15-3-8 except (jt=length) 8=0-3-8.  
(lb) - Max Horz 2=284(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 12, 16, 17, 18 except 11=162(LC 13), 15=171(LC 12), 8=121(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 12, 13, 14, 16, 17, 18 except 2=314(LC 23), 11=1223(LC 1), 11=1223(LC 1), 15=396(LC 23), 8=681(LC 1), 2=294(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-253/153, 3-5=-122/265, 5-7=-50/255, 7-8=-701/138  
BOT CHORD 10-11=0/483, 8-10=0/483  
WEBS 5-11=-586/49, 7-11=-749/289, 7-10=0/343, 3-11=-279/203, 3-15=-407/191

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12, 16, 17, 18, 2 except (jt=lb) 11=162, 15=171, 8=121.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss GR1	Truss Type COMMON GIRDER	Qty 1	Ply 3	HBJD- Harman	I29490339
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Carter Components, Millbury, Ohio 43447  
 8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:25 2017 Page 1  
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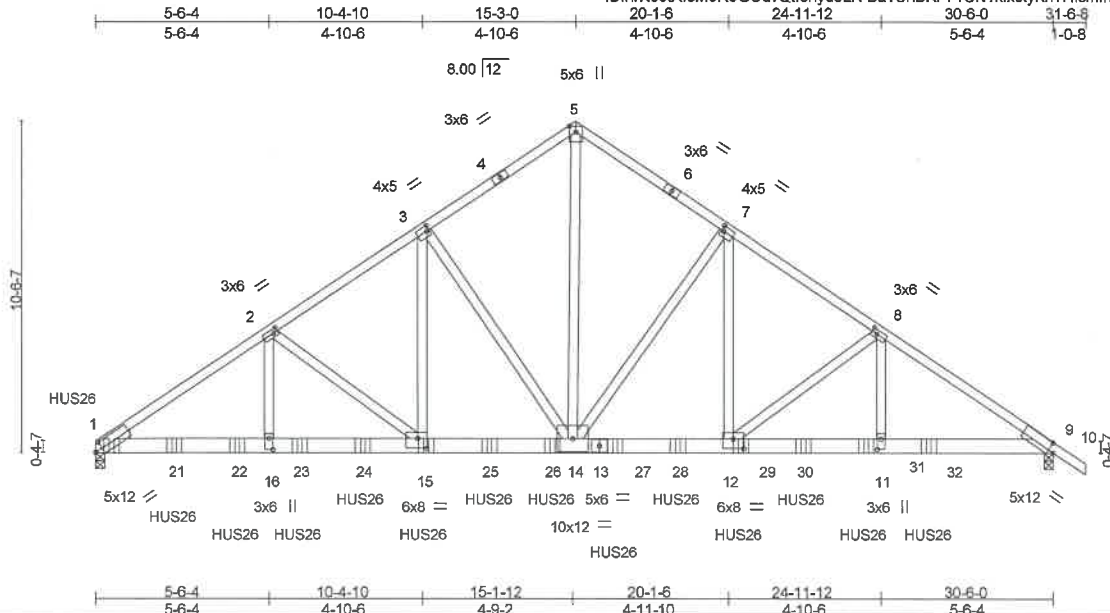


Plate Offsets (X,Y)-- [1:0-2-15,0-2-12], [2:0-1-12,0-1-8], [3:0-1-0,0-2-0], [5:0-2-4,0-2-8], [7:0-1-0,0-2-0], [8:0-2-0,0-1-8], [9:0-2-3,0-3-4], [11:0-4-0,0-1-8], [12:0-4-0,0-3-12], [15:0-3-8,0-3-12], [16:0-4-4,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.98	Vert(LL)	-0.20 12-14	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.59	Vert(CT)	-0.36 12-14	>999	180		
BCLL 0.0	Rep Stress Incr	NO	WB 0.80	Horz(CT)	0.09 9	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS					Weight: 541 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x6 SP 2400F 2.0E  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=10221/0-3-8, 9=8820/0-3-8  
 Max Horz 1=-278(LC 23)  
 Max Uplift 1=-1274(LC 8), 9=-1225(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-15365/1933, 2-3=-12121/1563, 3-5=-9292/1286, 5-7=-9170/1273, 7-8=-12092/1554, 8-9=-15051/1997  
 BOT CHORD 1-16=-1684/12756, 15-16=-1684/12756, 14-15=-1238/9999, 12-14=-1131/9981, 11-12=-1545/12474, 9-11=-1545/12474  
 WEBS 5-14=-1296/9779, 7-14=-4153/678, 7-12=-575/4652, 8-12=-3114/633, 8-11=-477/3158, 3-14=-4125/682, 3-15=-581/4637, 2-15=-3445/558, 2-16=-390/3475

- NOTES-**
- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-4-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=1274, 9=1225.
  - Use USP HUS26 (With 16d nails into Girder & 16d nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-6-0 from the left end to 26-6-0 to connect truss(es) to back face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard



Job 17040060	Truss GR1	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	HBJD- Harman  Job Reference (optional)	129490339
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:25 2017 Page 2  
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**LOAD CASE(S) Standard**

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-5=-70, 5-10=-70, 1-9=-20

Concentrated Loads (lb)

Vert: 15=-1126(B) 18=-1131(B) 21=-1126(B) 22=-1126(B) 23=-1126(B) 24=-1126(B) 25=-1126(B) 26=-1126(B) 27=-1126(B) 28=-1126(B) 29=-1126(B) 30=-1126(B) 31=-1126(B) 32=-1580(B)

**⚠ WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

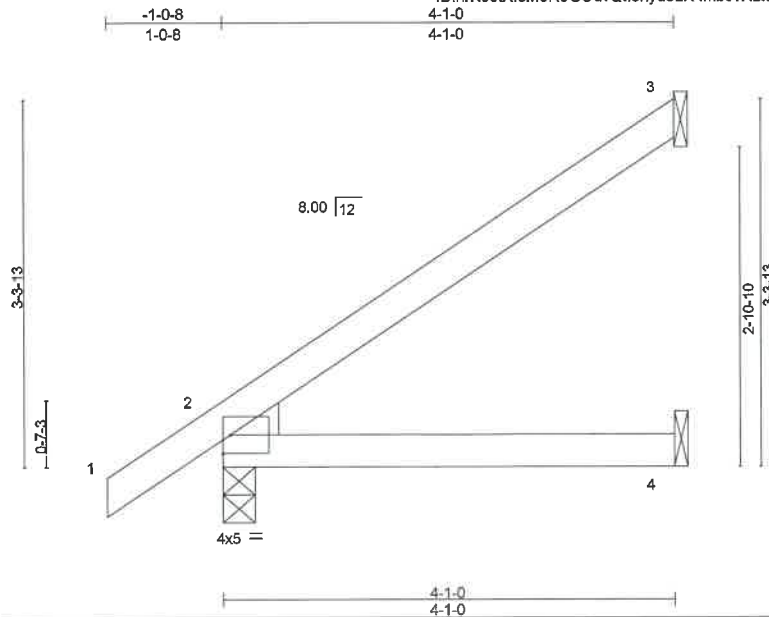


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss J1	Truss Type Jack-Open	Qty 2	Ply 1	HBJD- Haman	I29490340
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:26 2017 Page 1  
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Scale = 1:19.5

Plate Offsets (X,Y)-- [2:0-0-6,0-0-4], [2:0-4-5,0-0-9]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL) 0.02	4-7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.16	Vert(CT) -0.03	4-7	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT) 0.01	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP				Weight: 12 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-1-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 3=117/Mechanical, 2=263/0-3-8, 4=54/Mechanical  
Max Horz 2=134(LC 12)  
Max Uplift 3=-76(LC 12), 2=-17(LC 12)  
Max Grav 3=124(LC 19), 2=263(LC 1), 4=74(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**  
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
3) Refer to girder(s) for truss to truss connections.  
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2016 BEFORE USE.**  
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**MiTek**  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job 17040060	Truss J1A	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	I29490341
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Carter Components, Millbury, Ohio 43447

8,030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:26 2017 Page 1  
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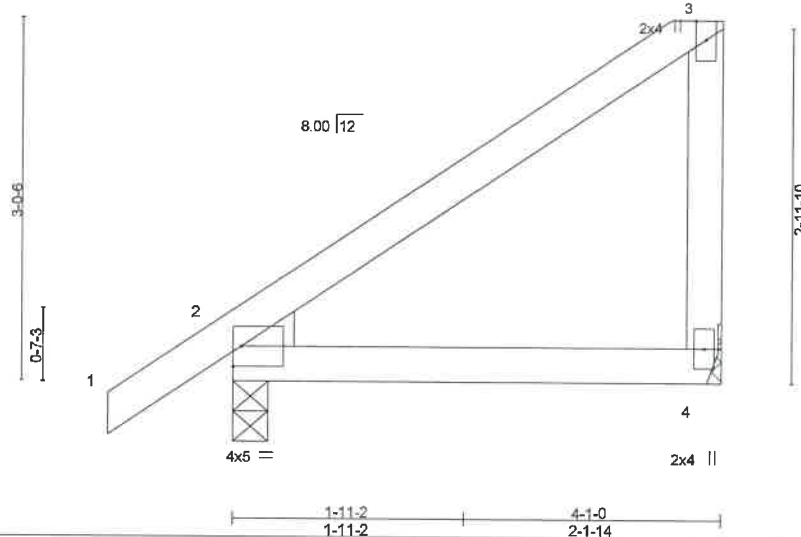


Plate Offsets (X, Y)-- [2:0-0-6 0-0-4] [2:0-4-5 0-0-9]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	I/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	0.02	4-7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	-0.03	4-7	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.01	2	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP					Weight: 15 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-1-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 4=168/Mechanical, 2=260/0-3-8  
Max Horz 2=124(LC 11)  
Max Uplift 4=-51(LC 12), 2=-39(LC 12)  
Max Grav 4=185(LC 19), 2=260(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.



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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss J1B	Truss Type Half Hip Girder	Qty 1	Ply 1	HBJD- Harman	I29490342
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:27 2017 Page 1  
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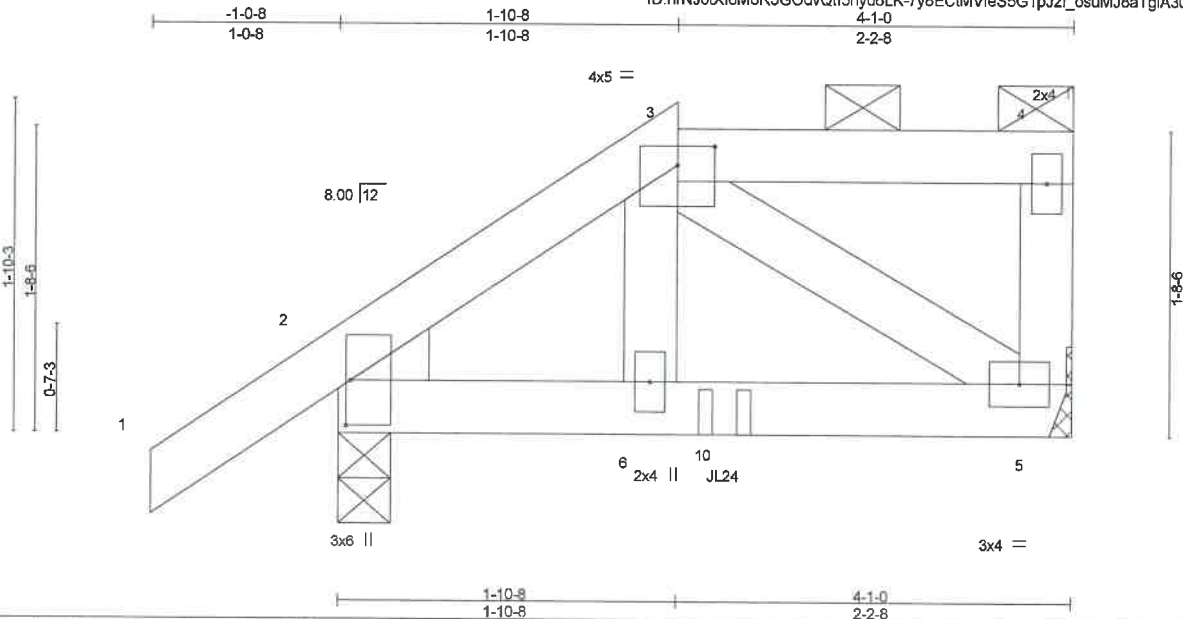


Plate Offsets (X,Y)--	[2:0-0-4,0-0-6]	[2:0-0-9,0-4-5]	[2:0-3-0,0-0-5]	[3:0-2-8,0-1-4]
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.09	Vert(LL)	-0.00	6	>999	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.06	Vert(CT)	-0.00	5-6	>999		
BCLL 0.0	Rep Stress Incr NO	WB 0.02	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MP						
							Weight: 17 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-1-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=261/0-3-8, 5=169/Mechanical  
 Max Horz 2=64(LC 7)  
 Max Uplift 2=-57(LC 8), 5=-43(LC 5)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=8.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Use USP JL24 (With 10d nails into Girder & NA9D nails into Truss) or equivalent at 2'-12" from the left end to connect truss(es) to front face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 56 lb down and 29 lb up at 1'-10-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-70, 3-4=-70, 5-7=-20  
 Concentrated Loads (lb)  
 Vert: 10=-3(F)



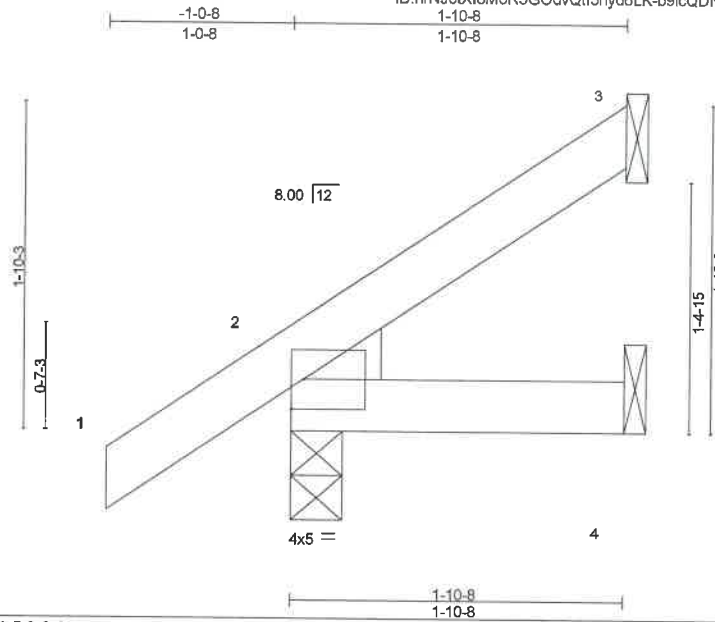
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MiTek**  
 18023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss J2	Truss Type Jack-Open	Qty 1	Ply 1	HBJD- Harman	I29490343
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:28 2017 Page 1  
ID:hrNJ0DX18MoR5GOdvQ15hyd6LK-b9icQDN7QyayuBOWX0V1P6vU3\_p9Udd9hXs?azzTTjH



Scale = 1:12.2

Plate Offsets (X, Y)--		[2:0-0-6 0-0-4]	[2:0-4-5 0-0-9]							
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in	(oc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	7	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.00	7	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						Weight: 7 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-10-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 3=44/Mechanical, 2=177/0-3-8, 4=19/Mechanical  
Max Horz 2=75(LC 12)  
Max Uplift 3=-31(LC 12), 2=-23(LC 12), 4=-1(LC 12)  
Max Grav 3=48(LC 19), 2=177(LC 1), 4=31(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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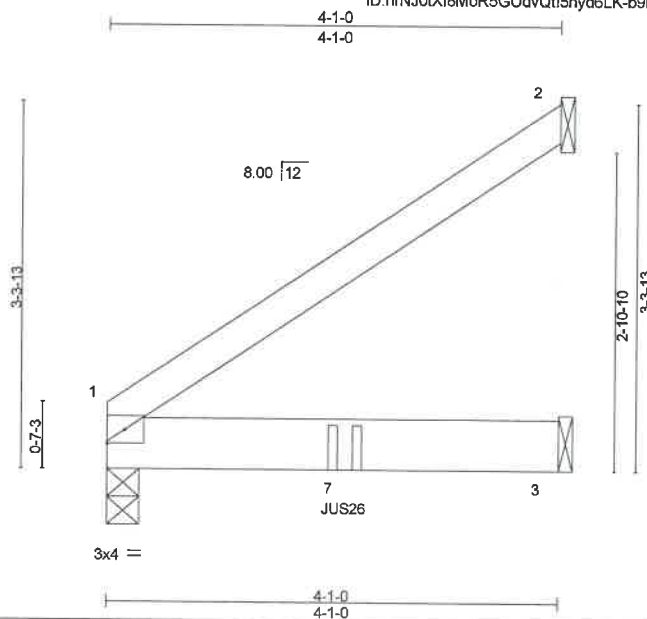


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss J2GR	Truss Type Jack-Open Girder	Qty 1	Ply 1	HBJD- Harman I29490344
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:28 2017 Page 1  
ID:hrNJ0tX18MoR5GOdvQt15hyd6LK-b9icQDN7QyayuBOWX0V1P6vRj\_gU Udd9hXs?azzTTjH



Scale = 1:19.5

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.29	Vert(LL)	-0.03	3-6	>999	240	MT20
TCDL 10.0	Lumber DOL	1.15	BC 0.59	Vert(CT)	-0.05	3-6	>999	180	197/144
BCLL 0.0	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.01	1	n/a	n/a	
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						
								Weight: 13 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x6 SPF No.2

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 4-1-0 oc purlins.  
Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=420/0-3-8, 2=128/Mechanical, 3=327/Mechanical  
Max Horz 1=109(LC 8)  
Max Uplift 1=-17(LC 8), 2=-73(LC 8), 3=-31(LC 8)  
Max Grav 1=420(LC 1), 2=130(LC 29), 3=327(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 2, 3.
- 5) Use USP JUS26 (With 10d nails into Girder & 10d nails into Truss) or equivalent at 2-1-12 from the left end to connect truss(es) to back face of bottom chord.
- 6) Fill all nail holes where hanger is in contact with lumber.
- 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-2=-70, 3-4=-20  
Concentrated Loads (lb)  
Vert: 7=-513(B)



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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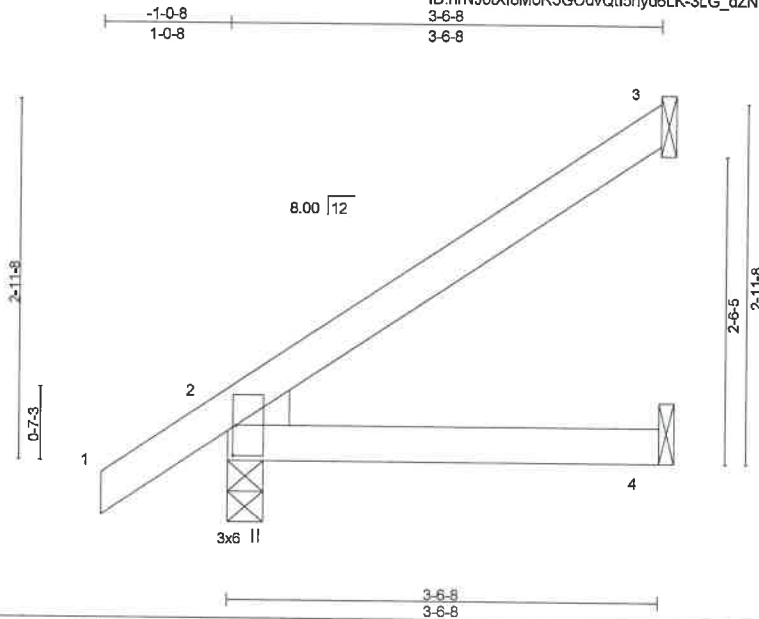


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss J3	Truss Type Jack-Open	Qty 5	Ply 1	HBJD- Harman	I29490345
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:29 2017 Page 1  
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Scale = 1:17.8

Plate Offsets (X,Y)-- [2:0-0-4,0-0-6], [2:0-0-9,0-4-5], [2:0-3-0,0-0-5]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	I/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.14	Vert(LL)	-0.01	4-7	>999	240	240
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	-0.02	4-7	>999	180	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a	
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						
								Weight: 11 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

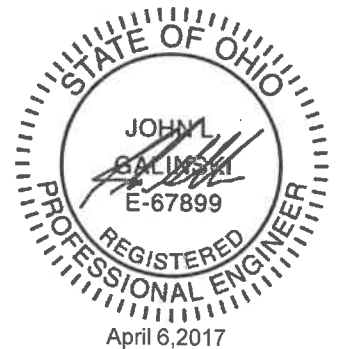
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purfins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 3=99/Mechanical, 2=240/0-3-8, 4=46/Mechanical  
 Max Horz 2=119(LC 12)  
 Max Uplift 3=-65(LC 12), 2=-18(LC 12)  
 Max Grav 3=106(LC 19), 2=240(LC 1), 4=64(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) Refer to girder(s) for truss to truss connections.
  - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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18023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	HBJD- Harman	I29490346
17040060	J3A	Half Hip Girder	1	1		
Carter Components, Millbury, Ohio 43447						Job Reference (optional)

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:29 2017 Page 1  
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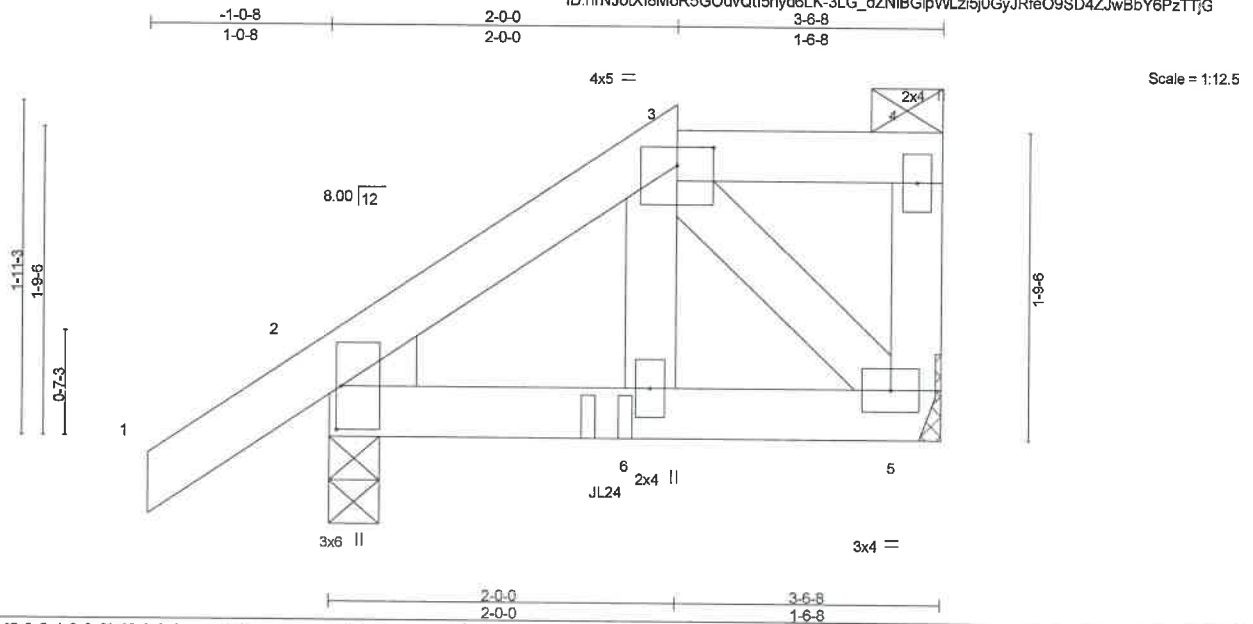


Plate Offsets (X,Y)--	[2:0-0-4,0-0-6]	[2:0-0-9,0-4-5]	[2:0-3-0,0-0-5]	[3:0-2-8,0-1-4]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.09	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(LL) -0.00 6 >999 240		
BCLL 0.0	Rep Stress Incr NO	WB 0.02	Vert(CT) -0.00 6 >999 180		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MP	Horz(CT) 0.00 5 n/a n/a		
				Weight: 15 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=257/0-3-8, 5=166/Mechanical  
 Max Horz 2=67(LC 7)  
 Max Uplift 2=-57(LC 8), 5=-44(LC 5)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use USP JL24 (With 10d nails into Girder & NA9D nails into Truss) or equivalent at 1-7-4 from the left end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-70, 3-4=-70, 5-7=-20  
 Concentrated Loads (lb)  
 Vert: 6=-45(F)



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss J4	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	I2949C347
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:30 2017 Page 1  
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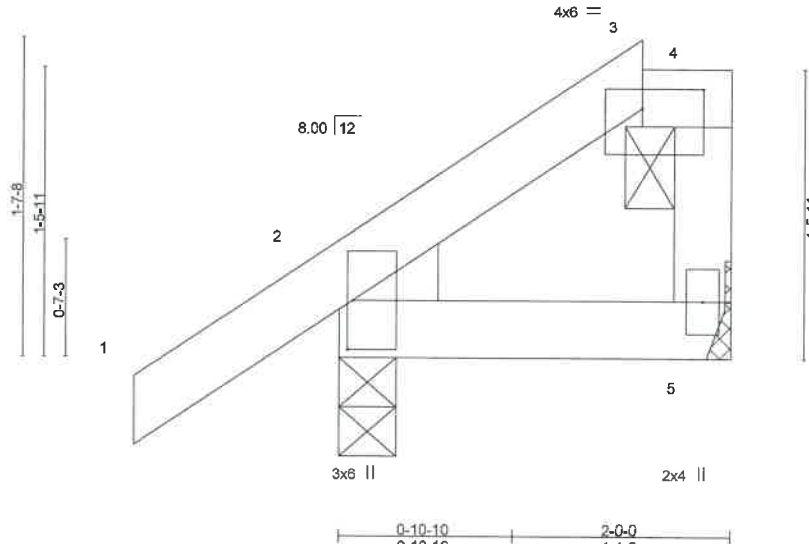


Plate Offsets (X, Y)--	[2:0-3-0 0-0-5]	[2:0-0-9 0-4-5]	[2:0-0-4 0-0-6]	[3:0-3-12 0-1-3]	[3:0-0-0 0-1-3]	[4:0-1-12 0-0-0]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	8	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	-0.00	8	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MR						Weight: 8 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 5=63/Mechanical, 2=177/0-3-8  
 Max Horz 2=55(LC 11)  
 Max Uplift 5=16(LC 9), 2=-39(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf, BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2.
- 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2016 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

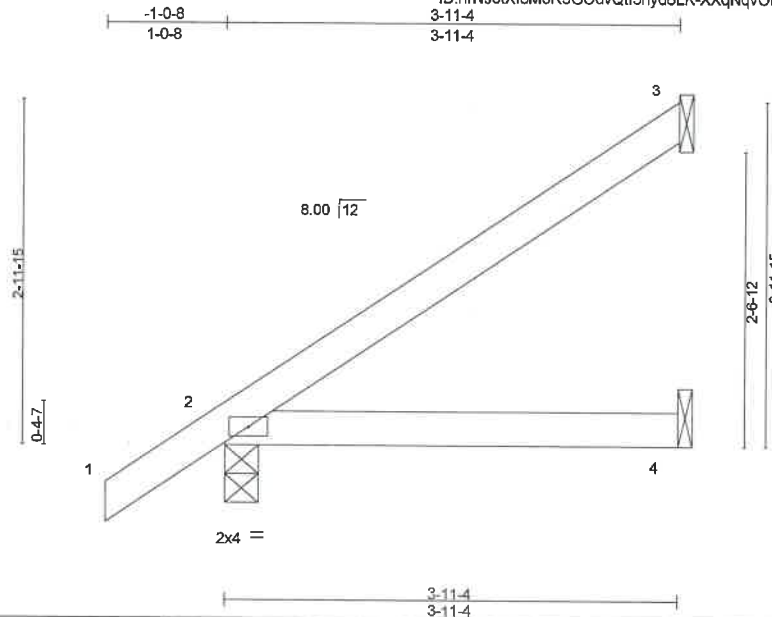


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss J5	Truss Type Jack-Open	Qty 21	Ply 1	HBJD- Harman	I29490348
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:30 2017 Page 1  
 ID:hrNJ0tXl8MoR5GOctvQtlf5hyd6LK-XXqNqvONyZag7VYueRXVUX\_ojnT1yX6S9rL5frzTTJF



<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/def L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.19	Vert(LL) -0.01 4-7 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.14	Vert(CT) -0.03 4-7 >999 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2015/TP12014	Matrix-MP		Weight: 12 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 3=113/Mechanical, 2=257/0-3-8, 4=51/Mechanical  
 Max Horz 2=130(LC 12)  
 Max Uplift 3=-70(LC 12), 2=-25(LC 12)  
 Max Grav 3=119(LC 19), 2=257(LC 1), 4=72(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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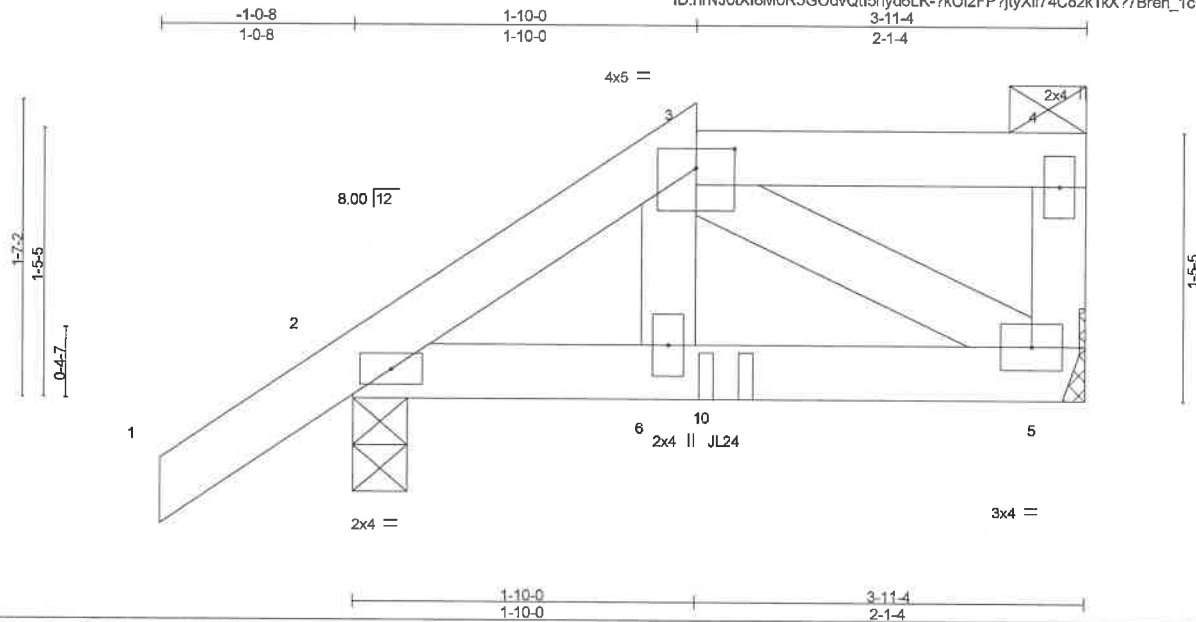
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



Job 17040060	Truss J5A	Truss Type Half Hip Girder	Qty 3	Ply 1	HBJD- Harman	I29490349
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:31 2017 Page 1  
ID:hrNJ0IX18MoR5GOdvQtI5hyd6LK-?kOI2FP?jlyXlf74C82k1kX?7Breh\_1cOV4fBHzTTjE



Scale = 1:11.6

Plate Offsets (X,Y)-- [3:0-2-8,0-1-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.09	in (loc) l/defl L/d	MT20	197/144
FCDL 10.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) -0.00 6 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.02	Vert(CT) -0.00 6 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MP	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 15 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=254/0-3-8, 5=161/Mechanical  
Max Horz 2=57(LC 7)  
Max Uplift 2=-51(LC 8), 5=-30(LC 5)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use USP JL24 (With 10d nails into Girder & NA9D nails into Truss) or equivalent at 2-0-0 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 54 lb down and 25 lb up at 1-10-0 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-70, 3-4=-70, 5-7=-20  
Concentrated Loads (lb)  
Vert: 10=-2(B)



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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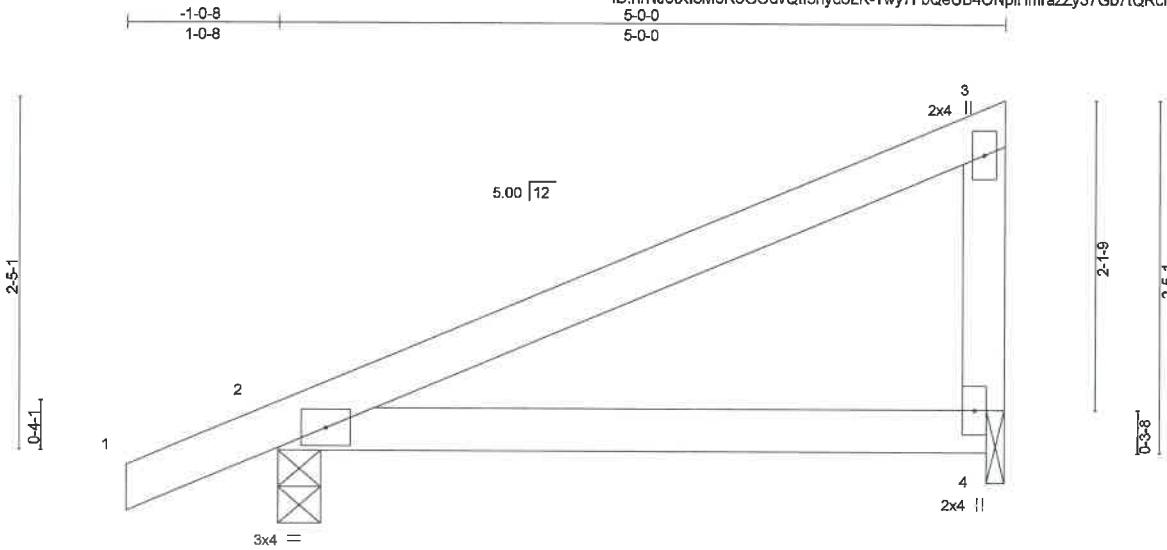
16023 Swingley Ridge Rd  
Chesterfield, MO 63017



Job 17040060	Truss M1	Truss Type Monopitch	Qty 6	Ply 1	HBJD- Haman	I29490351
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:32 2017 Page 1  
 ID:hrNJ0X18MoR5G0dvQtl5hyd6LK-Twy7FbQeUB40NpiHmrazZy37Gb7lQRclc9qCjkzTTjD



Scale = 1:14.9

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.32	Vert(LL)	-0.03	4-7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.25	Vert(CT)	-0.06	4-7	>947		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	2	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						
								Weight: 15 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=299/0-3-8, 4=211/0-1-8  
 Max Horz 2=98(LC 11)  
 Max Uplift 2=59(LC 12), 4=47(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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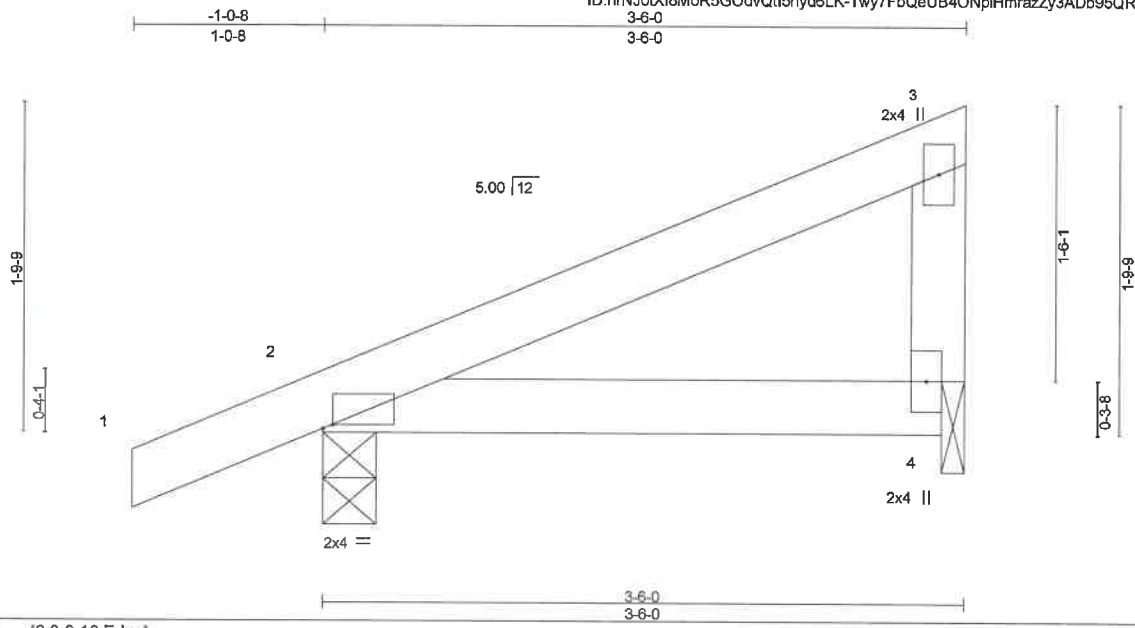


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	HBJD- Harman	I29490352
17040060	M2	Monopitch	7	1		

Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:32 2017 Page 1  
 ID:hrNJ0tXl8MoR5G0dvQtI5hyd6LK-Twy7FbQeUB4ONpiHmrazZy3ADb95QRlc9qCjkzTTJD



Scale = 1:11.8

Plate Offsets (X,Y)-- [2:0-0-10,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.13	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) -0.01 4-7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.01 4-7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 2 n/a n/a		
	Code IRC2015/TPI2014			Weight: 11 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=235/0-3-8, 4=140/0-1-8  
 Max Horz 2=71(LC 11)  
 Max Uplift 2=-50(LC 12), 4=-30(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

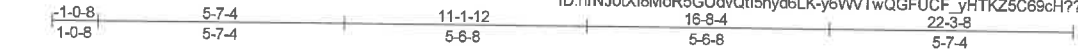
- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 3) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



Job 17040060	Truss T1	Truss Type Common	Qty 3	Ply 1	HBJD- Harman I29490353
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:33 2017 Page 1  
ID:hrNJ0Xl8MoR5G0dvQl15hyd6LK-y6WVtwQGfUCF\_yHTKZ5C69cH??Qz9suurpZmFazTTjC



4x5 =

Scale = 1:49.4

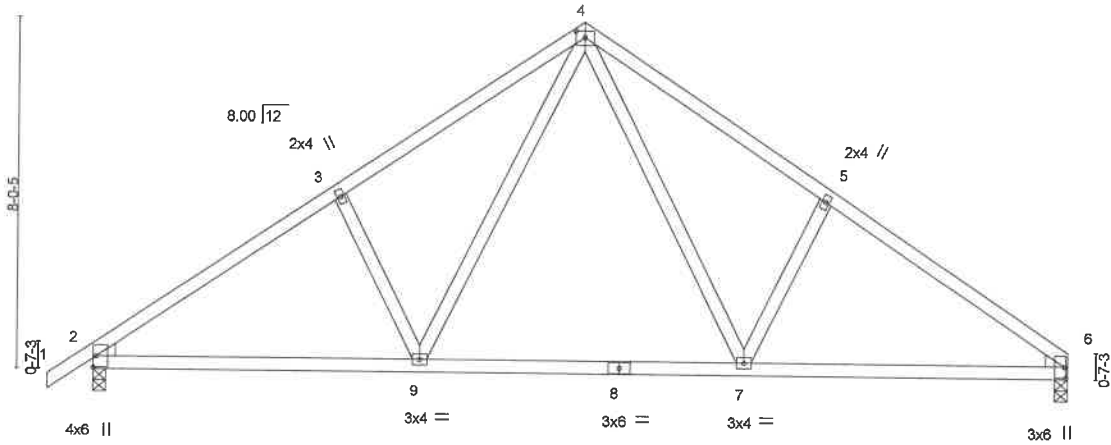


Plate Offsets (X,Y)--	[2:0-0-4 0-0-6]	[2:0-0-9 0-4-5]	[4:0-2-8 0-1-12]	[6:0-0-4 0-0-6]	[6:0-0-9 0-4-5]	[6:0-3-0 0-0-5]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.38	Vert(LL)	-0.05	7-9	>999	240	197/144
ƒCDL 10.0	Lumber DOL	1.15	BC 0.45	Vert(CT)	-0.12	7-9	>999	180	
BCLL 0.0	Rep Stress Incr	YES	WB 0.19	Horz(CT)	0.03	6	n/a	n/a	
BCDL 10.0	Code IRC2015/TP12014		Matrix-MS						
								Weight: 87 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 4-8-8 oc purlins.  
Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

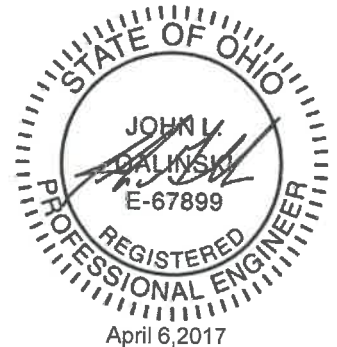
Left: 2x4 SPF No.2, Right: 2x4 SPF No.2

**REACTIONS.** (lb/size) 2=1078/0-3-8, 6=1001/0-3-8  
Max Horz 2=206(LC 9)  
Max Uplift 2=-139(LC 12), 6=-115(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1397/264, 3-4=-1248/331, 4-5=-1253/332, 5-6=-1402/265  
BOT CHORD 2-9=-190/1089, 7-9=-257/30, 6-7=-135/1092  
WEBS 4-7=-148/533, 5-7=-365/239, 4-9=-144/525, 3-9=-361/237

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=139, 6=115.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T1A	Truss Type Common	Qty 2	Ply 1	HBJD- Harman	I29490354
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:34 2017 Page 1  
ID:hrNJ0tX18McR5G0dvQt15hyd6LK-QJ4tgGRu0cK6c6ftGcRfN9SsPlzlx24TJjoczTTJB



4x5 =

Scale = 1:49.2

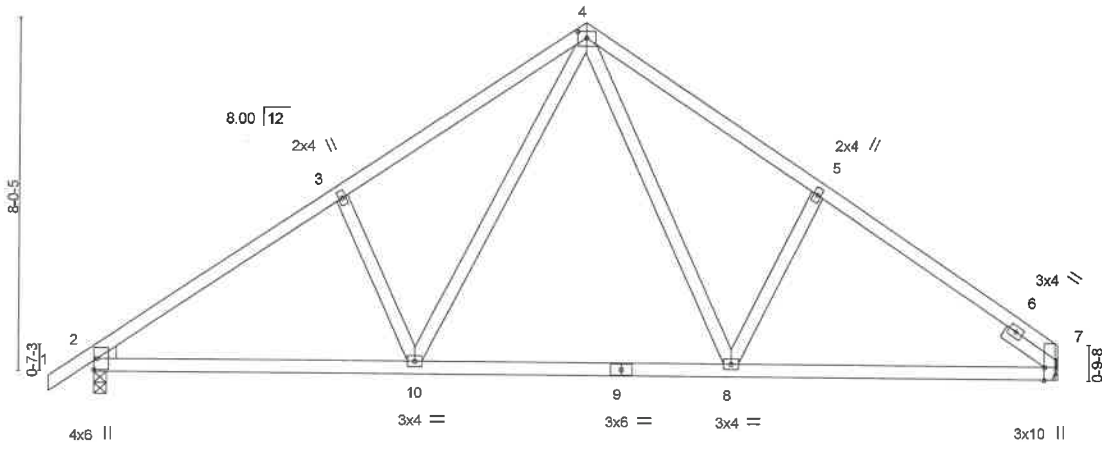


Plate Offsets (X,Y)--	[2:0-0-4,0-0-6]	[2:0-0-9,0-4-5]	[4:0-2-8,0-1-12]	[7:0-3-8,Edge]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.37	in (loc) l/defl L/d	MT20	197/144
FCDL 10.0	Plate Grip DOL 1.15	BC 0.46	Vert(LL) -0.06 8-10 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.20	Vert(CT) -0.13 8-10 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.04 7 n/a n/a		
	Code IRC2015/TPI2014			Weight: 88 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2  
 SLIDER Right 2x4 SPF No.2 1-6-0

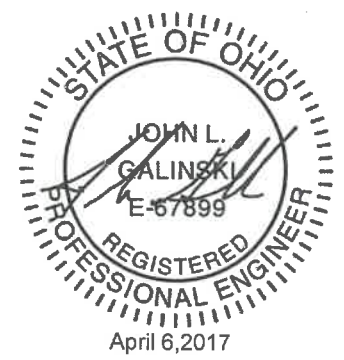
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-8-12 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 7=988/Mechanical, 2=1065/0-3-8  
 Max Horz 2=205(LC 9)  
 Max Uplift 7=111(LC 13), 2=138(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1377/259, 3-4=-1240/334, 4-5=-1171/319, 5-7=-1306/255  
 BOT CHORD 2-10=-192/1073, 8-10=-277/10, 7-8=-125/1014  
 WEBS 3-10=-362/239, 4-10=-155/536, 4-8=-137/477, 5-8=-329/231

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=111, 2=138.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040050	Truss T1B	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	I29490355
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:34 2017 Page 1  
ID:hrNJ0Xl8MoR5GOdvQl15hyd6LK-QJ4tgGRu0oK6c6rftGcRfN9RxPhpuF624TJJoc2TTjB

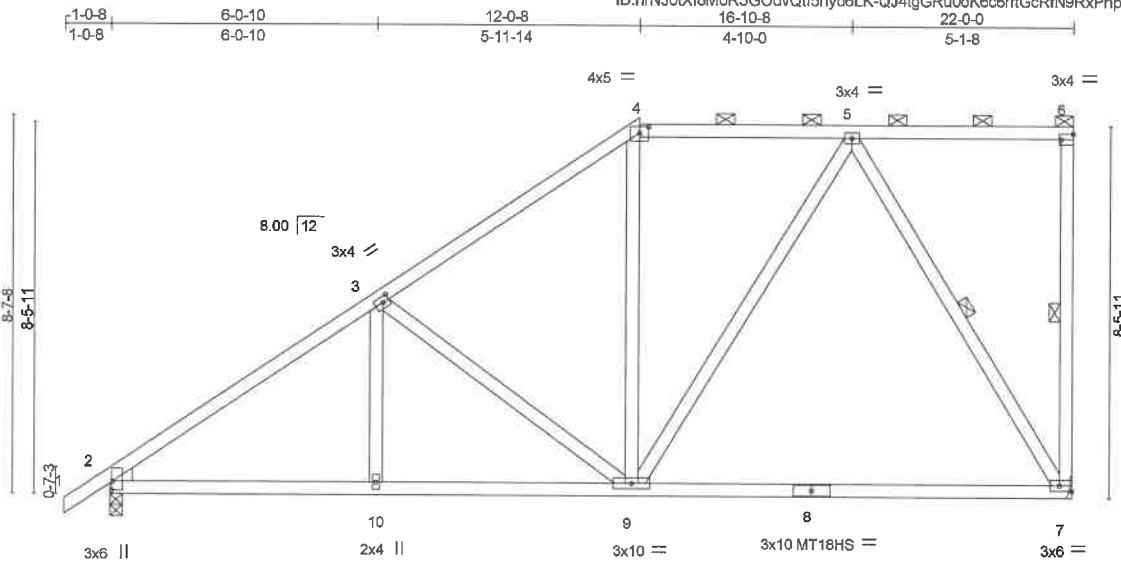


Plate Offsets (X,Y)--	[2:0-0-4 0-0-6]	[2:0-0-9 0-4-5]	[2:0-2-8 0-0-5]	[3:0-1-12 0-1-8]	[4:0-2-8 0-1-12]	[6:Edge,0-1-8]	[7:Edge,0-1-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.43	in (loc) l/def L/d	MT20	197/144
fCDL 10.0	Lumber DOL 1.15	BC 0.73	Vert(LL) -0.28 7-9 >922 240	MT18HS	197/144
BCLL 0.0	Rep Stress Incr YES	WB 0.45	Vert(CT) -0.57 7-9 >458 180		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Horz(CT) 0.03 7 n/a n/a		
				Weight: 107 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-8-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied or 8-3-12 oc bracing.  
WEBS 1 Row at midpt 6-7, 5-7

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.


**REACTIONS.** (lb/size) 7=982/Mechanical, 2=1058/0-3-8  
Max Horz 2=334(LC 11)  
Max Uplift 7=186(LC 9), 2=137(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1358/252, 3-4=-941/251, 4-5=-682/261  
BOT CHORD 2-10=-473/1059, 9-10=-473/1059, 7-9=-242/465  
WEBS 3-9=-494/234, 5-9=-105/450, 5-7=-872/319

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) All plates are MT20 plates unless otherwise indicated.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) Refer to girder(s) for truss to truss connections.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=186, 2=137.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 6, 2017

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b>  Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	 16023 Swingley Ridge Rd Chesterfield, MO 63017
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Job 17040060	Truss T1C	Truss Type Roof Special	Qty 1	Ply 1	HBJD- Harman	I29490356
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:35 2017 Page 1  
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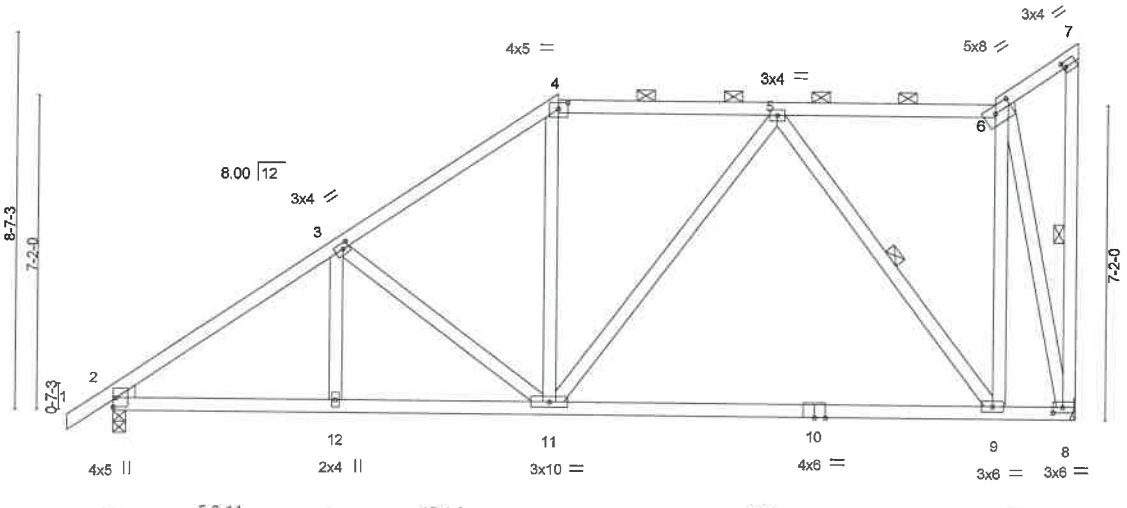


Plate Offsets (X,Y)--	[2:0-0-4,0-0-6]	[2:0-0-9,0-4-5]	[3:0-1-12,0-1-8]	[4:0-2-8,0-1-12]	[6:0-4-12,0-2-0]	[7:0-0-13,0-1-8]	[8:0-2-12,0-1-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.37	in (loc) l/defl L/d	MT20	197/144
FDCL 10.0	Plate Grip DOL 1.15	BC 0.69	Vert(LL) -0.22 9-11 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.99	Vert(CT) -0.45 9-11 >581 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.03 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 117 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-10-3 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-6.  
 BOT CHORD Rigid ceiling directly applied or 8-3-4 oc bracing.  
 WEBS 1 Row at midpt 7-8, 5-9

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 8=982/Mechanical, 2=1058/0-3-8  
 Max Horz 2=335(LC 11)  
 Max Uplift 8=-215(LC 12), 2=-176(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1376/258, 3-4=-1065/254, 4-5=-804/256, 5-6=-299/145  
 BOT CHORD 2-12=490/1072, 11-12=490/1072, 9-11=-292/676, 8-9=-114/274  
 WEBS 3-11=-374/190, 4-11=-6/280, 5-11=-94/318, 5-9=-717/299, 6-9=95/785, 6-8=-1055/216

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=215, 2=176.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 6, 2017

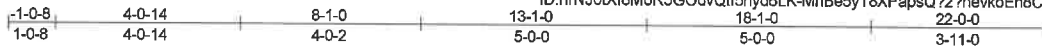
<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b>          Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	 16023 Swingley Ridge Rd Chesterfield, MO 63017
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Job 17040060	Truss T1D	Truss Type Roof Special	Qty 1	Ply 1	HBJD- Harman	I2949C357
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Carter Components, Millbury, Ohio 43447

8,030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:36 2017 Page 1  
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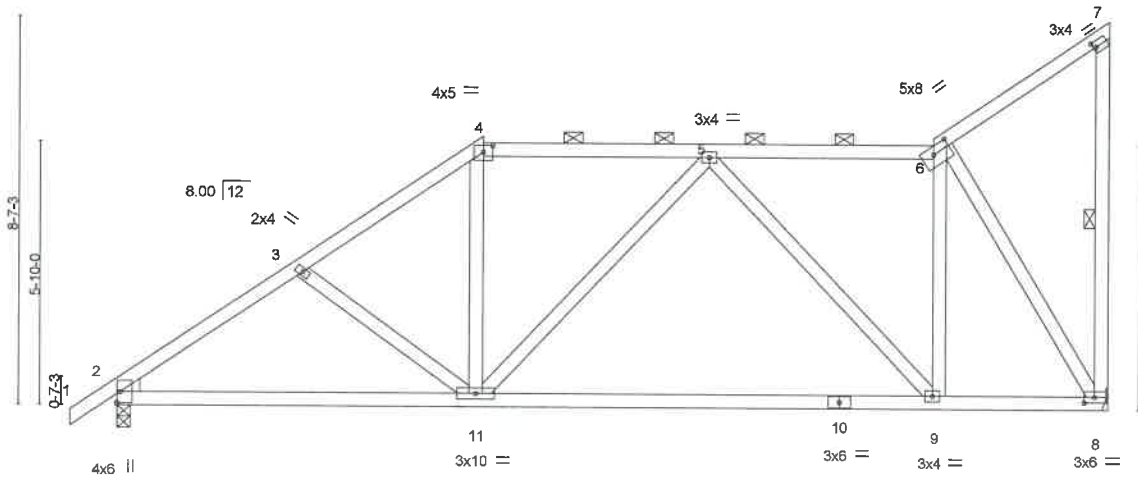


Plate Offsets (X, Y)--	[2:0-0-9 0-4-5], [2:0-0-4 0-0-6], [4:0-2-8 0-1-12], [6:0-4-12 0-2-0], [7:0-0-13 0-1-8], [8:0-2-12 0-1-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.39	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.71	Vert(LL) -0.22 9-11 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.84	Vert(CT) -0.46 9-11 >566 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.03 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 106 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

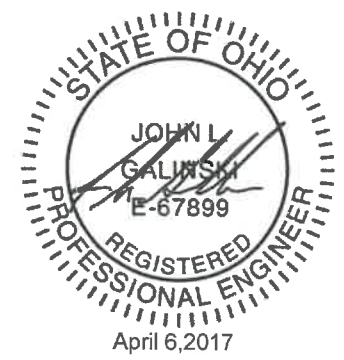
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-9-4 oc purlins, except end verticals, and 2-0-0 oc purlins (5-9-9 max.): 4-6.  
BOT CHORD Rigid ceiling directly applied or 8-0-13 oc bracing.  
WEBS 1 Row at midpt 7-8

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.


**REACTIONS.** (lb/size) 8=982/Mechanical, 2=1058/0-3-8  
Max Horz 2=335(LC 11)  
Max Uplift 8=-215(LC 12), 2=-176(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1395/273, 3-4=-1192/249, 4-5=-929/247, 5-6=-575/179  
BOT CHORD 2-11=-516/1095, 9-11=-357/938, 8-9=-171/588  
WEBS 4-11=-12/349, 5-9=-537/276, 6-9=-74/573, 6-8=-1047/244

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=215, 2=176.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-99 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T1E	Truss Type Roof Special	Qty 1	Ply 1	HBJD- Harman	I29490358
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Carter Components, Millbury, Ohio 43447

Job Reference (optional)

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:36 2017 Page 1  
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Scale: 1/4"=1'

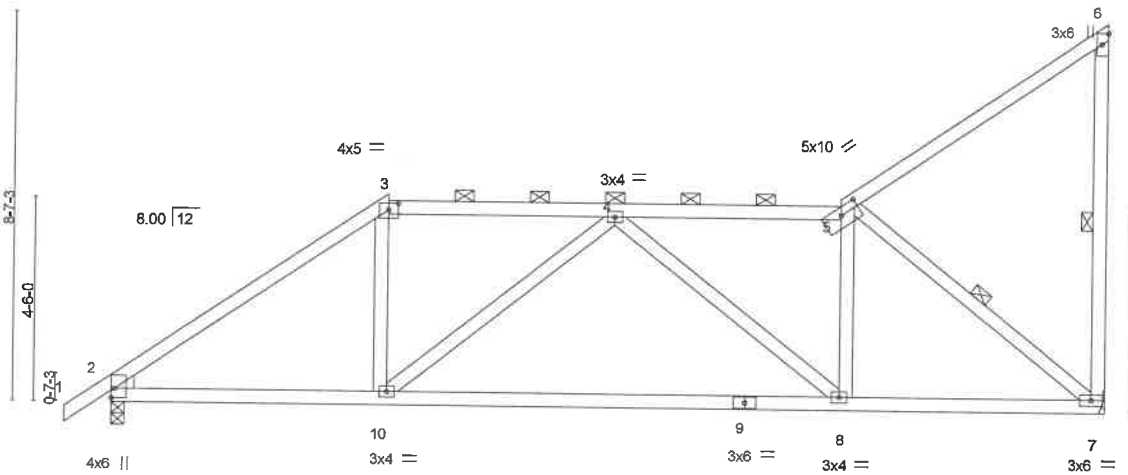


Plate Offsets (X, Y)--	[2:Edge 0-0-13], [2:0-0-9.0-4-5], [2:0-0-4.0-0-6], [3:0-2.8.0-1-12], [5:0-5.0-0-2-0], [6:Edge 0-1-12]
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<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.46	Vert(LL) -0.25 8-10 >999 240	MT20	197/144
↑CDL 10.0	Lumber DOL 1.15	BC 0.75	Vert(CT) -0.51 8-10 >515 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.33	Horz(CT) 0.04 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS			
				Weight: 96 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-6-9 oc purlins, except end verticals, and 2-0-0 oc purlins (5-5-3 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 8-6-4 oc bracing.  
WEBS 1 Row at midpt 6-7, 5-7

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 7=982/Mechanical, 2=1058/0-3-8  
Max Horz 2=335(LC 11)  
Max Uplift 7=-215(LC 12), 2=-176(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1391/235, 3-4=-1054/250, 4-5=-1030/232  
BOT CHORD 2-10=-450/1065, 8-10=-428/1280, 7-8=-228/1042  
WEBS 3-10=-7/412, 4-10=-294/212, 4-8=-325/260, 5-8=-35/439, 5-7=-1282/293

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=215, 2=176.
- 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

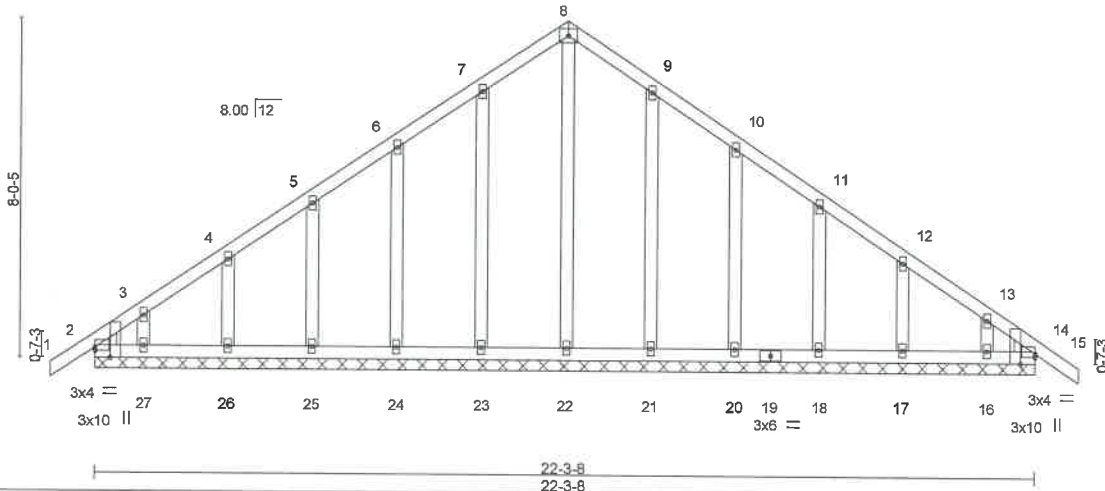
<b>Job</b> 17040060	<b>Truss</b> T1GE	<b>Truss Type</b> Common Supported Gable	<b>Qty</b> 1	<b>Ply</b> 1	<b>HBJD- Harman</b>	<b>ID2949C359</b>
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:37 2017 Page 1  
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Scale = 1:51.2



<b>Plate Offsets (X, Y)--</b>	[2:0-0-0 0-1-0], [2:0-2-15 Edge], [14:0-0-0 0-1-0], [14:0-2-15 Edge]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL) -0.00	15	n/r	90	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.03	Vert(CT) -0.00	15	n/r	120		
BCLL 0.0	Rep Stress Incr YES	WB 0.17	Horz(CT) 0.01	14	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Wind(LL) 0.00	15	n/r	120		
							Weight: 108 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2, Right: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-3-8.  
 (lb) - Max Horz 2=-212(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 23, 24, 25, 26, 27, 21, 20, 18, 17, 16, 14  
 Max Grav All reactions 250 lb or less at joint(s) 2, 22, 23, 24, 25, 26, 27, 21, 20, 18, 17, 16, 14

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 23, 24, 25, 26, 27, 21, 20, 18, 17, 16, 14.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

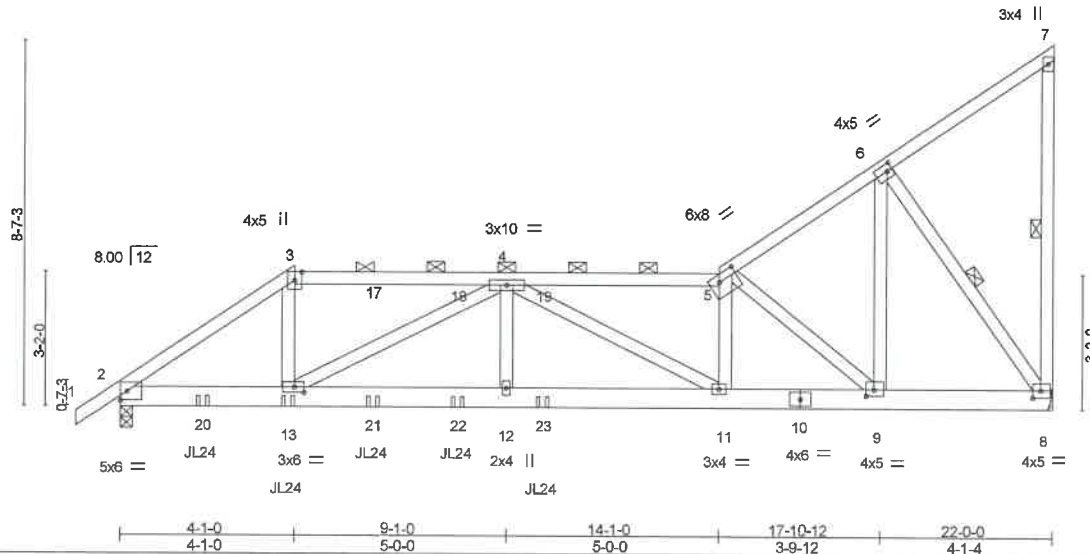


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T1GR	Truss Type Roof Special Girder	Qty 1	Ply 1	HBJD- Harman	129490360
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:38 2017 Page 1  
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Scale = 1:50.9

Plate Offsets (X, Y)-- [5:0-5-4,0-2-0], [6:0-1-8,0-2-0], [8:0-2-4,0-2-0], [9:0-2-4,0-1-12], [13:0-2-12,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.54	in (loc) l/def L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.74	Vert(LL) -0.12 11-12 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.21 11-12 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.05 8 n/a n/a		
	Code IRC2015/TPI2014			Weight: 117 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x6 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-9-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-14 max.); 3-5.  
 BOT CHORD Rigid ceiling directly applied or 8-8-14 oc bracing.  
 WEBS 1 Row at midpt 7-8, 6-8

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 8=1239/Mechanical, 2=1625/0-3-8  
 Max Horz 2=332(LC 7)  
 Max Uplift 8=-292(LC 8), 2=-373(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2295/512, 3-4=-1820/461, 4-5=-2436/433, 5-6=-1021/169  
 BOT CHORD 2-13=-522/1864, 12-13=-711/3037, 11-12=-711/3037, 9-11=-491/2457, 8-9=-131/789  
 WEBS 3-13=-125/913, 4-13=-1389/292, 4-12=0/450, 4-11=-687/304, 5-11=-118/460,  
 5-9=-2080/449, 6-9=-241/1305, 6-8=-1336/362

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Provide adequate drainage to prevent water ponding.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) Refer to girder(s) for truss to truss connections.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=292, 2=373.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 7) Use USP JL24 (With 10d nails into Girder & NA9D nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 9-11-4 to connect truss(es) to back face of bottom chord.
  - 8) Fill all nail holes where hanger is in contact with lumber.
  - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 103 lb down and 84 lb up at 5-11-4, and 103 lb down and 84 lb up at 7-11-4, and 104 lb down and 82 lb up at 9-11-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15



Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job 17040060	Truss T1GR	Truss Type Roof Special Girder	Qty 1	Ply 1	HBJD- Harman  I29490360
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:38 2017 Page 2  
ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-I4JOWeUO30rX5k9R66gNpDJ5K02bqyZd75HXxNzTTj7

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-3=-70, 3-5=-70, 5-7=-70, 8-14=-20

Concentrated Loads (lb)

Vert: 13=-148(B) 17=-47(B) 18=-47(B) 19=-58(B) 20=-149(B) 21=-34(B) 22=-34(B) 23=-307(B)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



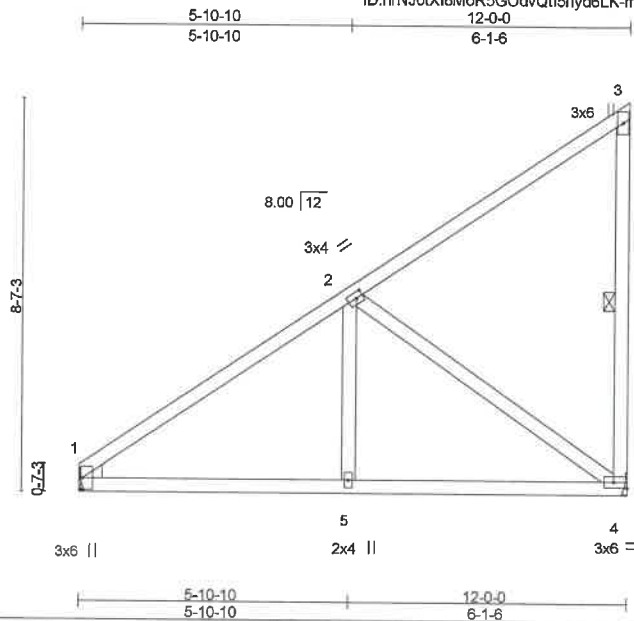
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T2	Truss Type Jack-Closed	Qty 1	Ply 1	HBJD- Harman	I29490361
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Carter Components, Millbury, Ohio 43447

Job Reference (optional)

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:39 2017 Page 1  
ID:hrNJ0X18MoR5G0dvQtI5hyd6LK-mGtmj\_V1qKzOjtkdgqCcMQsGLQVWZT8nDIO4TqzTTj6



Scale = 1:47.3

Plate Offsets (X, Y)-- [1:0-3-0-0-0-5], [1:0-0-9-0-4-5], [1:0-0-4-0-0-6], [2:0-1-12-0-1-8], [4:Edge 0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.45	Vert(LL) 0.04	5-8	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.31	Vert(CT) -0.07	4-5	>999	180		
BCLL 0.0	Rep Stress Incr YES	WB 0.53	Horz(CT) 0.01	1	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014	Matrix-MS					Weight: 52 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Left: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 3-4

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 4=533/Mechanical, 1=533/Mechanical  
Max Horz 1=323(LC 11)  
Max Uplift 4=-158(LC 12), 1=-41(LC 12)  
Max Grav 4=576(LC 19), 1=533(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-634/135  
BOT CHORD 1-5=-290/570, 4-5=-290/570  
WEBS 2-5=0/270, 2-4=-576/236

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 4=158.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 216 N. Lee Street, Suite 312, Alexandria, VA 22314.

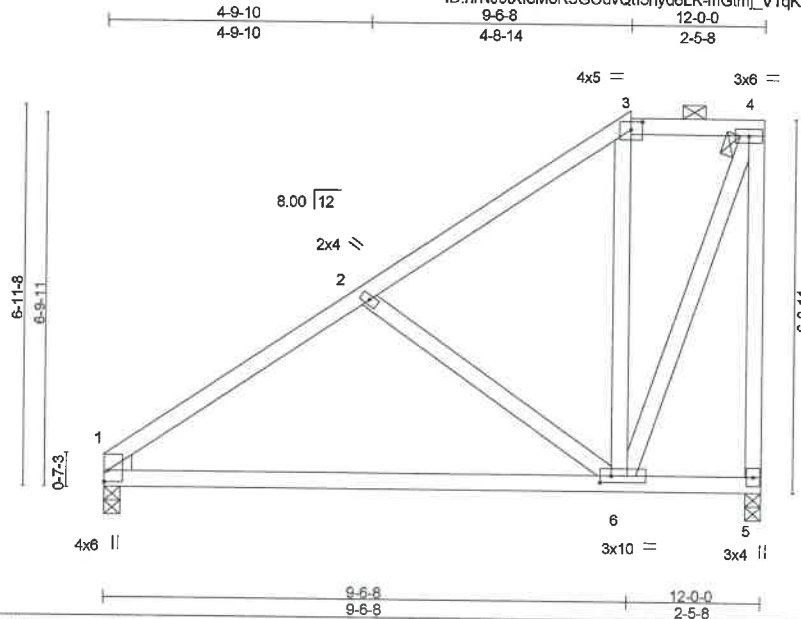


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T2A	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	129490362
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:39 2017 Page 1  
 ID:hrNJ0tX18MoR5G0dvQT15hyd6LK-mGtrj\_V1qKzOjtkdgqCocMQsHRQRFFZY0nD104TqzTTj6



Scale = 1:39.5

Plate Offsets (X,Y)--	[1:Edge,0-0-13]	[1:0-0-9,0-4-5]	[1:0-0-4,0-0-6]	[3:0-2-8,0-1-12]	[6:0-2-8,0-1-8]
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LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.38	Vert(LL)	-0.14	6-9	>999	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.52	Vert(CT)	-0.29	6-9	>495		
BCLL 0.0	Lumber DOL 1.15	WB 0.21	Horz(CT)	0.02	1	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS						
	Code IRC2015/TPI2014						Weight: 58 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=533/0-3-8, 5=533/0-3-8  
 Max Horz 1=256(LC 11)  
 Max Uplift 1=-58(LC 12), 5=-103(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-599/169, 2-3=-329/130, 3-4=-262/155, 4-5=-561/197  
 BOT CHORD 1-6=-313/563  
 WEBS 2-6=-373/209, 4-6=-202/543

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wnd: ASCE 7-10; Vuit=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 5=103.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T2B	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	129490363
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:40 2017 Page 1  
ID:hrNJ0tX18MoR5G0dvQt15hyd6LK-ESR9xKWb5FK1JpEXjru6POOpnSly4wSPmd?GzTJ5

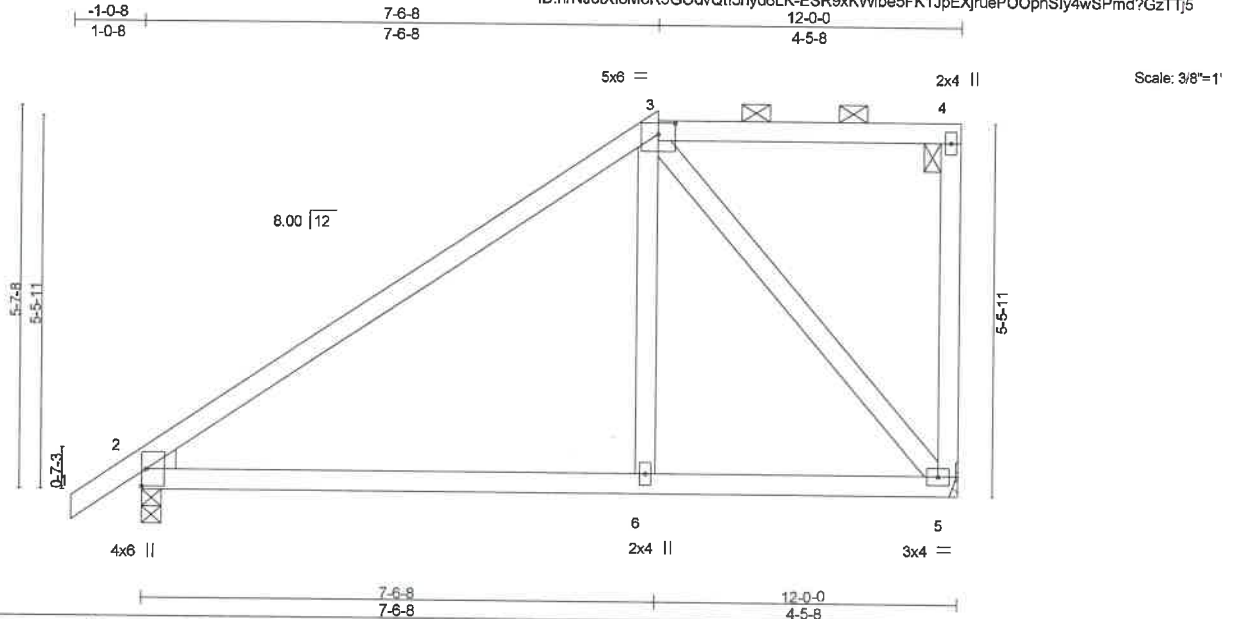


Plate Offsets (X,Y)-- [2:0-0-4.0-0-6] [2:0-0-9.0-4-5] [3:0-3-0.0-2-0]

LOADING (psf)	SPACING-	CSL.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.69	Vert(LL) 0.13	6-9	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.52	Vert(CT) -0.19	6-9	>756	180		
BCLL 0.0	Rep Stress Incr YES	WB 0.42	Horz(CT) 0.03	2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS					Weight: 50 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-10-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=610/0-3-8, 5=530/Mechanical  
 Max Horz 2=214(LC 11)  
 Max Uplift 2=-87(LC 12), 5=-102(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-544/132  
 BOT CHORD 2-6=-201/392, 5-6=-202/386  
 WEBS 3-6=0/294, 3-5=-524/224

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=ib) 5=102.
- 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



Job 17040060	Truss T2C	Truss Type Half Hip	Qty 1	Ply 1	HBJD- Harman	129490364
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:41 2017 Page 1  
ID:hrNJ0X18MoR5G0dvQ1I5hyd6LK-jf?X80XHMxD6yBu?oEE4RrxaoDA11OS4h2VBXizTTJ4

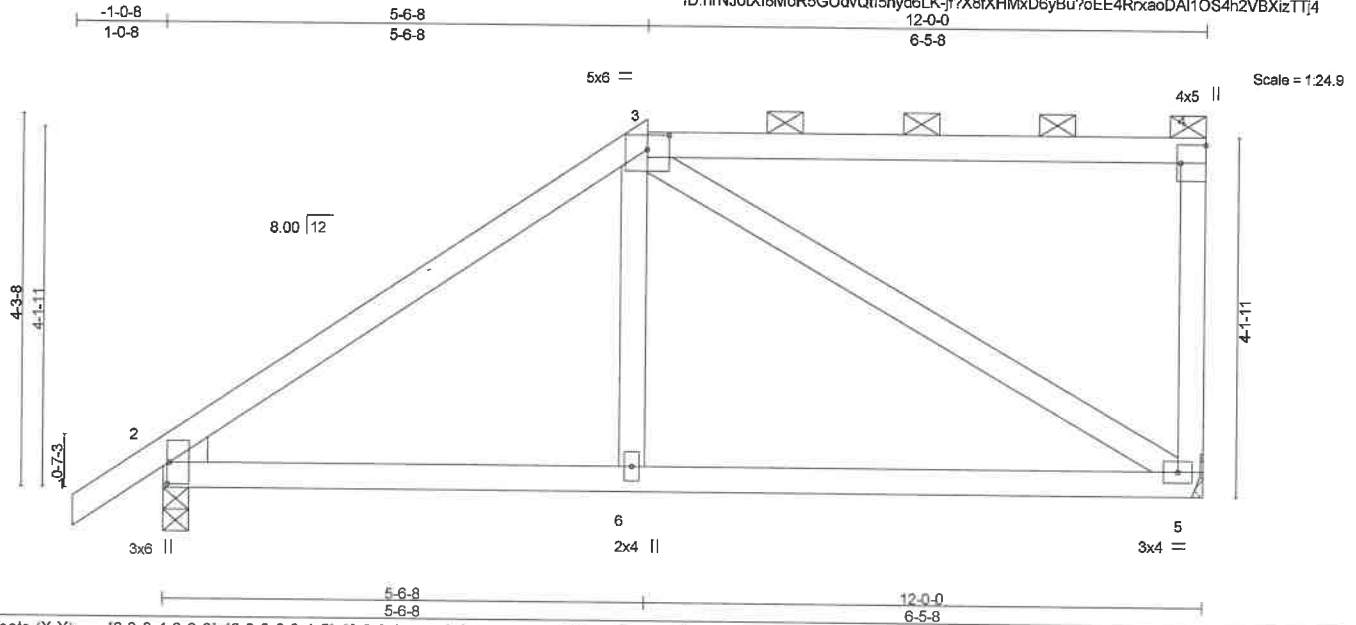


Plate Offsets (X, Y)--	[2:0-0-4, 0-0-6], [2:0-0-9, 0-4-5], [2:0-3-0, 0-0-5], [3:0-3-0, 0-2-0], [4:Edge 0-3-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.59	Vert(LL)	-0.05	5-6	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.32	Vert(CT)	-0.09	5-6	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.47	Horz(CT)	0.01	5	n/a		
BCDL 10.0	Code IRC2015/TPJ2014		Matrix-MS						
								Weight: 47 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Left: 2x4 SPF No.2

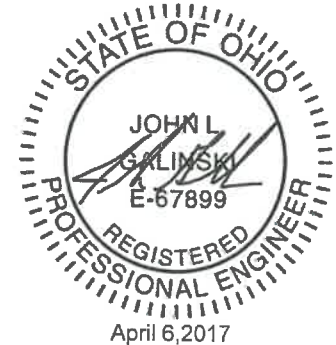
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=610/0-3-8, 5=530/Mechanical  
 Max Horz 2=161(LC 11)  
 Max Uplift 2=-82(LC 12), 5=-101(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-638/150  
 BOT CHORD 2-6=-214/457, 5-6=-216/452  
 WEBS 3-6=0/269, 3-5=-488/190

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 5=101.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSIT/PTI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MITek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



Job 17040060	Truss T2GR	Truss Type Half Hip Girder	Qty 1	Ply 1	HBJD- Harman	129490365
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:42 2017 Page 2  
 ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-BrYvM?Xv7FLzaLTCLyJz3UqldfVms2DviFk49zTTj3

**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 5--67(B) 6--37(B) 12--29(B) 13--29(B) 14--29(B) 15--29(B) 16--146(B) 17--26(B) 18--26(B) 19--26(B) 20--26(B)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314. **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

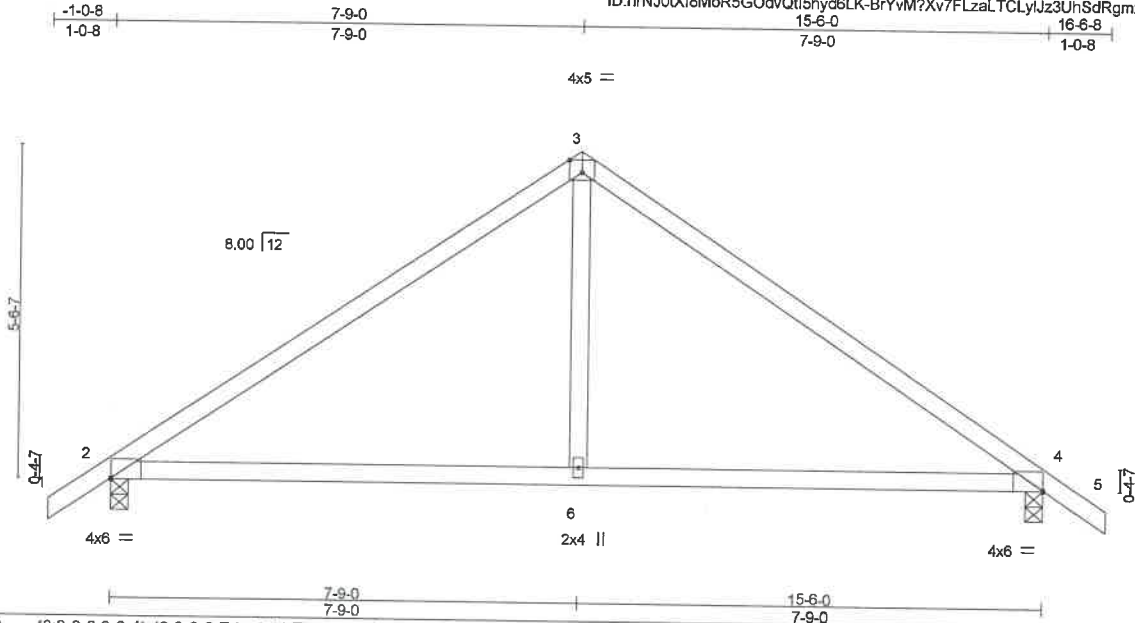


18023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T3	Truss Type Common	Qty 3	Ply 1	HBJD- Harman	I29493366
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:42 2017 Page 1  
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 15-6-0 16-6-8 7-9-0 1-0-8



Scale = 1:35.9

Plate Offsets (X, Y)-- [2:0-0-0 0-0-4], [3:0-2-8 Edge], [4:Edge 0-0-4]

<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSL.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	197/144
*TCDL 10.0	Plate Grip DOL 1.15	BC 0.66	Vert(LL) -0.14 6-12 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.08	Vert(CT) -0.25 6-9 >743 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.01 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 48 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=770/0-3-8, 4=770/0-3-8  
 Max Horz 2=153(LC 11)  
 Max Uplift 2=-105(LC 12), 4=-105(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-861/165, 3-4=-861/165  
 BOT CHORD 2-6=-13/601, 4-6=-13/601  
 WEBS 3-6=0/373

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=105, 4=105.



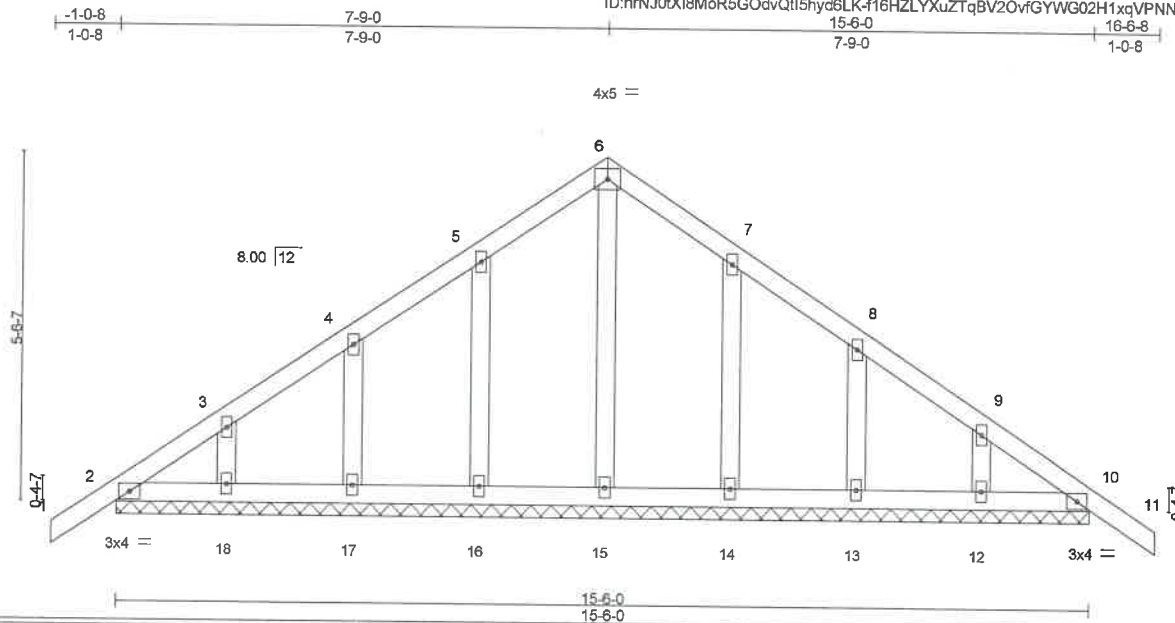
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T3GE	Truss Type Common Supported Gable	Qty 1	Ply 1	HBJD- Harman	129490367
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:43 2017 Page 1  
 ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-f16HZLYXuZTqBV2OvfGYWGO2H1xqVPNN8M7HcbzTTJ2  
 15-6-0  
 7-9-0  
 16-6-8  
 1-0-8



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.07	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) -0.00 11 n/r 90		
BCLL 0.0	Lumber DOL 1.15	WB 0.06	Vert(CT) -0.00 11 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 10 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.00 11 n/r 120	Weight: 64 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 15-6-0.  
 (lb) - Max Horz 2=-153(LC 10)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 16, 17, 18, 14, 13, 12  
 Max Grav All reactions 250 lb or less at joint(s) 2, 10, 15, 16, 17, 18, 14, 13, 12

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Gable studs spaced at 2-0-0 oc.
  - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 16, 17, 18, 14, 13, 12.



Job 17040060	Truss T4	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	I29490368
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:44 2017 Page 1  
ID:hrNJ0tX18MoR5G0dvQtI5hyd6LK-7EgfnhZ9fsbhpcaTNnn3UZ2AR9JEpoWN0kr81zTTj1

Job Reference (optional)



Scale = 1:46.1

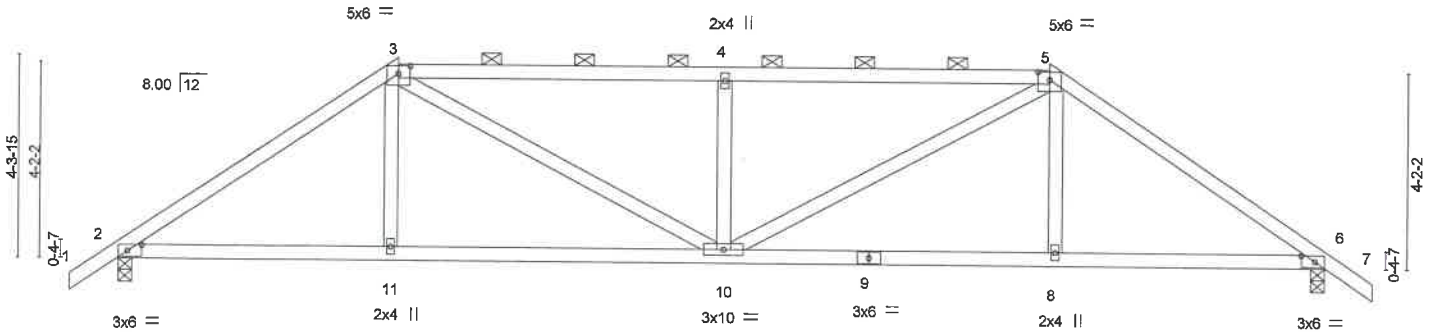


Plate Offsets (X, Y) --	[2:0-3-9-0-1-8]	[3:0-3-0-0-2-0]	[5:0-3-0-0-2-0]	[6:0-3-9-0-1-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.77	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.53	Vert(LL) -0.09 10 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.24	Vert(CT) -0.18 10-11 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.05 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 95 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins, except 2-0-0 oc purlins (3-1-4 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1234/0-3-8, 6=1234/0-3-8  
Max Horz 2=120(LC 11)  
Max Uplift 2=-101(LC 12), 6=-101(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1776/333, 3-4=-2021/454, 4-5=-2021/454, 5-6=-1776/333  
BOT CHORD 2-11=-183/1400, 10-11=-185/1394, 8-10=-162/1394, 6-8=-160/1400  
WEBS 3-11=0/275, 3-10=-216/809, 4-10=-582/241, 5-10=-216/809, 5-8=0/275

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=101, 6=101.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



18023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T4A	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	I29490369
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:44 2017 Page 1  
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Scale = 1:46.1

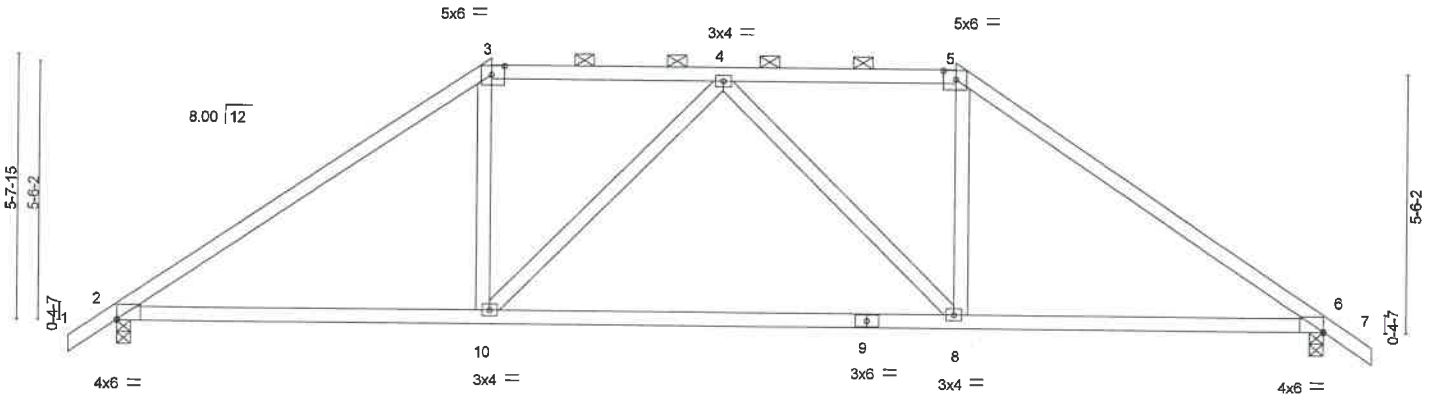


Plate Offsets (X, Y)--	[2:0-0-0,0-0-4], [3:0-3-4,0-2-4], [5:0-3-4,0-2-4], [6:0-0-0,0-0-4]
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LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.83	Vert(LL) -0.20	8-10	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.78	Vert(CT) -0.40	8-10	>779	180		
BCLL 0.0	Rep Stress Incr YES	WB 0.34	Horz(CT) 0.05	6	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS					Weight: 93 lb	FT = 18%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF 1650F 1.6E *Except*	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-11-7 max.): 3-5.
3-5: 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
BOT CHORD 2x4 SPF No.2	
WEBS 2x4 SPF No.2	

REACTIONS. (lb/size) 2=1234/0-3-8, 6=1234/0-3-8  
 Max Horz 2=154(LC 11)  
 Max Uplift 2=-123(LC 12), 6=-123(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1673/299, 3-4=-1268/322, 4-5=-1268/322, 5-6=-1673/299  
 BOT CHORD 2-10=-114/1277, 8-10=-161/1435, 6-8=-98/1277  
 WEBS 3-10=-9/454, 4-10=-367/201, 4-8=-367/201, 5-8=-9/454

- NOTES-
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=tb) 2=123, 6=123.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPII Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

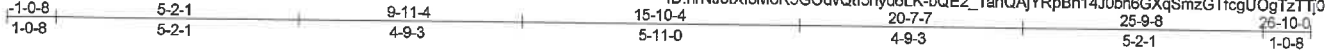
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T4B	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	12949370
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:45 2017 Page 1

ID:hrNJOtX18MoR5G0dvQl5Hyd6LK-bQE2\_1anQAJYRpBn14J0bh6GXqSmzGTfcgUOgTZTj0



Scale = 1:48.1

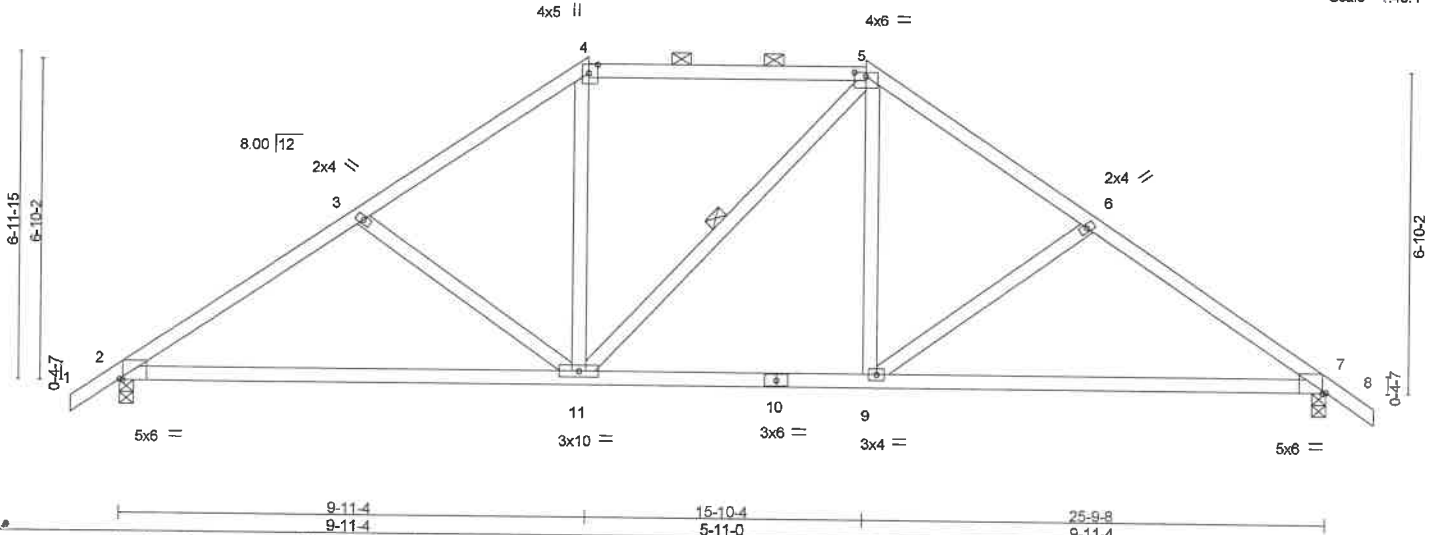


Plate Offsets (X, Y)-- [2:0-0-13, Edge], [4:0-2-4, 0-2-4], [5:0-3-0, 0-1-0], [7:0-0-13, Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.60	Vert(LL) -0.21 9-17 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.70	Vert(CT) -0.44 9-17 >702 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.22	Horz(CT) 0.05 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS		Weight: 104 lb	FT = 18%

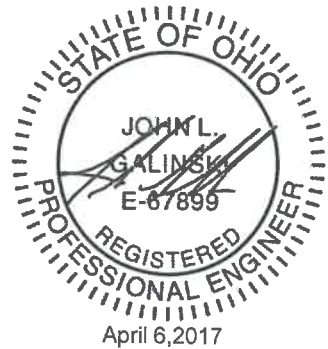
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-0-12 oc purlins, except
BOT CHORD 2x4 SPF No.2	2-0-0 oc purlins (4-5-0 max.); 4-5.
WEBS 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
	WEBS 1 Row at midpt 5-11

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1234/0-3-8, 7=1234/0-3-8  
 Max Horz 2=189(LC 11)  
 Max Uplift 2=-140(LC 12), 7=-140(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1707/350, 3-4=-1425/317, 4-5=-1102/310, 5-6=-1425/317, 6-7=-1707/350  
 BOT CHORD 2-11=-184/1383, 9-11=-35/1101, 7-9=-184/1383  
 WEBS 3-11=-371/209, 4-11=-15/403, 5-9=-32/403, 6-9=-372/209

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=140, 7=140.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





Job 17040060	Truss T4C	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	129490371
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Carter Components, Millbury, Ohio 43447

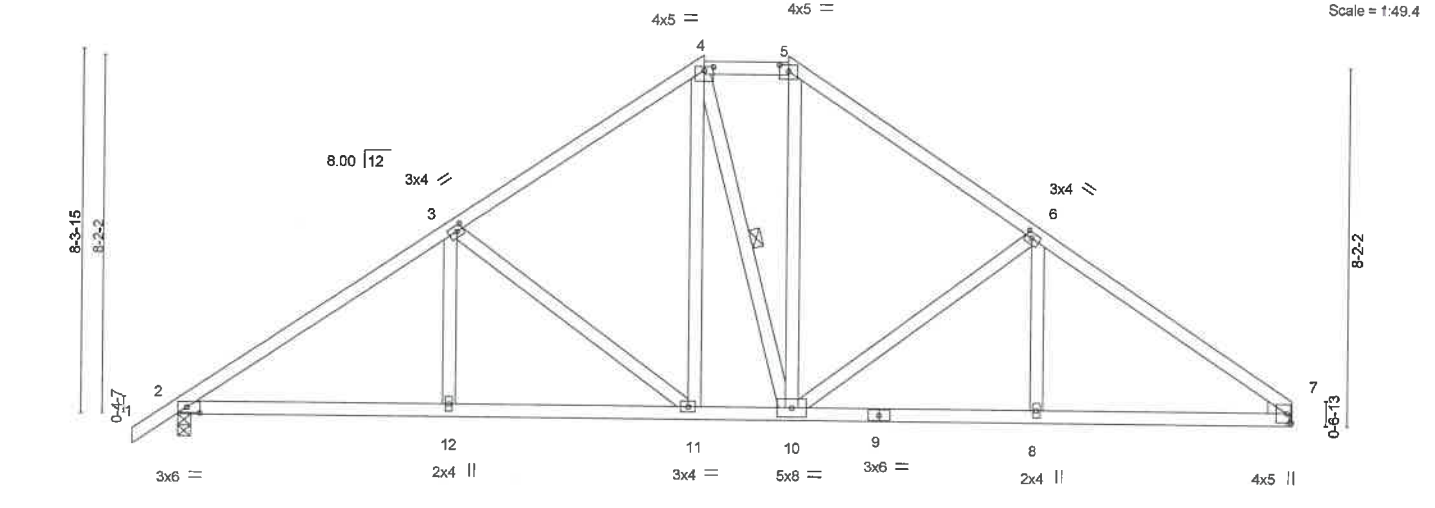
Job Reference (optional)

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:46 2017 Page 1

ID:hrNJ0tXl8MoR5G0dvQtI5hyd6LK-3coQBNbQBURP2ymzaogF8veTbEr1ifopqKDyDwzTTj?



Scale = 1:49.4



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.45	Vert(LL)	0.06 12-15	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.51	Vert(CT)	-0.11 12-15	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.47	Horz(CT)	0.05 7	n/a	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-MS						
								Weight: 117 lb	FT = 18%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 4-0-9 oc purlins, except 2-0-0 oc purlins (5-11-1 max.): 4-5.
BOT CHORD	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SPF No.2	WEBS	1 Row at midpt 4-10
WEDGE			
Right: 2x4 SPF No.2			

**REACTIONS.** (lb/size) 2=1222/0-3-8, 7=1146/Mechanical  
 Max Horz 2=217(LC 9)  
 Max Uplift 2=-154(LC 12), 7=-126(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1730/307, 3-4=-1242/310, 4-5=-929/307, 5-6=-1239/309, 6-7=-1662/302  
 BOT CHORD 2-12=-205/1360, 11-12=-205/1360, 10-11=-28/927, 8-10=-161/1303, 7-8=-161/1303  
 WEBS 3-12=0/262, 3-11=-557/218, 4-11=-78/384, 5-10=-72/366, 6-10=-493/214

**NOTES-**  
 1) Unbalanced roof live loads have been considered for this design.  
 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
 3) Provide adequate drainage to prevent water ponding.  
 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
 5) Refer to girder(s) for truss to truss connections.  
 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=154, 7=126.  
 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
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**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T4D	Truss Type Common	Qty 8	Ply 1	HBJD- Harman	I29490372
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Carter Components, Millbury, Ohio 43447

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ID:hrNJ0tXl8MoR5G0dvQtl5hyd6LK-XpMoPjb2ynzFg6L98VLUg6Bd6eAXR4ey3\_zVIMzTTI



Scale = 1:55.2

Plate Offsets (X, Y)-- [2:0-3-9,0-1-8], [3:0-1-12,0-1-8], [6:0-1-12,0-1-8], [7:0-0-7,0-0-11], [7:0-0-15,0-4-14], [7:0-2-8,0-1-2]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.53	Vert(LL)	-0.07	11-14	>999	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.56	Vert(CT)	-0.15	11-14	>999		
BCLL 0.0	Lumber DOL 1.15	WB 0.62	Horz(CT)	0.05	7	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS						
	Code IRC2015/TPI2014						Weight: 102 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Right: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-11-0 oc purtins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1222/0-3-8, 7=1146/Mechanical  
 Max Horz 2=236(LC 9)  
 Max Uplift 2=-158(LC 12), 7=-131(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1709/300, 3-5=-1174/300, 5-6=-1171/299, 6-7=-1649/297  
 BOT CHORD 2-11=-216/1335, 10-11=-216/1335, 8-10=-150/1286, 7-8=-150/1286  
 WEBS 5-10=-164/760, 6-10=-557/238, 3-10=-610/242, 3-11=0/275

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=158, 7=131.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



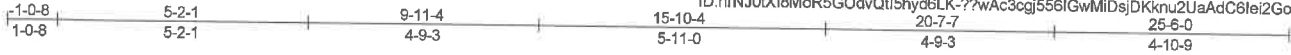
Job 17040060	Truss T4F	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	129490374
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Carter Components, Millbury, Ohio 43447

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ID:hrNJ0tX18MoR5GOdvQtI5hyd6LK-??wAc3cgj5561GwMiDsDKknu2UaAdC6le2GozTTiz

Job Reference (optional)



Scale = 1:44.7

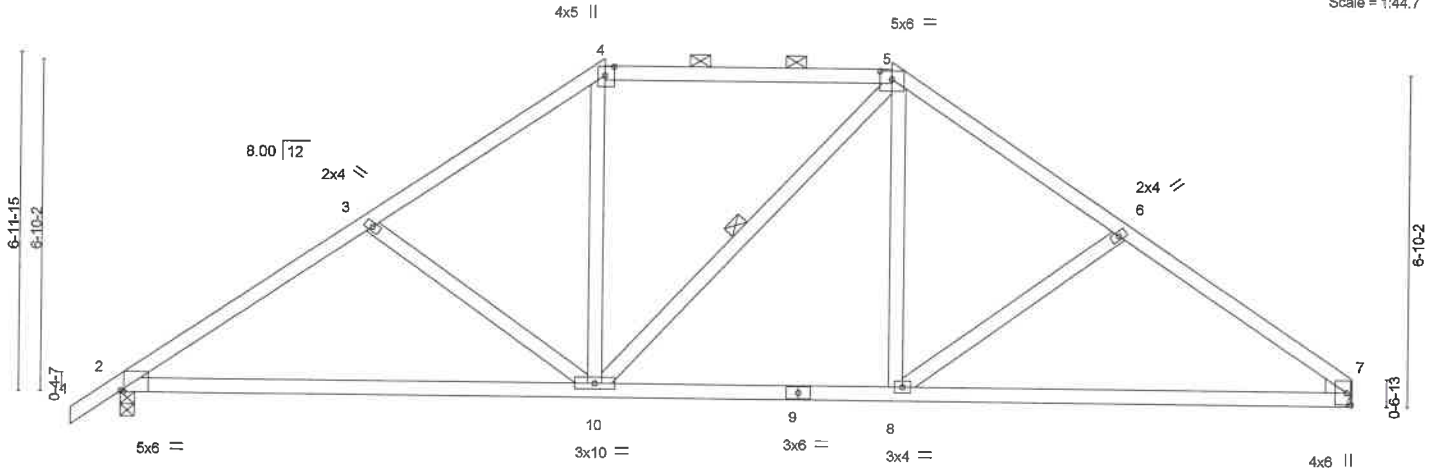


Plate Offsets (X,Y)--	[2:0-0-13 Edge], [4:0-2-4, 0-2-4], [5:0-3-0, 0-2-0], [7:0-0-7, 0-0-11], [7:0-0-15, 0-4-14], [7:0-3-0, 0-1-2]
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LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.59	Vert(LL)	-0.20 10-13	>999	240	MT20	197/144
*TCDL 10.0	Plate Grip DOL 1.15	BC 0.70	Vert(CT)	-0.43 10-13	>716	180		
BCLL 0.0	Lumber DOL 1.15	WB 0.22	Horz(CT)	0.05 7	n/a	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS						
	Code IRC2015/TPI2014						Weight: 102 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 WEDGE  
 Right: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-1-3 oc purlins, except 2-0-0 oc purlins (4-5-11 max.); 4-5.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-10

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1222/0-3-8, 7=1146/Mechanical  
 Max Horz 2=182(LC 9)  
 Max Uplift 2=-140(LC 12), 7=-112(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1688/348, 3-4=-1406/315, 4-5=-1085/309, 5-6=-1380/313, 6-7=-1645/341  
 BOT CHORD 2-10=-213/1366, 8-10=-63/1069, 7-8=-202/1310  
 WEBS 3-10=-371/209, 4-10=-15/396, 5-8=-31/364, 6-8=-331/201

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) Refer to girder(s) for truss to truss connections.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=140, 7=112.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

**MiTek**  
 16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss T4G	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	129490375
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:49 2017 Page 1

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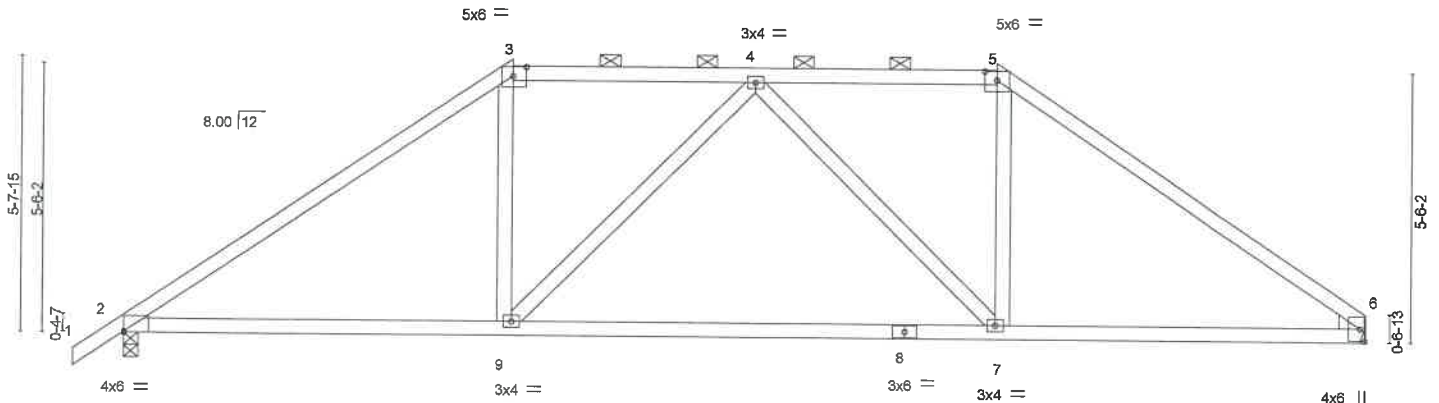


Plate Offsets (X, Y)	[2:0-0-0,0-0-4], [3:0-3-4,0-2-4], [5:0-3-0,0-2-3], [6:0-0-7,0-0-11], [6:0-0-15,0-4-14], [6:0-3-0,0-1-2]
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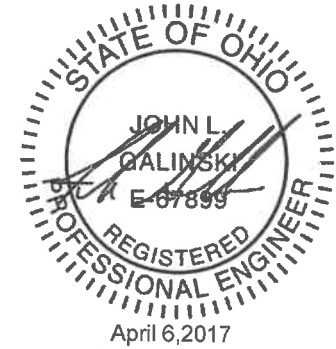
LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.91	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.78	Vert(LL) -0.21 7-9 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.37	Vert(CT) -0.42 7-9 >728 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.05 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 92 lb	FT = 18%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2 *Except* 1-3: 2x4 SPF 1650F 1.6E	TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-11-13 max.): 3-5.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	
WEDGE	
Right: 2x4 SPF No.2	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1222/0-3-8, 6=1146/Mechanical  
Max Horz 2=148(LC 9)  
Max Uplift 2=-123(LC 12), 6=-94(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1654/297, 3-4=-1252/320, 4-5=-1217/316, 5-6=-1610/297  
BOT CHORD 2-9=-127/1261, 7-9=-190/1406, 6-7=-123/1227  
WEBS 3-9=-9/446, 4-9=-349/202, 4-7=-392/199, 5-7=-8/450

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6 except (jt=lb) 2=123.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Job 17040060	Truss T4GR	Truss Type Hip Girder	Qty 1	Ply 1	HBJD- Harman	129490376
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Carter Components, Millbury, Ohio 43447

Job Reference (optional)

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ID:hrNJ0Xl8MoR5GOdvQtI5hyd6LK-yO1x1kewEilQx4kpdubllp5lr7neT?OlyB9LhzTTix



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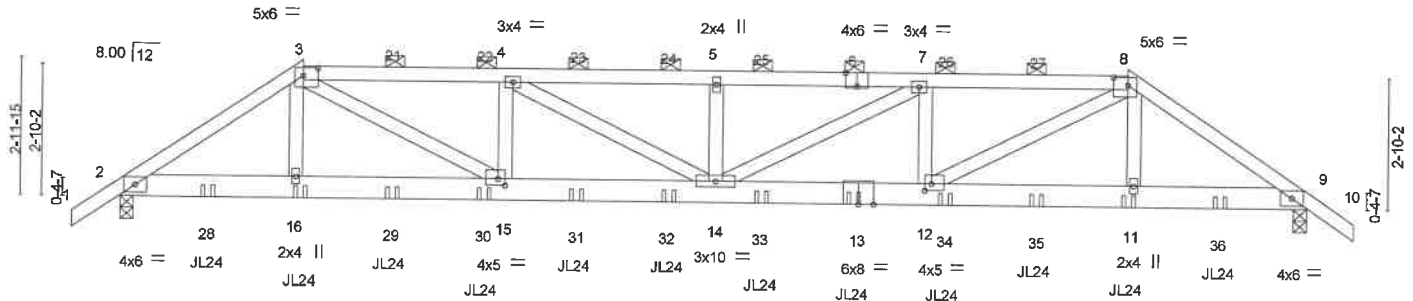


Plate Offsets (X, Y)--	[3:0-3-12 0-2-0], [6:0-3-0 Edge], [8:0-3-12 0-2-0], [12:0-1-12 0-1-12], [15:0-1-12 0-1-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.76	Vert(LL)	-0.24	14	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.84	Vert(CT)	-0.44	14	>709		
BCLL 0.0	Rep Stress Incr	NO	WB 0.45	Horz(CT)	0.08	9	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MS						
								Weight: 115 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x6 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-4-8 oc purlins, except 2-0-0 oc purlins (2-5-0 max.): 3-8.  
 BOT CHORD Rigid ceiling directly applied or 7-8-9 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1748/0-3-8, 9=1748/0-3-8  
 Max Horz 2=85(LC 26)  
 Max Uplift 2=-350(LC 8), 9=-350(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2758/614, 3-4=-3830/919, 4-5=-4334/1026, 5-7=-4334/1026, 7-8=-3831/919, 8-9=-2758/613  
 BOT CHORD 2-16=-535/2273, 15-16=-537/2257, 14-15=-920/3828, 12-14=-890/3829, 11-12=-465/2258, 9-11=-463/2274  
 WEBS 3-16=0/291, 3-15=-489/1843, 4-15=-762/326, 4-14=-157/593, 5-14=-403/216, 7-14=-157/591, 7-12=-762/326, 8-12=-490/1844, 8-11=0/291

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Provide adequate drainage to prevent water ponding.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=350, 9=350.
  - 6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 7) Use USP JL24 (With 10d nails into Girder & NA9D nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-10-12 from the left end to 23-10-12 to connect truss(es) to front face of bottom chord.
  - 8) Fill all nail holes where hanger is in contact with lumber.
  - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 92 lb down and 84 lb up at 3-11-4, 100 lb down and 79 lb up at 5-10-12, 100 lb down and 79 lb up at 7-10-12, 100 lb down and 79 lb up at 9-10-12, 100 lb down and 79 lb up at 11-10-12, 100 lb down and 79 lb up at 13-10-12, 100 lb down and 79 lb up at 15-10-12, 100 lb down and 79 lb up at 17-10-12, and 100 lb down and 79 lb up at 19-10-12, and 92 lb down and 84 lb up at 21-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
  - 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

Continued on page 2



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Job 17040060	Truss T4GR	Truss Type Hip Girder	Qty 1	Ply 1	HBJD- Harman  Job Reference (optional)	I29490376
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:50 2017 Page 2  
ID:hrNJ0tX18MoR5GOdvQt5hyd6LK-yO1x1kewEiLqXa4kpdu8llp5lr7neT?OlyB9LhzTTix

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-70, 3-8=-70, 8-10=-70, 2-9=-20

Concentrated Loads (lb)

Vert: 3=-43(F) 6=-43(F) 13=-31(F) 16=-31(F) 8=-43(F) 11=-31(F) 21=-43(F) 22=-43(F) 23=-43(F) 24=-43(F) 25=-43(F) 26=-43(F) 27=-43(F) 28=-141(F) 29=-31(F)  
30=-31(F) 31=-31(F) 32=-31(F) 33=-31(F) 34=-31(F) 35=-31(F) 36=-141(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017





Job 17040060	Truss T4GR2	Truss Type Half Hip Girder	Qty 1	Ply 1	HBJD- Harman  Job Reference (optional)	I29490377
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:51 2017 Page 2  
ID:hrNJ0tX18MoR5GOdvQt15hyd6LK-QabJF4eY?0Th9kfwNLPQryMFJFSPNuzY\_cxjl7zTTiw

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-70, 3-8=-70, 2-9=-20

Concentrated Loads (lb)

Vert: 3=-43(B) 6=-43(B) 11=-31(B) 14=-31(B) 10=-31(B) 7=-43(B) 17=-43(B) 18=-43(B) 19=-43(B) 20=-43(B) 21=-43(B) 22=-43(B) 23=-43(B) 24=-43(B) 25=-141(B)  
26=-31(B) 27=-31(B) 28=-31(B) 29=-31(B) 30=-31(B) 31=-31(B) 32=-31(B) 33=-31(B)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss T4H	Truss Type Hip	Qty 1	Ply 1	HBJD- Harman	I29490378
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Carter Components, Millbury, Ohio 43447

Job Reference (optional)

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:52 2017 Page 1  
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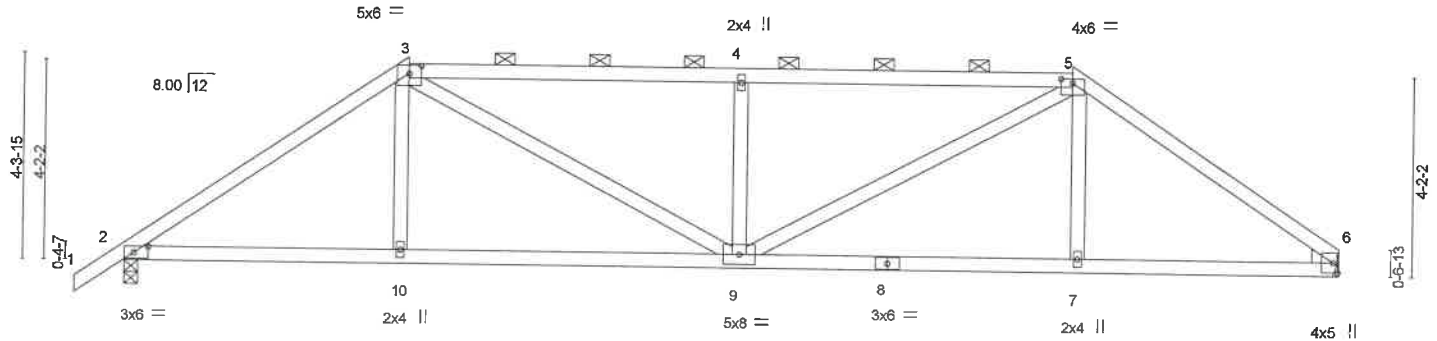


Plate Offsets (X, Y)	5-11-4 5-11-4	12-10-12 6-11-8	19-10-4 6-11-8	25-6-0 5-7-12
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<b>LOADING</b> (psf)	<b>SPACING</b>	<b>CSI</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.78	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.52	Vert(LL) -0.09 7-9 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.24	Vert(CT) -0.20 7-9 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.05 6 n/a n/a		
	Code IRC2015/TPI2014			Weight: 93 lb	FT = 16%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
WEDGE  
Right: 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins, except  
2-0-0 oc purlins (3-1-0 max.): 3-5.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1222/0-3-8, 6=1146/Mechanical  
Max Horz 2=113(LC 9)  
Max Uplift 2=-101(LC 12), 6=-88(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1754/331, 3-4=-1986/451, 4-5=-1986/451, 5-6=-1686/327  
BOT CHORD 2-10=-190/1382, 9-10=-193/1376, 7-9=-183/1322, 6-7=-181/1327  
WEBS 3-10=0/274, 3-9=-214/791, 4-9=-586/241, 5-9=-215/846

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6 except (jt=lb) 2=101.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

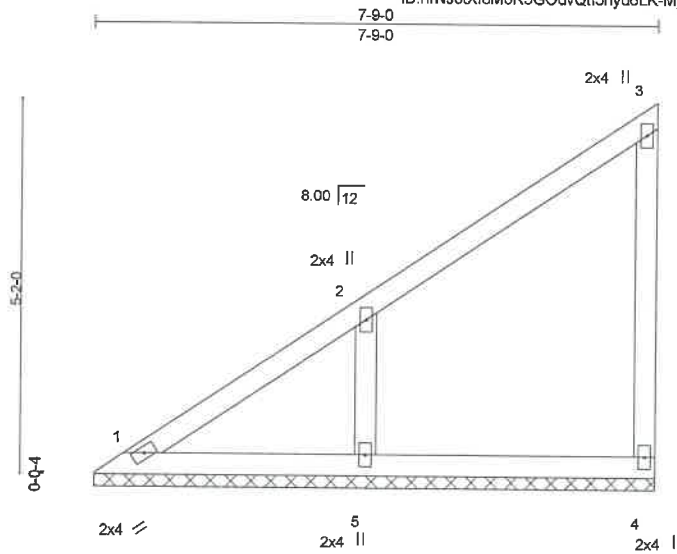


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss V1	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490379
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:53 2017 Page 1  
ID:hrNJ0tXl8MoR5G0dvQtI5hyd6LK-Myj3fmgpXcjPO1oJVmSuwNRka3Kwvw6rRwQpy0zTTiu



Scale = 1:29.8

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.21	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.05	Horz(CT)	-0.00	4	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P						
								Weight: 26 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=103/7-8-10, 4=136/7-8-10, 5=402/7-8-10  
Max Horz 1=189(LC 9)  
Max Uplift 1=-11(LC 8), 4=-41(LC 9), 5=-156(LC 12)  
Max Grav 1=135(LC 20), 4=153(LC 19), 5=418(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-283/269  
WEBS 2-5=-328/225

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=156.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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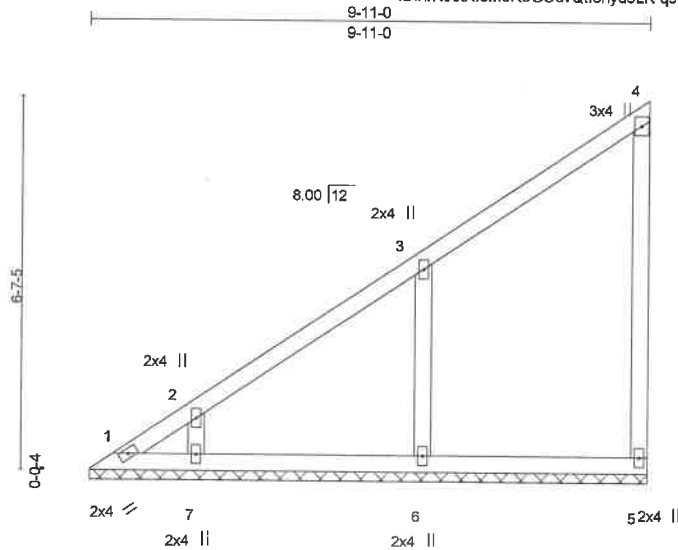


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss V2	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490380
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:54 2017 Page 1  
 ID:hrNJ0tXl8MoR5G0ctvQtI5hyd6LK-q9HRi6RlxsG0BNV2Tz7Sb\_vsTg8aMs\_ga9NUSzTTi



Scale = 1:38.3

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.24	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.08	Horz(CT)	-0.00	5	n/a		
BCDL 10.0	Code IRC2015/TP12014		Matrix-S					Weight: 36 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 9-10-10.  
 (lb) - Max Horz 1=247(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 6=-155(LC 12), 7=-112(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=413(LC 19), 7=301(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-393/357, 2-3=-300/282  
 WEBS 3-6=-330/228

- NOTES-**
- Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 6=155, 7=112.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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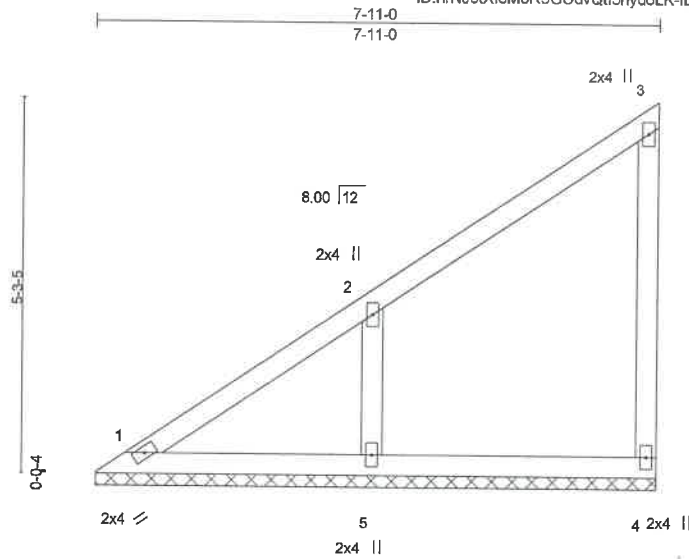


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss V3	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490381
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:55 2017 Page 1  
ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-lLrq4Sh33F\_7dLycBUM?oW3ys0KJqZ8vEvv0uzTTis



Scale = 1:30.4

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.22	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) -0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 27 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
Rigid ceiling directly applied or 10-0-0 oc bracing.

MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=111/7-10-10, 4=134/7-10-10, 5=411/7-10-10  
Max Horz 1=194(LC 9)  
Max Uplift 1=-10(LC 8), 4=-41(LC 9), 5=-159(LC 12)  
Max Grav 1=142(LC 20), 4=151(LC 19), 5=426(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-287/273  
WEBS 2-5=-335/228

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=159.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

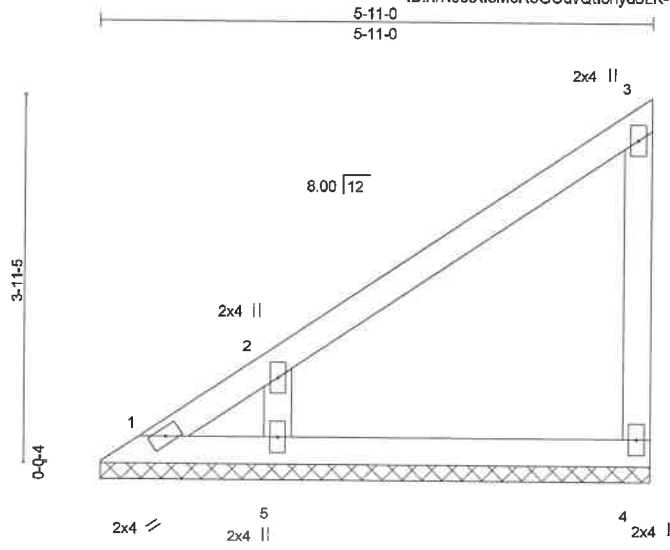


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss V4	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490382
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITEK Industries, Inc. Thu Apr 06 09:52:55 2017 Page 1  
ID:hrNJ0X18MoR5GOdvQtI5hyd6LK-ILrq4Sh33F\_7dLYicBUM?cW3Ns0YJqk8vEvw0uzTTis



Scale = 1:23.2

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.04	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2015/TPI2014			Weight: 19 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-11-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=-24/5-10-10, 4=140/5-10-10, 5=360/5-10-10  
 Max Horz 1=140(LC 9)  
 Max Uplift 1=-63(LC 10), 4=-34(LC 9), 5=-139(LC 12)  
 Max Grav 1=82(LC 12), 4=154(LC 19), 5=373(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-252/238  
 WEBS 2-5=-293/209

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Gable requires continuous bottom chord bearing.
  - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 4 except (jt=lb) 5=139.

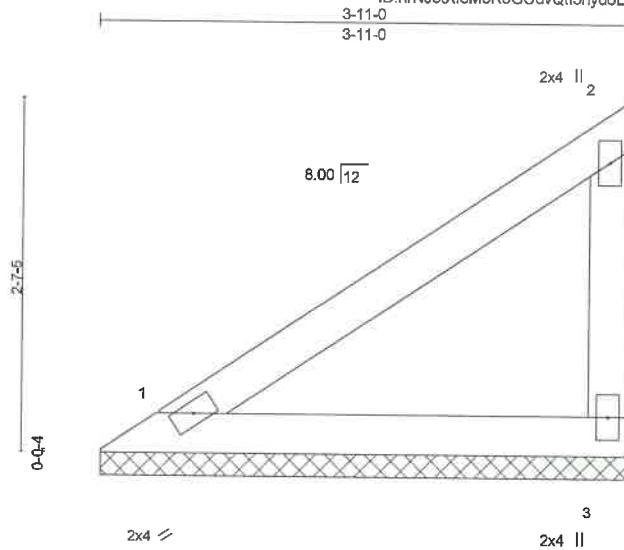


<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b>          Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	 16023 Swingley Ridge Rd Chesterfield, MO 63017
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Job 17040060	Truss V5	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490383
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:56 2017 Page 1  
ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-mXPCloihqY6\_FVXuAu?bY03E4GMg2HYH7ueTYLzTTir



Scale: 3/4"=1'

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.20	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.11	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-P					Weight: 11 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
WEBS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-11-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=148/3-10-10, 3=148/3-10-10  
Max Horz 1=87(LC 9)  
Max Uplift 1=-12(LC 12), 3=-43(LC 12)  
Max Grav 1=148(LC 1), 3=159(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 10/03/2015 BEFORE USE.**

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16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss V6	Truss Type Valley	Qty 1	Ply 1	HBJD - Harman	I29490384
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:56 2017 Page 1  
 ID:hrNJ0tXl6MoR5G0dvQlI5hyd6LK-mXPCloihqY6\_FVXuAu?bY03D2GMz2Fch7ueTYLzTTr  
 24-5-12 11-2-4



Scale = 1:51.6

<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.26	in (loc) l/def L/d	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.09	Vert(LL) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.19	Vert(CT) n/a - n/a 999		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Horz(CT) 0.00 8 n/a n/a		
				Weight: 100 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SP 2400F 2.0E  
 WEBS 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 4-11

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 24-5-6.  
 (lb) - Max Horz 1=239(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 8 except 12=-141(LC 12), 13=-177(LC 12), 10=-150(LC 13), 9=-151(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 8 except 11=362(LC 22), 12=363(LC 19), 13=476(LC 19), 10=397(LC 20), 9=356(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-260/231, 3-4=-271/290, 4-5=-273/289  
 WEBS 4-11=-280/83, 3-12=-295/189, 2-13=-357/225, 5-10=-318/201, 6-9=-275/184

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8 except (j=lb) 12=141, 13=177, 10=150, 9=151.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

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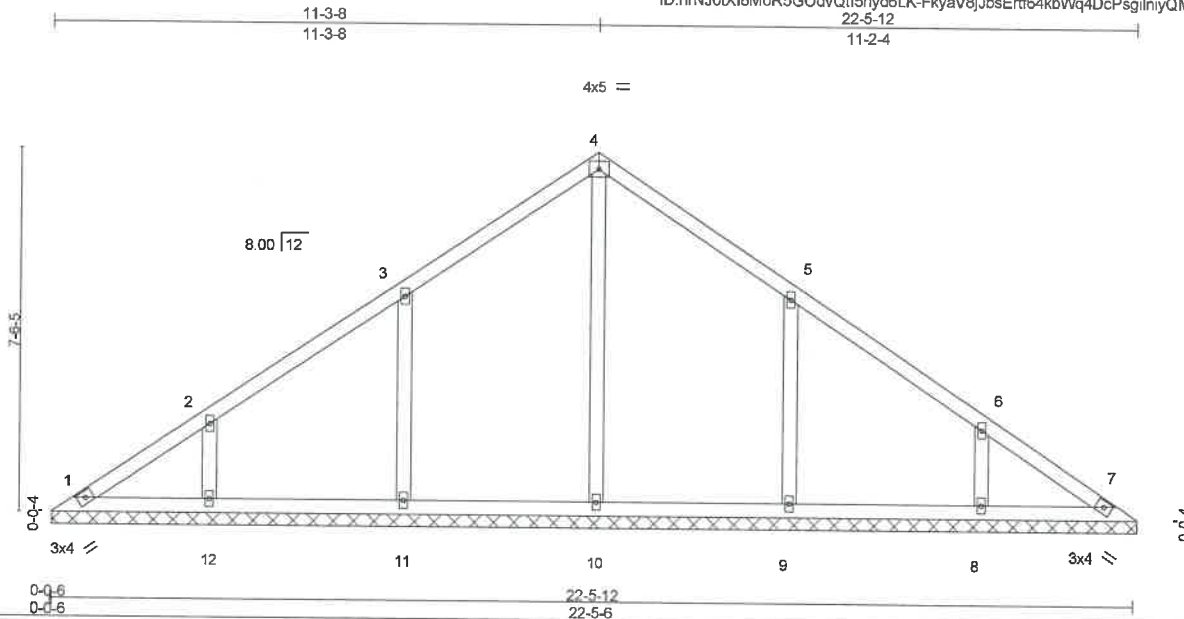
16023 Swingley Ridge Rd  
 Chesterfield, MO 63017



Job 17040060	Truss V7	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490385
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:57 2017 Page 1  
ID:hrNJ0tX18MoR5G0dvQtI5hyd6LK-FkyaV8JbsErtf64kbWq4DcPsgjlniyQMYO15nzTTiq



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.05	Vert(LL) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.18	Vert(CT) n/a - n/a 999		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S	Horz(CT) 0.00 7 n/a n/a		
				Weight: 85 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SP 2400F 2.0E  
OTHERS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 22-6-4.  
(lb) - Max Horz 1=188(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 11=156(LC 12), 12=128(LC 12), 9=156(LC 13), 8=128(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=280(LC 1), 11=401(LC 19), 12=347(LC 19), 9=401(LC 20), 8=347(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-11=-321/206, 2-12=-266/169, 5-9=-321/205, 6-8=-266/169

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are 2x4 MT20 unless otherwise indicated.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 11=156, 12=128, 9=156, 8=128.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITP1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job 17040060	Truss V8	Truss Type Valley	Qty 1	Ply 1	HBJD- Haman	I29490386
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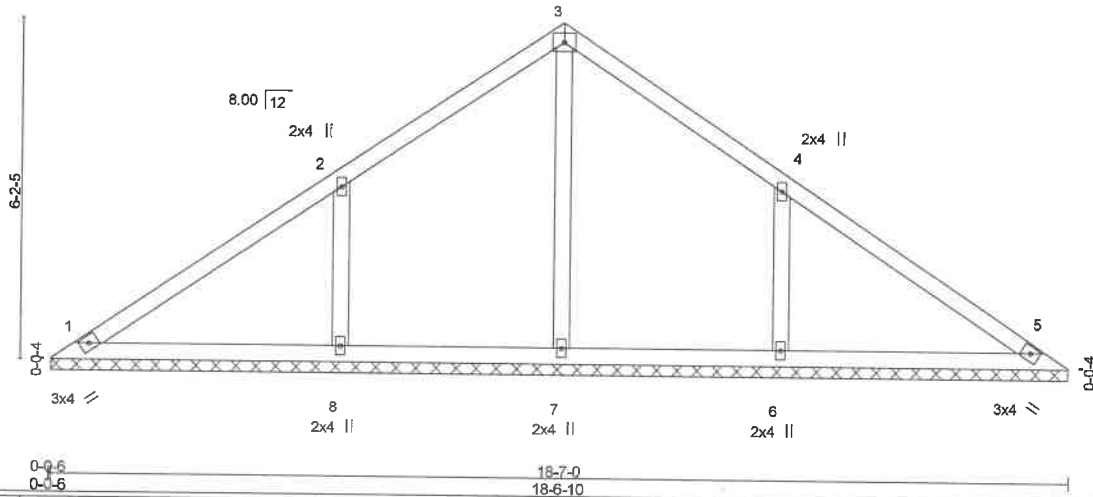
Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:58 2017 Page 1  
 ID:hrNJ0tXl8MoR5GOdvQtI5hyd6LK-jwWjTlxMAMiUohHHJ13dr8ZL41RWANabC7adDzTTip



4x5 =

Scale = 1:39.3



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	2-0-0	TC 0.28	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.09	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.11	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 65 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SP 2400F 2.0E  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD  
 BOT CHORD

Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 18-6-4.  
 (lb) - Max Horz 1=153(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-192(LC 12), 6=-192(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=503(LC 19), 6=502(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-8=-382/241, 4-6=-382/241

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (t=lb) 8=192, 6=192.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-39 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

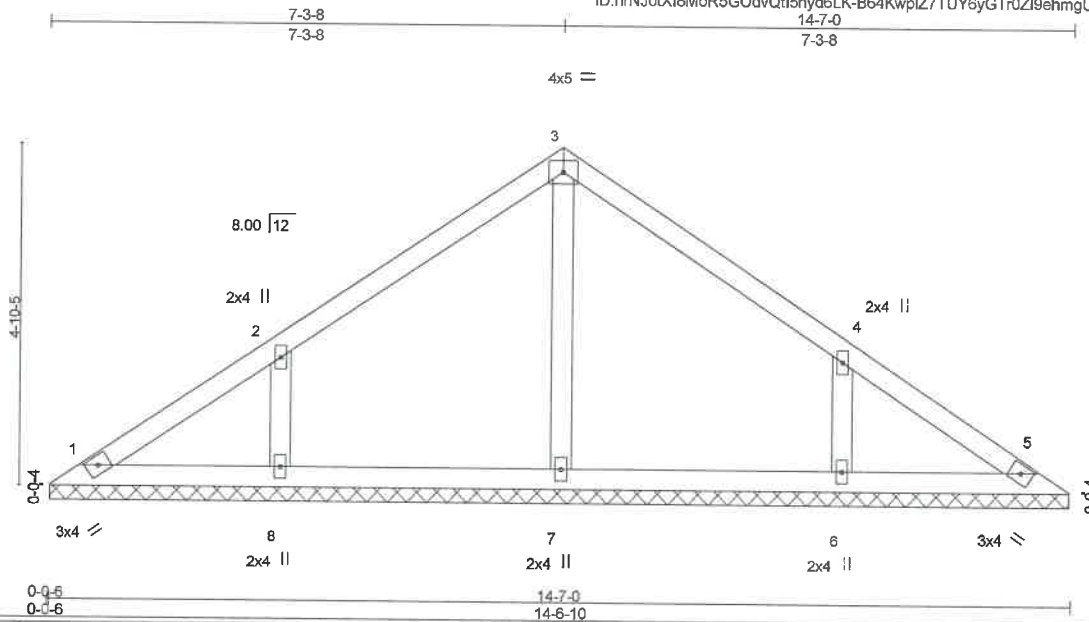


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040060	Truss V9	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	I29490387
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MITek Industries, Inc. Thu Apr 06 09:52:59 2017 Page 1  
ID:hrNJ0tXl8MoR5G0dvQt15hyd6LK-B64KwplZ7TUy6yGT0Zi9ehmgUNVfD5jqs89gzTTio



<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.17	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S					Weight: 44 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.


MITek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 14-6-4.  
(lb) - Max Horz 1=-119(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-148(LC 12), 6=-148(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=293(LC 1), 8=376(LC 19), 6=376(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-298/190, 4-6=-298/190

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=148, 6=148.

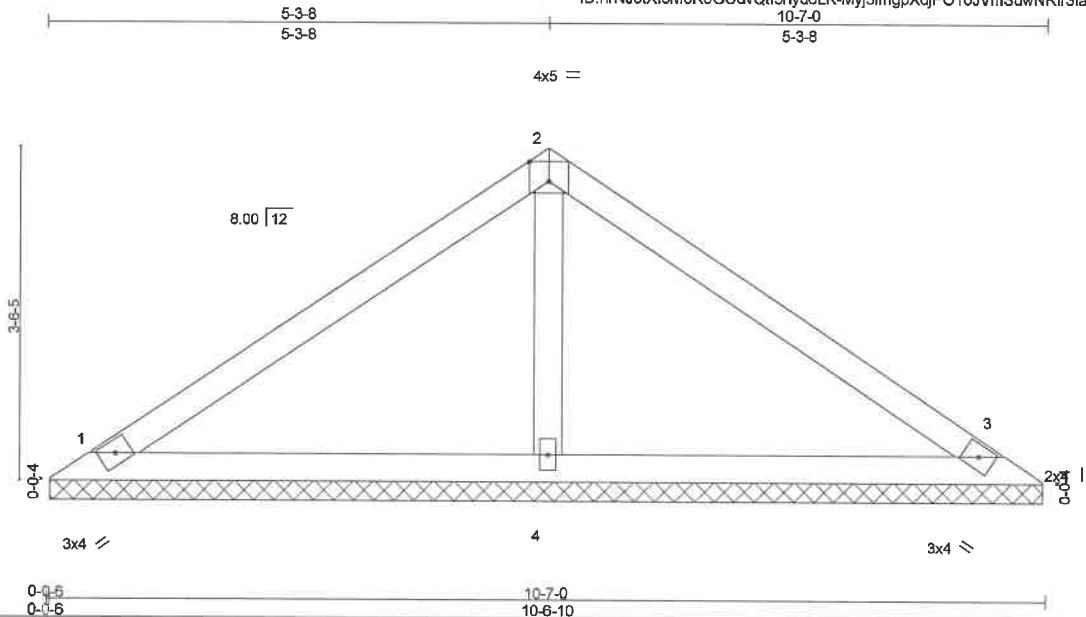


<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.</b>  Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.</p>	 16023 Swingley Ridge Rd Chesterfield, MO 63017
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Job 17040060	Truss V10	Truss Type Valley	Qty 1	Ply 1	HBJD- Harman	129490388
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:53 2017 Page 1  
 ID:hrNJ0IX18MoR5G0dvQt15hyd6LK-Myj3fmgpXcjpO1oJvMswNRir3larwRwQpy0zTiu  
 10-7-0  
 5-3-8



Scale = 1:22.9

* Plate Offsets (X,Y)--		[2:0-2-8 Edge]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S						Weight: 29 lb	FT = 18%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 OTHERS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=213/10-6-4, 3=213/10-6-4, 4=440/10-6-4  
 Max Horz 1=-84(LC 10)  
 Max Uplift 1=-40(LC 12), 3=-51(LC 13), 4=-21(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-293/97

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANS/ITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

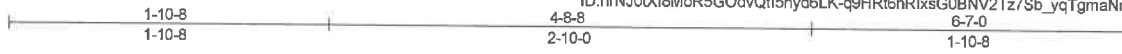


16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 17040080	Truss V11	Truss Type GABLE	Qty 1	Ply 1	HBJD- Harman	I29490389
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Carter Components, Millbury, Ohio 43447

8.030 s Jan 23 2017 MiTek Industries, Inc. Thu Apr 06 09:52:54 2017 Page 1  
ID:hrNJ0tXl8MoR5GOdvQt15hyd6LK-q9HRt6hRlxsG0BNV2Tz7Sb\_yqTgmaNm\_ga9NUSzTTIt



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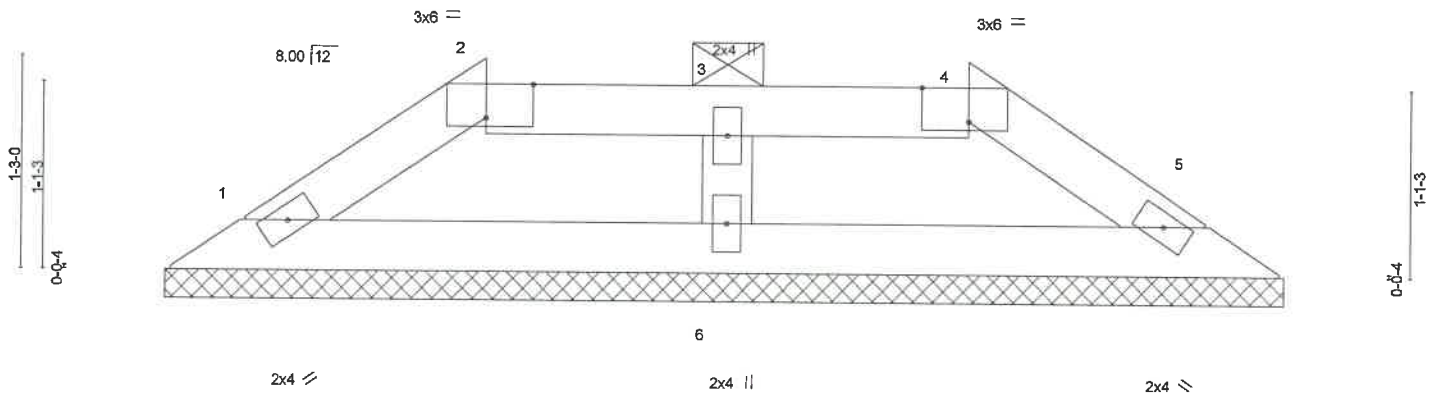


Plate Offsets (X,Y)-	[2:0-3-4, Edge], [4:0-3-4, Edge]	6-7-0 6-7-0
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.05	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.07	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.02	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2015/TPI2014			Weight: 15 lb	FT = 18%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2  
OTHERS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 2-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=142/6-7-0, 5=142/6-7-0, 6=221/6-7-0  
Max Horz 1=-22(LC 8)  
Max Uplift 1=-24(LC 12), 5=-25(LC 13), 6=-17(LC 9)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=115mph (3-second gust) V<sub>asd</sub>=91mph; TC<sub>DL</sub>=6.0psf; BC<sub>DL</sub>=6.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Provide adequate drainage to prevent water ponding.
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 6.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**

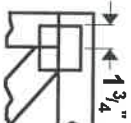
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



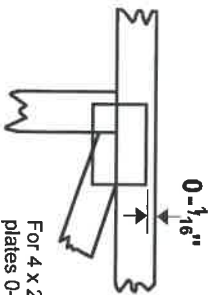
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless X, Y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.



This symbol indicates the required direction of slots in connector plates.

\* Plate location details available in MITek 20/20 software or upon request.

## PLATE SIZE

4 X 4

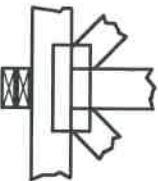
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## BEARING



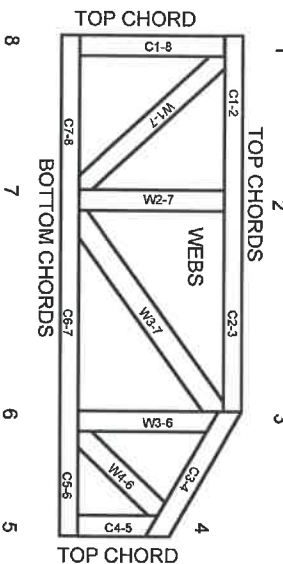
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

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# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor 1 bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.



MITek Engineering Reference Sheet: Mill-7473 rev. 10/03/2015



# REScheck Software Version 4.6.3 Compliance Certificate

Project Harmon Residence

Energy Code: **2009 IECC**  
 Location: **Bowling Green, Ohio**  
 Construction Type: **Single-family**  
 Project Type: **New Construction**  
 Conditioned Floor Area: **2,252 ft<sup>2</sup>**  
 Glazing Area: **14%**  
 Climate Zone: **5 (6482 HDD)**  
 Permit Date:  
 Permit Number:

Construction Site:  
 Clairmont  
 Napoleon, OH

Owner/Agent:

Designer/Contractor:  
 Homes By Josh Doyle

## Compliance: Passes using UA trade-off

Compliance: **6.0% Better Than Code** Maximum UA: **383** Your UA: **360**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

## Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1,283	0.0	50.0	0.019	24
Wall 1: Wood Frame, 16" o.c.	2,560	17.0	0.0	0.064	138
Window 1: Wood Frame:Double Pane	360			0.290	104
Door 1: Solid	42			0.300	13
Basement Wall 1: Solid Concrete or Masonry Wall height: 7.0' Depth below grade: 7.0' Insulation depth: 7.0'	1,204	0.0	10.0	0.057	69
Basement Wall 2: Solid Concrete or Masonry Wall height: 1.0' Depth below grade: 0.0' Insulation depth: 1.0'	172	0.0	13.0	0.068	12

**Compliance Statement:** The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in REScheck Version 4.6.3 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Don Rose Estimator  
 Name - Title

Rombree  
 Signature

5-24-17  
 Date



# REScheck Software Version 4.6.3

## Inspection Checklist

Energy Code: 2009 IECC

Requirements: 0.0% were addressed directly in the REScheck software






Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.2 [PR1] <sup>1</sup> 	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
103.2, 403.7 [PR3] <sup>1</sup> 	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the commercial code.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.6 [PR2] <sup>2</sup> 	Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods.	Heating: Btu/hr _____  Cooling: Btu/hr _____	Heating: Btu/hr _____  Cooling: Btu/hr _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO4] <sup>1</sup> 	Conditioned basement wall insulation R-value. Where interior insulation is used, verification may need to occur during Insulation Inspection. Not required in warm-humid locations in Climate Zone 3.	R-_____	R-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [FO5] <sup>1</sup> 	Conditioned basement wall insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.7 [FO6] <sup>1</sup> 	Conditioned basement wall insulation depth of burial or distance from top of wall.	_____ ft	_____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2.1 [FO11] <sup>2</sup> 	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.8 [FO12] <sup>2</sup> 	Snow- and ice-melting system controls installed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup>	Door U-factor.	U- _____	U- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] <sup>1</sup>	Glazing U-factor (area-weighted average).	U- _____	U- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] <sup>1</sup>	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.4 [FR20] <sup>1</sup>	Fenestration that is not site built is listed and labeled as meeting AAMA/WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.5 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.1 [FR12] <sup>1</sup>	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R- _____ R- _____	R- _____ R- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [FR13] <sup>1</sup>	All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used for supply ducts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R-3.	R- _____	R- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [FR18] <sup>2</sup>	Circulating service hot water pipes are insulated to R-2.	R- _____	R- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation is labeled or the installed R-values provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.2.4, 402.2.5 [IN3] <sup>1</sup>	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies.	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] <sup>1</sup>	Wall insulation is installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2 [FI1] <sup>1</sup> ●	Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft <sup>2</sup> or 20% (whichever is less) where sufficient space is not available.	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [FI2] <sup>1</sup> ●	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.3 [FI3] <sup>1</sup> ●	Attic access hatch and door insulation ≥ R-value of the adjacent assembly.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.2, 402.4.2.1 [FI17] <sup>1</sup> ●	Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection.	ACH 50 = ____	ACH 50 = ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [FI4] <sup>1</sup> ●	Post construction duct tightness test result of ≤8 cfm to outdoors, or ≤12 cfm across systems. Or, rough-in test result of ≤6 cfm across systems or ≤4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	____ cfm	____ cfm	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.1 [FI9] <sup>2</sup> ●	Programmable thermostats installed on forced air furnaces.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.2 [FI10] <sup>2</sup> ●	Heat pump thermostat installed on heat pumps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [FI11] <sup>2</sup> ●	Circulating service hot water systems have automatic or accessible manual controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1 [FI6] <sup>1</sup> ●	50% of lamps in permanent fixtures are high efficacy lamps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
401.3 [FI7] <sup>2</sup> ●	Compliance certificate posted.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.3 [FI18] <sup>3</sup> ●	Manufacturer manuals for mechanical and water heating equipment have been provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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# 2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
Above-Grade Wall	17.00
Below-Grade Wall	10.00
Floor	0.00
Ceiling / Roof	50.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
Window	0.29	
Door	0.30	

Heating & Cooling Equipment	Efficiency
Heating System: _____	_____
Cooling System: _____	_____
Water Heater: _____	_____

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Comments



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\BM-100(i943)

Dry | 1 span | No cantilevers | 0/12 slope

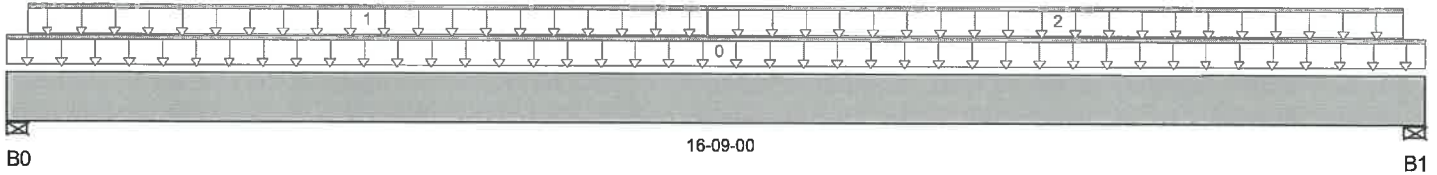
April 14, 2017 09:05:04

BC CALC® Design Report



Build 5033  
Job Name:  
Address:  
City, State, Zip:  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\BM-1  
Specifier:  
Designer:  
Company:  
Msc:



Total Horizontal Product Length = 16-09-00

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3"		1,083 / 0	628 / 0		
B1, 3"		1,074 / 0	628 / 0		

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	Gbl Roof, OH, Eyeb...	Unf. Lin. (lb/ft)	L	00-00-00	16-09-00	60		75			n/a
1	Gbl Wall	Unf. Lin. (lb/ft)	L	00-03-00	08-02-15	31					n/a
2	Gbl Wall	Unf. Lin. (lb/ft)	L	08-02-15	16-06-00	85					n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	7,157 ft-lbs	89.5%	115%	1	08-03-00
End Shear	1,521 lbs	16.7%	115%	1	01-02-14
Total Load Defl.	L/560 (0.351")	42.9%	n/a	1	08-05-11
Live Load Defl.	L/999 (0.124")	n/a	n/a	6	08-05-11
Max Defl.	0.351"	35.1%	n/a	1	08-05-11
Span / Depth	16.5	n/a	n/a	0	00-00-00

Bearing Supports	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Wall/Plate	3" x 3-1/2"	1,711 lbs	20.4%	21.7%	Unspecified
B1 Wall/Plate	3" x 3-1/2"	1,702 lbs	20.3%	21.6%	Unspecified

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 16-03-00, Bottom: 16-03-00.  
 Unbalanced snow loads determined from building geometry were used in selected product's verification.  
 Design based on Dry Service Condition.



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-100(i943)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:04

Build 5033

Job Name:

Address:

City, State, Zip :

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B1

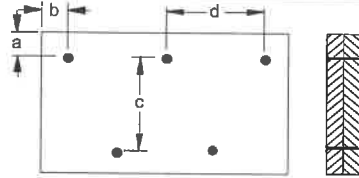
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"      c = 7-7/8"

b minimum = 3"      d = 24"

Member has no side loads.

Connectors are: 16d Sinker Nails

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods.

Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\BM-101(i1666)

Dry | 5 spans | No cantilevers | 0/12 slope

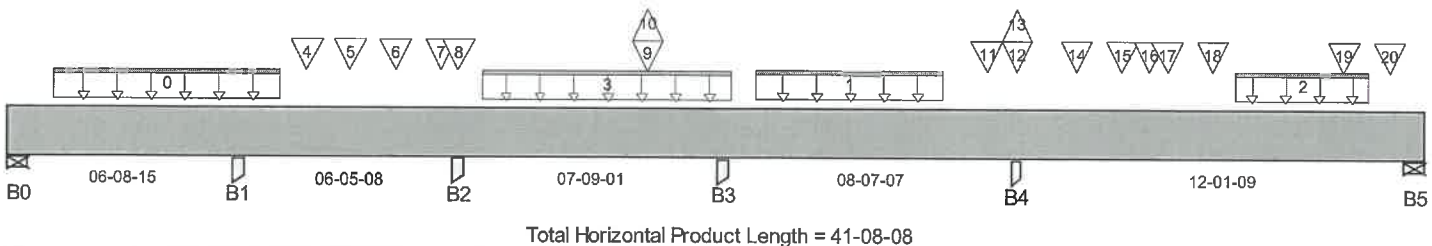
April 14, 2017 09:05:05

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Dropped Beams\Basement\Dropped Beams\BV  
 Specifier:  
 Designer:  
 Company:  
 Misc:



## Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4"	1,487 / 197	391 / 0			
B1, 5-3/4"	4,072 / 657	882 / 0			
B2, 5-3/4"	9,302 / 1,011	3,790 / 0			
B3, 5-7/8"	4,699 / 2,921	515 / 0			
B4, 5-7/8"	11,426 / 301	6,500 / 0			
B5, 4"	3,348 / 118	1,464 / 0			

## Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Roof Live	Trib.
						100%	90%	115%	160%	125%	
0	Smoothed Load	Unf. Lin. (lb/ft)	L	01-04-08	08-00-08	496	124				n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	21-11-00	27-05-07	504	126				n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	36-00-08	40-00-08	494	71				n/a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	13-11-00	21-03-00	428	107				n/a
4	J-2(i1652)	Conc. Pt. (lbs)	L	08-09-04	08-09-04	362					n/a
5	J-1(i1627)	Conc. Pt. (lbs)	L	10-00-08	10-00-08	374					n/a
6	J-1(i1512)	Conc. Pt. (lbs)	L	11-04-08	11-04-08	383					n/a
7	J-1(i1626)	Conc. Pt. (lbs)	L	12-08-08	12-08-08	386					n/a
8	BM-113(i1662)	Conc. Pt. (lbs)	L	13-02-12	13-02-12	4,496	2,408				n/a
9	BM-114(i1633)	Conc. Pt. (lbs)	L	18-09-02	18-09-02	700	454				n/a
10	BM-114(i1633)	Conc. Pt. (lbs)	L	18-09-02	18-09-02	-783					n/a
11	J-1(i1597)	Conc. Pt. (lbs)	L	28-08-08	28-08-08	320					n/a
12	BM-115(i1609)	Conc. Pt. (lbs)	L	29-07-04	29-07-04	1,677	2,316				n/a
13	BM-115(i1609)	Conc. Pt. (lbs)	L	29-07-04	29-07-04	-13					n/a
14	J-1(i1512)	Conc. Pt. (lbs)	L	31-04-08	31-04-08	383					n/a
15	J-1(i1567)	Conc. Pt. (lbs)	L	32-08-08	32-08-08	380					n/a
16	BM-116(i1594)	Conc. Pt. (lbs)	L	33-06-04	33-06-04	4,000	2,412				n/a
17	J-1(i1476)	Conc. Pt. (lbs)	L	34-00-08	34-00-08	381	188				n/a
18	J-1(i1490)	Conc. Pt. (lbs)	L	35-04-08	35-04-08	386	170				n/a
19	J-3(i1358)	Conc. Pt. (lbs)	L	39-03-00	39-03-00		150				n/a
20	-	Conc. Pt. (lbs)	L	40-07-13	40-07-13	687	315				n/a

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Dropped Beams\Basement\Dropped Beams\  
 Specifier:  
 Designer:  
 Company:  
 Misc:

Controls Summary	Value	% Allowable Duration		Case	Location	Disclosure
Pos. Moment	16,916 ft-lbs	53.3%	100%	3	34-00-08	Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.
Neg. Moment	-17,407 ft-lbs	55.1%	100%	8	29-06-15	
End Shear	4,522 lbs	38.2%	100%	3	30-09-12	
Cont. Shear	9,021 lbs	76.2%	100%	8	30-09-12	
Uplift	-2,407 lbs	n/a	100%	11	20-11-08	
Total Load Defl.	L/543 (0.262")	44.2%	n/a	3	35-08-02	
Live Load Defl.	L/788 (0.181")	45.7%	n/a	15	35-08-02	
Total Neg. Defl.	L/999 (-0.07")	n/a	n/a	3	26-02-05	
MaxDefl.	0.262"	26.2%	n/a	3	35-08-02	
Span / Depth	12	n/a	n/a	0	00-00-00	

Bearing Supports	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Wall/Plate	4" x 5-1/4"	1,877 lbs	10.1%	11.8%	Unspecified
B1 Post	5-3/4" x 5-1/4"	4,954 lbs	20.6%	22%	Unspecified
B2 Post	5-3/4" x 5-1/4"	13,092 lbs	54.4%	58%	Unspecified
B3 Post	5-7/8" x 5-1/4"	5,213 lbs	21.2%	22.6%	Unspecified
B4 Post	5-7/8" x 5-1/4"	17,926 lbs	72.7%	77.6%	Unspecified
B5 Wall/Plate	4" x 5-1/4"	4,812 lbs	26.1%	30.5%	Unspecified

BC CALO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

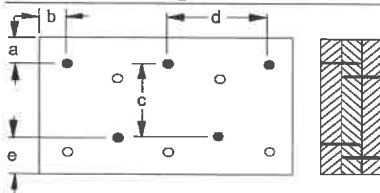
**Cautions**

Uplift of -2,407 lbs found at span 3 - Right.  
 Uplift of -2,407 lbs found at span 4 - Left.

**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-07-04, Bottom: 00-07-04.  
 Design based on Dry Service Condition.

**Connection Diagram**



a minimum = 2"      c = 6-7/8"  
 b minimum = 3"      d = 24"  
 e minimum = 3"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.  
 Nailing schedule applies to both sides of the member.  
 Member has no side loads.  
 Connectors are: 16d Sinker Nails



# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\BM-102(i1658)

BC CALC® Design Report

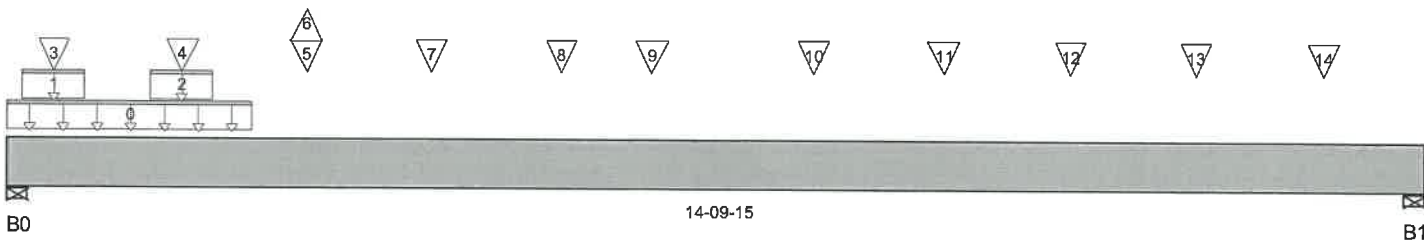


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:05

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Dropped Beams\Basement\Dropped Beams\BV  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 14-09-15

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4"	3,959 / 377	2,526 / 0			
B1, 4"	3,463 / 78	2,054 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Trib.
0	NPC-1(i1578)	Unf. Lin. (lb/ft)	L	00-00-00	02-06-14		138				n/a
1	NPC-1(i1578)	Unf. Lin. (lb/ft)	L	00-01-14	00-09-15	276	156				n/a
2	NPC-1(i1578)	Unf. Lin. (lb/ft)	L	01-05-15	02-01-14	326	144				n/a
3	J-5(i1529)	Conc. Pt. (lbs)	L	00-05-15	00-05-15	166					n/a
4	J-5(i1555)	Conc. Pt. (lbs)	L	01-09-15	01-09-15	202	50				n/a
5	-	Conc. Pt. (lbs)	L	03-01-08	03-01-08	908	471				n/a
6	-	Conc. Pt. (lbs)	L	03-01-08	03-01-08	-454					n/a
7	-	Conc. Pt. (lbs)	L	04-05-01	04-05-01	490	123				n/a
8	-	Conc. Pt. (lbs)	L	05-09-04	05-09-04	446	231				n/a
9	-	Conc. Pt. (lbs)	L	06-08-10	06-08-10	2,313	1,708				n/a
10	-	Conc. Pt. (lbs)	L	08-05-00	08-05-00	493	185				n/a
11	-	Conc. Pt. (lbs)	L	09-09-01	09-09-01	492	123				n/a
12	-	Conc. Pt. (lbs)	L	11-01-01	11-01-01	492	123				n/a
13	-	Conc. Pt. (lbs)	L	12-05-00	12-05-00	491	304				n/a
14	-	Conc. Pt. (lbs)	L	13-09-00	13-09-00	505	371				n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	26,067 ft-lbs	82.2%	100%	1	06-07-11
End Shear	6,016 lbs	50.8%	100%	1	01-03-14
Total Load Defl.	L/286 (0.599")	83.9%	n/a	1	07-01-15
Live Load Defl.	L/455 (0.377")	79.1%	n/a	3	07-01-15
Max Defl.	0.599"	59.9%	n/a	1	07-01-15
Span / Depth	14.4	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Wall/Plate	4" x 5-1/4"	6,485 lbs	35.2%	41.1%	Unspecified
B1	Wall/Plate	4" x 5-1/4"	5,517 lbs	30%	35%	Unspecified

### Notes



# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...\BM-102(i1658)

Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:05

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Dropped Beams\Basement\Dropped Beams\

Specifier:

Designer:

Company:

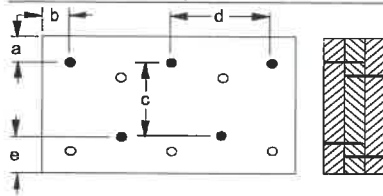
Misc:

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-07-04, Bottom: 00-07-04.  
 Design based on Dry Service Condition.

### Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

### Connection Diagram



a minimum = 2"      c = 6-7/8"  
 b minimum = 3"      d = 24"  
 e minimum = 3"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nailing schedule applies to both sides of the member.

Member has no side loads.

Connectors are: 16d Sinker Nails

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# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-103(i1607)

BC CALC® Design Report

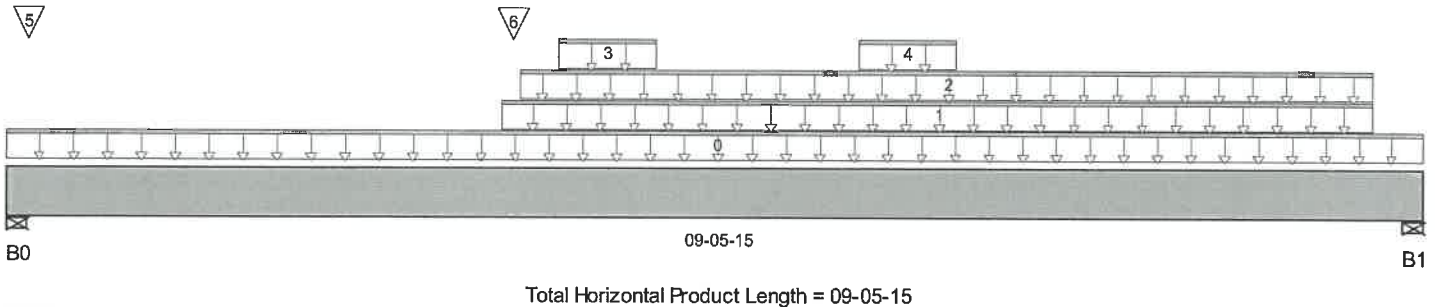


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:05

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip:,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\Basement\Flush Beams\BM-103(i  
 Specifier:  
 Designer:  
 Company:  
 Misc:



## Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4-1/2"	206 / 0	1,440 / 0	907 / 0		
B1, 5-3/4"	202 / 0	1,415 / 0	792 / 0		

## Load Summary

Tag Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-05-15	27	7				n/a
1 IB4- 27 (i1473)	Unf. Lin. (lb/ft)	L	03-03-10	09-01-14		73				n/a
2 IB4- 27 (i1473)	Unf. Lin. (lb/ft)	L	03-05-02	09-01-14	17	149	72			n/a
3 IB4- 27 (i1473)	Unf. Lin. (lb/ft)	L	03-08-03	04-04-03		354	442			n/a
4 IB4- 27 (i1473)	Unf. Lin. (lb/ft)	L	05-08-04	06-04-03		530	662			n/a
5 IB4- 13 (i14)	Conc. Pt. (lbs)	L	00-01-14	00-01-14	32	436	267			n/a
6 IB4- 27 (i1473)	Conc. Pt. (lbs)	L	03-04-10	03-04-10	27	399	284			n/a

## Controls Summary

	Value	% Allowable Duration		Case	Location
Pos. Moment	5,523 ft-lbs	36.2%	115%	2	04-07-03
End Shear	1,920 lbs	27.1%	115%	2	01-01-12
Total Load Defl.	L/654 (0.161")	36.7%	n/a	2	04-09-03
Live Load Defl.	L/999 (0.063")	n/a	n/a	13	04-09-03
Max Defl.	0.161"	16.1%	n/a	2	04-09-03
Span / Depth	11.4	n/a	n/a	0	00-00-00

## Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Wall/Plate	4-1/2" x 3-1/2"	2,347 lbs	34.9%	19.8%	Unspecified
B1	Wall/Plate	5-3/4" x 3-1/2"	2,207 lbs	25.8%	14.6%	Unspecified

## Notes



# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-103(i1607)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:05

Build 5033  
Job Name:  
Address:  
City, State, Zip:  
Customer:  
Code reports: ESR-1040

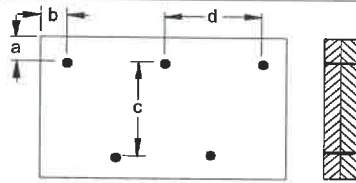
File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\Basement\Flush Beams\BM-10:  
Specifier:  
Designer:  
Company:  
Misc:

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets arbitrary (1") Maximum total load deflection criteria.  
Design meets arbitrary (0.75") Maximum live load deflection criteria.  
Calculations assume member is fully braced.  
Unbalanced snow loads determined from building geometry were used in selected product's verification.  
Design based on Dry Service Condition.

### Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

### Connection Diagram



a minimum = 2"    c = 5-1/4"  
b minimum = 3"    d = 24"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Member has no side loads.

Connectors are: 16d Sinker Nails

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-104(i1625)

BC CALC® Design Report

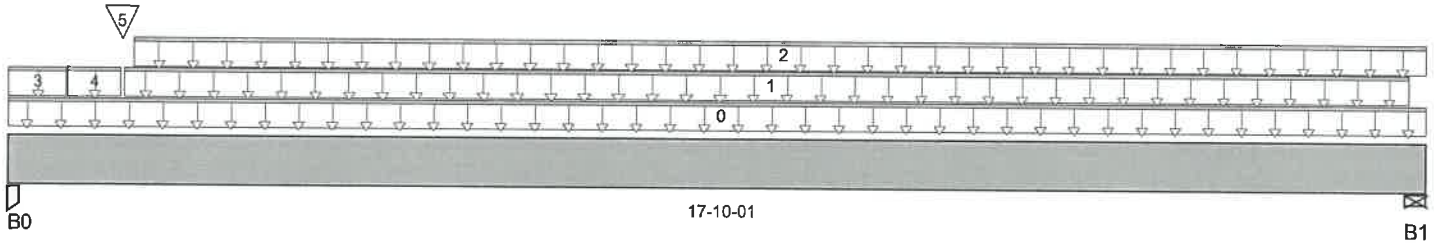


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-104(i1625)  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 17'-10-01

### Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 2"	164 / 0	710 / 0			
B1, 4-1/2"	148 / 0	721 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	17-10-01	10	3				n/a
1	I4 66(i290)	Unf. Lin. (lb/ft)	L	01-05-07	17-07-09		65				n/a
2	FC100 Floor Material	Unf. Lin. (lb/ft)	L	01-06-14	17-10-01	6	1				n/a
3	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	00-09-00	0					n/a
4	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-09-00	01-05-02	19					n/a
5	BM-107 (i1559)	Conc. Pt. (lbs)	L	01-05-02	01-05-02	8	84				n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	3,735 ft-lbs	17.6%	100%	1	08-10-01
End Shear	845 lbs	10.7%	100%	1	01-01-14
Total Load Defl.	L/998 (0.209")	24%	n/a	1	08-10-01
Live Load Defl.	L/999 (0.035")	n/a	n/a	2	08-10-01
Max Defl.	0.209"	20.9%	n/a	1	08-10-01
Span / Depth	17.6	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Post	2" x 3-1/2"	875 lbs	15.8%	16.8%	Unspecified
B1	Wall/Plate	4-1/2" x 3-1/2"	869 lbs	13%	7.4%	Unspecified

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume member is fully braced.  
 Design based on Dry Service Condition.



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \BM-104(i1625)

Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip: .

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-104(

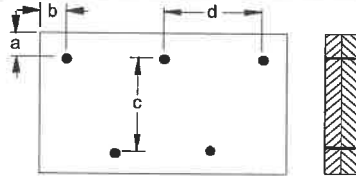
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"    c = 7-7/8"

b minimum = 3"    d = 24"

Calculated Side Load = 5.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Box Nails

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-105(i1628)

BC CALC® Design Report



Dry | 5 spans | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

Build 5033

Job Name:

Address:

City, State, Zip:

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

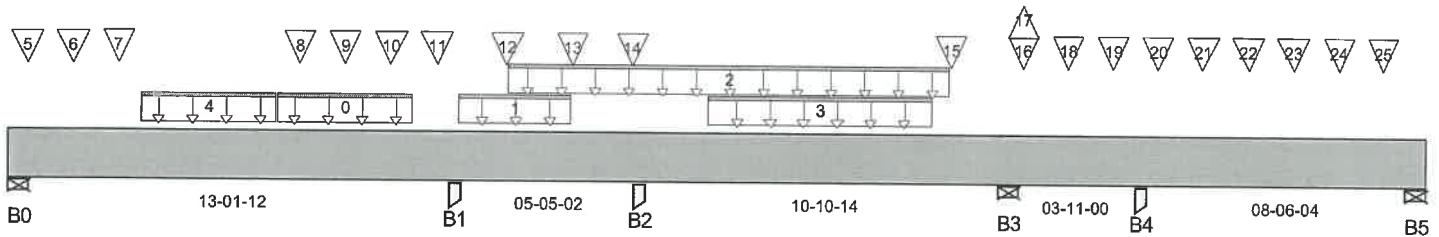
Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-105(i16

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 41-11-00

## Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 2-1/2"	2,654 / 11	1,182 / 0			
B1, 3-1 1/16"	5,913 / 186	2,348 / 0			
B2, 3-7/8"	1,320 / 1,960	605 / 0			
B3, 3-1/2"	2,205 / 1,330	676 / 0			
B4, 3-1/2"	5,797 / 415	2,620 / 0			
B5, 3-1/2"	1,995 / 44	1,078 / 0			

## Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	07-11-00	11-11-00	490	36				n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	13-03-00	16-07-00	142	36				n/a
2	I4 64(i293)	Unf. Lin. (lb/ft)	L	14-08-07	27-08-15		65				n/a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	20-07-00	27-03-00	40	20				n/a
4	Smoothed Load	Unf. Lin. (lb/ft)	L	03-11-00	07-11-00	492	149				n/a
5	J-100(i1617)	Conc. Pt. (lbs)	L	00-07-00	00-07-00	330	181				n/a
6	-	Conc. Pt. (lbs)	L	01-11-00	01-11-00	686	232				n/a
7	-	Conc. Pt. (lbs)	L	03-03-00	03-03-00	686	190				n/a
8	J-100(i1601)	Conc. Pt. (lbs)	L	08-07-00	08-07-00		207				n/a
9	J-100(i1624)	Conc. Pt. (lbs)	L	09-11-00	09-11-00		158				n/a
10	J-100(i1611)	Conc. Pt. (lbs)	L	11-03-00	11-03-00		120				n/a
11	-	Conc. Pt. (lbs)	L	12-07-00	12-07-00	499	93				n/a
12	BM-107(i1559)	Conc. Pt. (lbs)	L	14-08-02	14-08-02		80				n/a
13	J-102(i1550)	Conc. Pt. (lbs)	L	16-07-00	16-07-00	177					n/a
14	BM-110(i1563)	Conc. Pt. (lbs)	L	18-04-02	18-04-02	296	328				n/a
15	BM-106(i1587)	Conc. Pt. (lbs)	L	27-09-04	27-09-04		104				n/a
16	-	Conc. Pt. (lbs)	L	29-11-00	29-11-00	498	96				n/a
17	-	Conc. Pt. (lbs)	L	29-11-00	29-11-00	-29					n/a
18	-	Conc. Pt. (lbs)	L	31-03-00	31-03-00	898	225				n/a
19	-	Conc. Pt. (lbs)	L	32-07-00	32-07-00	898	407				n/a
20	-	Conc. Pt. (lbs)	L	33-11-00	33-11-00	898	603				n/a
21	-	Conc. Pt. (lbs)	L	35-03-00	35-03-00	898	487				n/a
22	-	Conc. Pt. (lbs)	L	36-07-00	36-07-00	898	370				n/a
23	-	Conc. Pt. (lbs)	L	37-11-00	37-11-00	898	355				n/a
24	-	Conc. Pt. (lbs)	L	39-03-00	39-03-00	898	425				n/a
25	-	Conc. Pt. (lbs)	L	40-07-00	40-07-00	842	486				n/a

BC CALC® Design Report


 Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

 File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-105(  
 Specifier:  
 Designer:  
 Company:  
 Misc:

Controls Summary	Value	% Allowable Duration		Case	Location
Pos. Moment	10,576 ft-lbs	33.1%	100%	3	05-11-00
Neg. Moment	-11,276 ft-lbs	35.3%	100%	5	13-01-12
End Shear	3,388 lbs	28.6%	100%	3	01-02-06
Cont. Shear	4,933 lbs	41.6%	100%	5	12-00-00
Uplift	-1,355 lbs	n/a	100%	10	18-06-13
Uplift	-654 lbs	n/a	100%	11	29-05-12
Total Load Defl.	L/841 (0.186")	28.6%	n/a	3	05-11-00
Live Load Defl.	L/1,207 (0.129")	29.8%	n/a	15	05-11-00
Total Neg. Defl.	L/999 (-0.022")	n/a	n/a	3	15-05-00
Max Defl.	0.186"	18.6%	n/a	3	05-11-00
Span / Depth	13.1	n/a	n/a	0	00-00-00

Bearing Supports	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Wall/Plate	2-1/2" x 5-1/4"	3,836 lbs	68.8%	39%	Unspecified
B1 Post	3-11/16" x 5-1/4"	8,261 lbs	53.3%	56.9%	Unspecified
B2 Post	3-7/8" x 5-1/4"	1,925 lbs	11.9%	12.7%	Unspecified
B3 Wall/Plate	3-1/2" x 5-1/4"	2,881 lbs	36.9%	20.9%	Unspecified
B4 Post	3-1/2" x 5-1/4"	8,416 lbs	57.4%	61.2%	Unspecified
B5 Wall/Plate	3-1/2" x 5-1/4"	3,073 lbs	39.4%	22.3%	Unspecified

### Cautions

Uplift of -1,355 lbs found at span 2 - Right.  
 Uplift of -1,355 lbs found at span 3 - Left.  
 Uplift of -654 lbs found at span 4 - Left.

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume member is fully braced.  
 Design based on Dry Service Condition.



# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...\BM-105(i1628)

BC CALC® Design Report



Dry | 5 spans | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

Build 5033

Job Name:

Address:

City, State, Zip:

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-105(

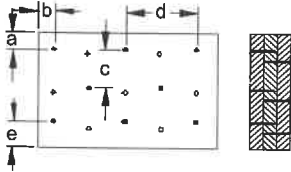
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"

c = 3-7/16"

b minimum = 3"

d = 24"

e minimum = 3"

Calculated Side Load = 307.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nailing schedule applies to both sides of the member.

Connectors are: 16d Common Nails

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods.

Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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**Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...IBM-106(i1587)**

BC CALC® Design Report

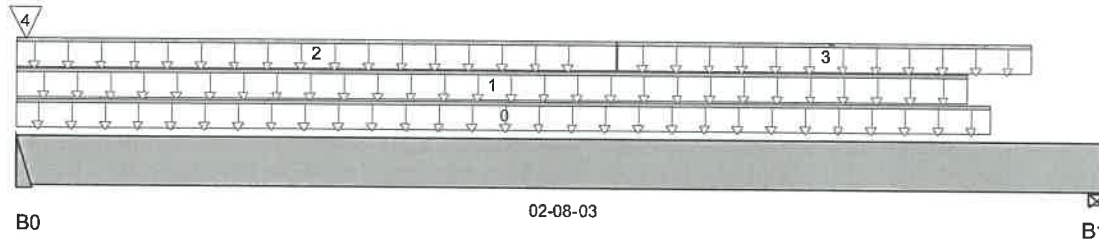


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:03

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-106(i1587)  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 02-08-03

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	38 / 0	103 / 0			
B1, 4-15/16"	39 / 0	92 / 0			

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	I4 63(i292)	Unf. Lin. (lb/ft)	L	00-00-00	02-04-13		65				n/a
1	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	02-04-01	3	1				n/a
2	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-05-11	0	0				n/a
3	FC100 Floor Material	Unf. Lin. (lb/ft)	L	01-05-11	02-06-01	32	8				n/a
4	I4 63(i292)	Conc. Pt. (lbs)	L	00-00-04	00-00-04		4				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	70 ft-lbs	0.7%	100%	1	01-03-00
End Shear	43 lbs	1.1%	100%	1	01-03-00
Total Load Defl.	L/999 (0")	n/a	n/a	1	01-03-00
Max Defl.	0"	n/a	n/a	1	01-03-00
Span / Depth	2.2	n/a	n/a	0	00-00-00

**Disclosure**

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

**Bearing Supports**

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0	Hanger	3-1/8" x 1-3/4"	142 lbs	n/a	3.5% SUL 1.81/9
B1	Wall/Plate	4-15/16" x 1-3/4"	131 lbs	3.6%	2% Unspecified

**Cautions**

Hanger SUL 1.81/9 requires (12) 10d face nails, (2) joist nails.

**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-01-12, Bottom: 00-01-12.  
 Hanger Manufacturer: Simpson Strong-Tie, Inc.  
 Design based on Dry Service Condition.

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# Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \IBM-107(i1559)

Dry | 1 span | No cantilevers | 0/12 slope

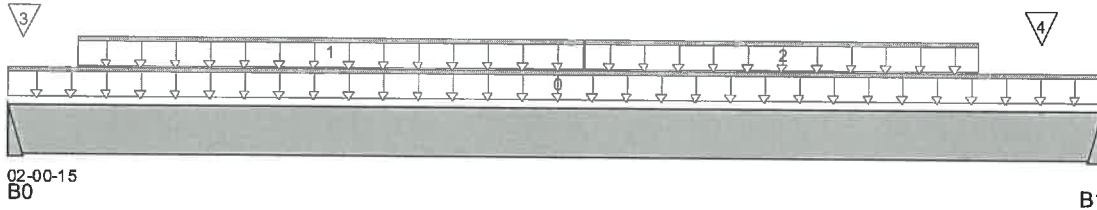
April 14, 2017 09:05:03

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip:  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\IBM-107(i1559)  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 02-00-15

## Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	9 / 0	80 / 0			
B1	9 / 0	76 / 0			

## Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	I4 65(i294)	Unf. Lin. (lb/ft)	L	00-00-00	02-00-15		65				n/a
1	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-01-10	01-01-01	4	1				n/a
2	FC100 Floor Material	Unf. Lin. (lb/ft)	L	01-01-01	01-10-02	14	3				n/a
3	-	Conc. Pt. (lbs)	L	00-00-06	00-00-06	1	4				n/a
4	FC100 Floor Material	Conc. Pt. (lbs)	L	01-11-08	01-11-08	1					n/a

## Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	30 ft-lbs	0.3%	100%	1	01-00-08
End Shear	0 lbs	n/a	100%		00-00-00
Span / Depth	1.7	n/a	n/a	0	00-00-00

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

## Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0	Hanger	3-1/8" x 1-3/4"	88 lbs	n/a	2.2% SUL 1.81/9
B1	Hanger	3-1/8" x 1-3/4"	85 lbs	n/a	2.1% SUR 1.81/9

## Cautions

Hanger SUL 1.81/9 requires (12) 10d face nails, (2) joist nails.  
 Hanger SUR 1.81/9 requires (12) 10d face nails, (2) joist nails.

## Notes

Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-01-12, Bottom: 00-01-12.  
 Hanger Manufacturer: Simpson Strong-Tie, Inc.  
 Design based on Dry Service Condition.

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-109(i1547)

Dry | 1 span | No cantilevers | 0/12 slope

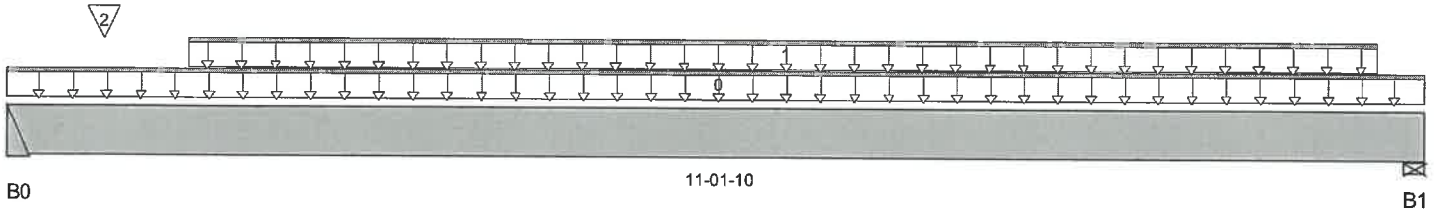
April 14, 2017 09:05:02

BC CALC® Design Report



Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-109(i1547)  
Specifier:  
Designer:  
Company:  
Misc:



Total Horizontal Product Length = 11-01-10

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	413 / 0	529 / 0			
B1, 3-1/2"	414 / 0	539 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	I4 81(i309)	Unf. Lin. (lb/ft)	L	00-00-00	11-01-10		65				n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-05-02	10-09-02	78	20				n/a
2	J-104(i1588)	Conc. Pt. (lbs)	L	00-09-02	00-09-02	88	22				n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,508 ft-lbs	11.8%	100%	1	05-09-02
End Shear	812 lbs	10.3%	100%	1	01-02-14
Total Load Defl.	L/999 (0.053")	n/a	n/a	1	05-07-02
Live Load Defl.	L/999 (0.024")	n/a	n/a	2	05-07-02
Max Defl.	0.053"	n/a	n/a	1	05-07-02
Span / Depth	10.8	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Hanger	3" x 3-1/2"	942 lbs	20.2%	12%	HHUS410
B1 Wall/Plate	3-1/2" x 3-1/2"	952 lbs	18.3%	10.4%	Unspecified

### Cautions

Hanger HHUS410 requires (30) 10d face nails, (10) 10d joist nails.

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets arbitrary (1") Maximum total load deflection criteria.  
Design meets arbitrary (0.75") Maximum live load deflection criteria.  
Calculations assume member is fully braced.  
Hanger Manufacturer: Simpson Strong-Tie, Inc.  
Design based on Dry Service Condition.



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...\BM-109(i1547)



Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

BC CALC® Design Report

Build 5033

Job Name:

Address:

City, State, Zip :

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-109(

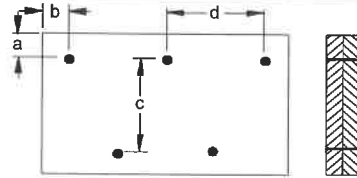
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"      c = 7-7/8"

b minimum = 3"      d = 24"

Calculated Side Load = 91.8 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/4 in. Pneumatic Gun Nails

## Disclosure

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-110(i1563)

BC CALC® Design Report

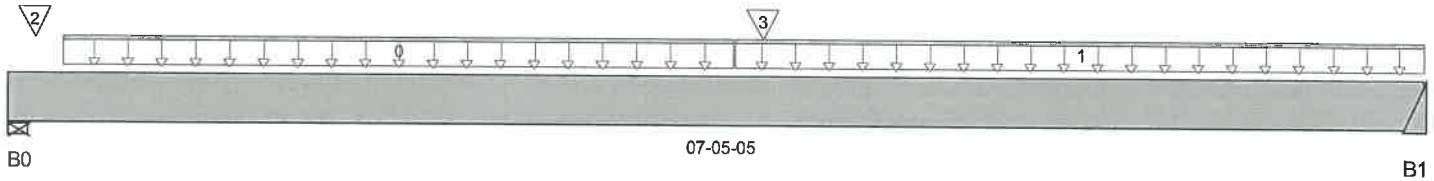


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-110(i1563)  
Specifier:  
Designer:  
Company:  
Misc:



Total Horizontal Product Length = 07-05-05

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	247 / 0	322 / 0			
B1	300 / 0	345 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100% Live	90% Dead	115% Snow	160% Wind	125% Roof Live	Trib.
0	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	03-09-10	11	3				n/a
1	FC100 Floor Material	Unf. Lin. (lb/ft)	L	03-09-10	07-05-05	27	7				n/a
2	I4 86(i314)	Conc. Pt. (lbs)	L	00-01-12	00-01-12		15				n/a
3	-	Conc. Pt. (lbs)	L	03-11-06	03-11-06	407	527				n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,857 ft-lbs	8.7%	100%	1	03-11-06
End Shear	589 lbs	7.5%	100%	1	01-03-06
Total Load Defl.	L/999 (0.014")	n/a	n/a	1	03-09-10
Live Load Defl.	L/999 (0.006")	n/a	n/a	2	03-09-10
Max Defl.	0.014"	n/a	n/a	1	03-09-10
Span / Depth	7.1	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	569 lbs	10.9%	6.2% Unspecified
B1	Hanger	3" x 3-1/2"	645 lbs	13.8%	8.2% HHUS410

### Cautions

Hanger HHUS410 requires (30) 10d face nails, (10) 10d joist nails.

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume member is fully braced.  
 Hanger Manufacturer: Simpson Strong-Tie, Inc.  
 Design based on Dry Service Condition.





# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\BM-110(i1563)

Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-110(

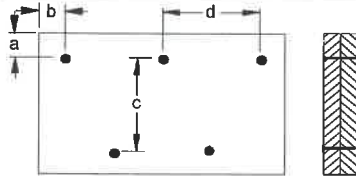
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"      c = 7-7/8"

b minimum = 3"      d = 24"

Calculated Side Load = 124.6 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/4 in. Pneumatic Gun Nails

## Disclosure

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-111(i1660)

BC CALC® Design Report

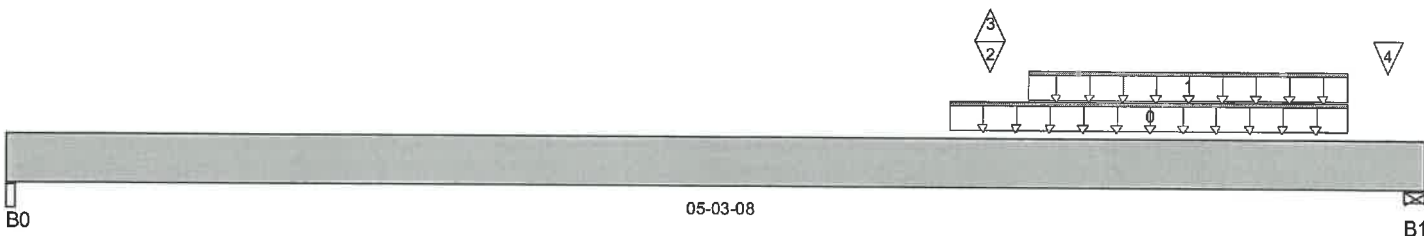


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:03

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-111(i1660)  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 05-03-08

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	83 / 235	529 / 0	275 / 0		
B1, 3-1/2"	215 / 569	1,316 / 0	666 / 0		

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	FC100 Floor Material	Unf. Lin. (lb/ft)	L	03-06-01	05-00-00	23					n/a
1	E4 56(i276)	Unf. Lin. (lb/ft)	L	03-09-09	05-00-00		81				n/a
2	-	Conc. Pt. (lbs)	L	03-07-13	03-07-13	263	1,651	941			n/a
3	-	Conc. Pt. (lbs)	L	03-07-13	03-07-13	-804					n/a
4	E4 57(i284)	Conc. Pt. (lbs)	L	05-01-12	05-01-12		24				n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,668 ft-lbs	11.4%	115%	3	03-07-13
End Shear	1,857 lbs	20.4%	115%	3	01-03-06
Total Load Defl.	L/999 (0.009")	n/a	n/a	3	02-10-09
Live Load Defl.	L/999 (0.003")	n/a	n/a	20	02-10-09
Max Defl.	0.009"	n/a	n/a	3	02-10-09
Span / Depth	4.9	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Beam	3-1/2" x 3-1/2"	803 lbs	8.7%	8.7%	Unspecified
B1	Wall/Plate	3-1/2" x 3-1/2"	1,982 lbs	38.1%	21.6%	Unspecified

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 03-02-09, Bottom: 03-02-09.  
 Unbalanced snow loads determined from building geometry were used in selected product's verification.  
 Design based on Dry Service Condition.



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...\BM-111(i1660)

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:03

Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-111(

Specifier:

Designer:

Company:

Misc:

## Connection Diagram

Concentrated side-load exceeds allowable magnitude for connection design. Please consult a technical representative or Professional Engineer for the design of the connection.

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-112(i1677)

Dry | 1 span | No cantilevers | 0/12 slope

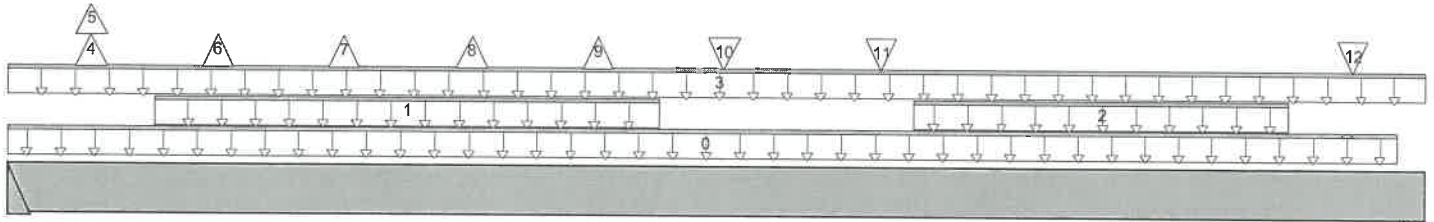
April 14, 2017 09:05:01

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip:  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-112(i1677)  
 Specifier:  
 Designer:  
 Company:  
 Misc:



B0 15-00-00 B1  
 Total Horizontal Product Length = 15-00-00

Reaction Summary (Down / Uplift) ( lbs )					
Bearing	Live	Dead	Snow	Wind	Roof Live
B0	267 / 814	1,621 / 0	925 / 0		
B1, 3-1/2"	280 / 227	2,160 / 0	1,079 / 0		

Load Summary		Live	Dead	Snow	Wind	Roof Live	Trib.
Tag	Description	100%	90%	115%	160%	125%	
0	E4 55(i277)	Unf. Lin. (lb/ft)	L 00-00-00	14-08-08	32	39	n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L 01-06-09	06-10-09	37		n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L 09-06-09	13-06-09	38	10	n/a
3	E4 55(i277)	Unf. Lin. (lb/ft)	L 00-00-00	15-00-00	133	50	n/a
4	J-102(i 1504)	Conc. Pt. (lbs)	L 00-10-09	00-10-09	45	-45	n/a
5	J-102(i 1504)	Conc. Pt. (lbs)	L 00-10-09	00-10-09	-222		n/a
6	J-102(i 1513)	Conc. Pt. (lbs)	L 02-02-09	02-02-09	-222	-43	n/a
7	J-102(i 1546)	Conc. Pt. (lbs)	L 03-06-09	03-06-09	-222	-43	n/a
8	J-102(i 1550)	Conc. Pt. (lbs)	L 04-10-09	04-10-09	-222	-43	n/a
9	J-102(i 1527)	Conc. Pt. (lbs)	L 06-02-09	06-02-09	-153	-26	n/a
10	J-105(i 1561)	Conc. Pt. (lbs)	L 07-06-09	07-06-09	49		n/a
11	-	Conc. Pt. (lbs)	L 09-02-06	09-02-06	51	544	680
12	J-105(i 1553)	Conc. Pt. (lbs)	L 14-02-09	14-02-09	47		n/a

Controls Summary		Value	% Allowable Duration	Case	Location
Pos. Moment	12,058 ft-lbs	49.3%	115%	3	09-02-09
End Shear	3,007 lbs	33.1%	115%	3	01-02-14
Total Load Defl.	L/391 (0.448")	61.4%	n/a	3	07-08-09
Live Load Defl.	L/1,064 (0.165")	33.8%	n/a	20	07-08-09
Max Defl.	0.448"	44.8%	n/a	3	07-08-09
Span / Depth	14.7	n/a	n/a	0	00-00-00

Bearing Supports		Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0	Hanger	3" x 3-1/2"	2,546 lbs	54.5%	32.3%	HHUS410
B1	Wall/Plate	3-1/2" x 3-1/2"	3,239 lbs	62.2%	35.3%	Unspecified

**Cautions**



# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \BM-112(i1677)

Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:01

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip: .

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-112(

Specifier:

Designer:

Company:

Misc:

Hanger HHUS410 requires (30) 10d face nails, (10) 10d joist nails.

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets arbitrary (1") Maximum total load deflection criteria.

Design meets arbitrary (0.75") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

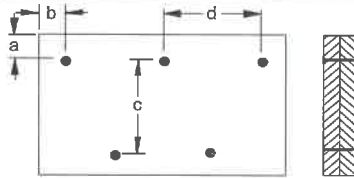
Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

## Connection Diagram



BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

a minimum = 2"    c = 7-7/8"  
b minimum = 3"    d = 24"

Calculated Side Load = 40.1 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/4 in. Pneumatic Gun Nails



# Quadruple 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-113(i1662)

Dry | 1 span | No cantilevers | 0/12 slope

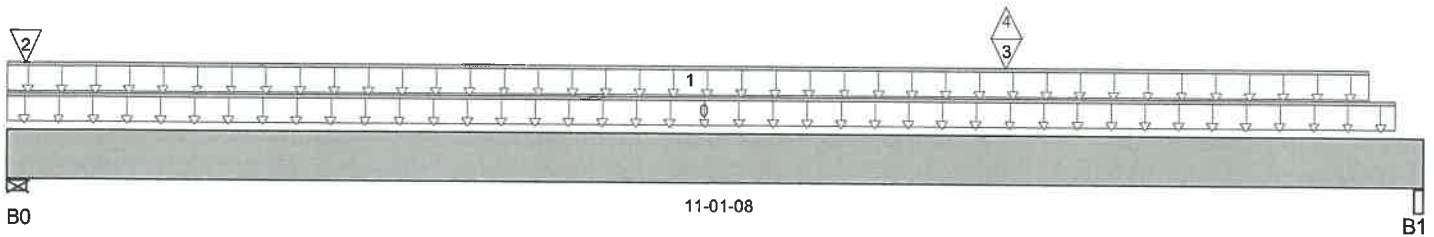
April 14, 2017 09:05:04

BC CALC® Design Report



Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\Basement\Flush Beams\BM-113(i  
Specifier:  
Designer:  
Company:  
Misc:



Total Horizontal Product Length = 11-01-08

### Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 2-3/4"	2,036 / 0	1,117 / 0			
B1, 5-1/4"	4,504 / 1	2,412 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	10-10-14	14					n/a
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	10-08-04	13					n/a
2	E4- 5(i8)	Conc. Pt. (lbs)	L	00-01-12	00-01-12	217	107				n/a
3	PBO106(i333)	Conc. Pt. (lbs)	L	07-09-13	07-09-13	6,032	3,141				n/a
4	PBO106(i333)	Conc. Pt. (lbs)	L	07-09-13	07-09-13	-1					n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	20,038 ft-lbs	75.5%	100%	1	07-09-13
End Shear	6,862 lbs	55.8%	100%	1	01-00-00
Total Load Defl.	L/377 (0.337")	63.6%	n/a	1	06-00-01
Live Load Defl.	L/580 (0.219")	62.1%	n/a	3	06-00-01
Max Defl.	0.337"	33.7%	n/a	1	06-00-01
Span / Depth	13.7	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Wall/Plate	2-3/4" x 7"	3,153 lbs	38.3%	21.7%	Unspecified
B1	Beam	5-1/4" x 7"	6,916 lbs	25.1%	25.1%	Unspecified

### Notes

- Design meets Code minimum (L/240) Total load deflection criteria.
- Design meets Code minimum (L/360) Live load deflection criteria.
- Design meets arbitrary (1") Maximum total load deflection criteria.
- Design meets arbitrary (0.75") Maximum live load deflection criteria.
- Calculations assume member is fully braced.
- Design based on Dry Service Condition.
- Fastener Manufacturer: USP Structural Connectors



BC CALC® Design Report



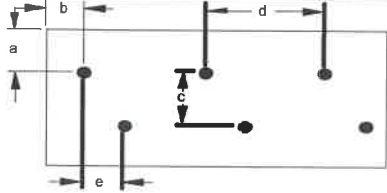
Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:04

Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\Basement\Flush Beams\BM-11:  
Specifier:  
Designer:  
Company:  
Misc:

**Connection Diagram**



a minimum = 1-1/2" c = 6-1/4"  
b minimum = 4" d = 24"  
e minimum = 1"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.  
Beams 7 inches wide will be assumed to be either top-loaded only, or equally loaded from each side.  
Install screws from both sides, staggering screws by half of the spacing to avoid splitting.  
Member has no side loads.  
Connectors are: WS35 1/4 x3-1/2

**Disclosure**

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# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-114(i1633)

BC CALC® Design Report

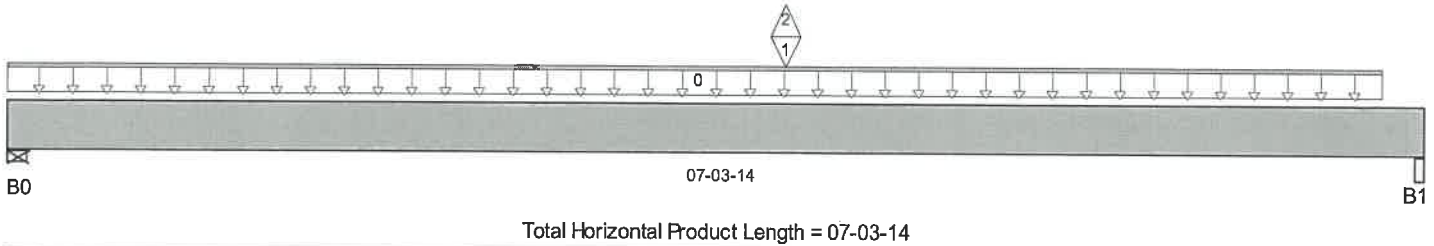


Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:04

Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Flush Beams\Basement\Flush Beams\BM-114(i  
Specifier:  
Designer:  
Company:  
Misc:



### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	570 / 612	367 / 0			
B1, 5-1/4"	701 / 784	454 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-01-04	27	7				n/a
1	PBO108(i335)	Conc. Pt. (lbs)	L	04-00-00	04-00-00	1,082	705				n/a
2	PBO108(i335)	Conc. Pt. (lbs)	L	04-00-00	04-00-00	-1,396					n/a

### Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	3,195 ft-lbs	24.1%	100%	1	04-00-00
Neg. Moment	-1,055 ft-lbs	7.9%	100%	2	04-00-00
End Shear	1,111 lbs	18.1%	100%	1	01-00-12
Uplift	-329 lbs	n/a	100%	2	07-03-14
Total Load Defl.	L/999 (0.046")	n/a	n/a	1	03-08-11
Live Load Defl.	L/999 (-0.032")	n/a	n/a	4	03-08-11
Total Neg. Defl.	L/999 (-0.014")	n/a	n/a	2	03-08-11
Max Defl.	0.046"	n/a	n/a	1	03-08-11
Span / Depth	8.7	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Wall/Plate	3-1/2" x 3-1/2"	937 lbs	18%	10.2%	Unspecified
B1	Beam	5-1/4" x 3-1/2"	1,155 lbs	8.4%	8.4%	Unspecified

### Cautions

Uplift of -329 lbs found at span 1 - Right.

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets arbitrary (1") Maximum total load deflection criteria.  
Design meets arbitrary (0.75") Maximum live load deflection criteria.  
Calculations assume member is fully braced.  
Design based on Dry Service Condition.





# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-114(i1633)



Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:04

BC CALC® Design Report

Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\BM-11-

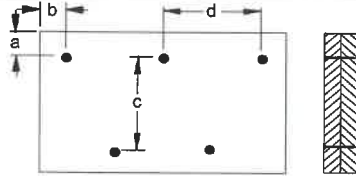
Specifier:

Designer:

Company:

Misc:

## Connection Diagram



a minimum = 2"      c = 5-1/4"

b minimum = 3"      d = 24"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Member has no side loads.

Connectors are: 16d Sinker Nails

## Disclosure

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# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-115(i1609)

BC CALC® Design Report

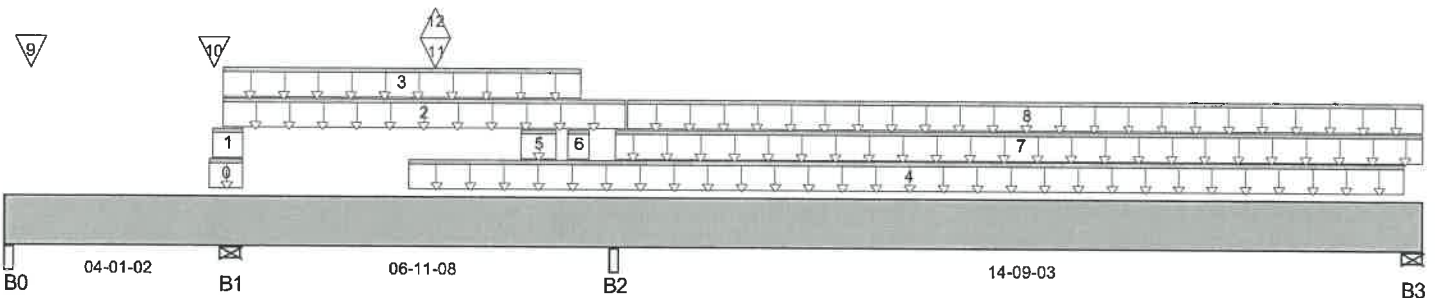


Dry | 3 spans | No cantilevers | 0/12 slope

April 14, 2017 09:05:05

Build 5033  
 Job Name:  
 Address:  
 City, State, Zip:  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\Basement\Flush Beams\BM-115(i  
 Specifier:  
 Designer:  
 Company:  
 Misc:



### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 5-1/4"	137 / 468	178 / 0			
B1, 3-1/2"	2,204 / 155	1,149 / 0			
B2, 5-1/4"	1,648 / 17	2,288 / 0			
B3, 5-3/4"	169 / 53	507 / 0			

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	IB4- 33(i346)	Unf. Lin. (lb/ft)	L	03-08-05	04-04-00		73				n/a
1	IB4- 33(i346)	Unf. Lin. (lb/ft)	L	03-09-02	04-04-00	732	953				n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	03-11-06	11-03-04	6					n/a
3	FC1 Floor Material	Unf. Lin. (lb/ft)	L	03-11-06	10-05-09	20					n/a
4	-	Unf. Lin. (lb/ft)	L	07-04-00	25-05-14		73				n/a
5	IB4- 32(i542)	Unf. Lin. (lb/ft)	L	09-04-04	10-00-04	64	146				n/a
6	IB4- 32(i542)	Unf. Lin. (lb/ft)	L	10-02-05	10-07-05	300	1,461				n/a
7	FC1 Floor Material	Unf. Lin. (lb/ft)	L	11-00-10	25-09-14	18	4				n/a
8	FC1 Floor Material	Unf. Lin. (lb/ft)	L	11-03-04	25-09-14	9					n/a
9	-	Conc. Pt. (lbs)	L	00-05-10	00-05-10	42	227				n/a
10	IB4- 33(i346)	Conc. Pt. (lbs)	L	03-09-05	03-09-05		140				n/a
11	IB4- 32(i542)	Conc. Pt. (lbs)	L	07-09-11	07-09-11	2,206	678				n/a
12	IB4- 32(i542)	Conc. Pt. (lbs)	L	07-09-11	07-09-11	-26					n/a

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip :  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\Basement\Flush Beams\BM-115  
 Specifier:  
 Designer:  
 Company:  
 Misc:

Controls Summary	Value	% Allowable Duration		Case	Location	Disclosure
Pos. Moment	3,455 ft-lbs	26%	100%	4	07-09-11	Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.
Neg. Moment	-3,310 ft-lbs	24.9%	100%	6	11-00-10	
End Shear	556 lbs	9%	100%	3	12-00-08	
Cont. Shear	2,839 lbs	46.2%	100%	6	10-00-12	
Uplift	-290 lbs	n/a	100%	4	00-00-00	
Total Load Defl.	L/999 (0.119")	n/a	n/a	3	19-01-01	
Live Load Defl.	L/999 (-0.038")	n/a	n/a	12	17-01-09	
Total Neg. Defl.	L/999 (-0.006")	n/a	n/a	4	02-06-12	
MaxDefl.	0.119"	n/a	n/a	3	19-01-01	
Span / Depth	18.6	n/a	n/a	0	00-00-00	

Bearing Supports		Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0	Beam	5-1/4" x 3-1/2"	315 lbs	2.3%	2.3%	Unspecified
B1	Wall/Plate	3-1/2" x 3-1/2"	3,353 lbs	64.4%	36.5%	Unspecified
B2	Beam	5-1/4" x 3-1/2"	3,936 lbs	28.6%	28.6%	Unspecified
B3	Wall/Plate	5-3/4" x 3-1/2"	676 lbs	7.9%	4.5%	Unspecified

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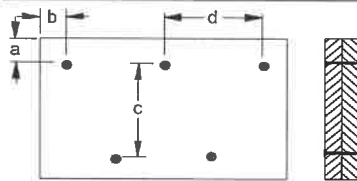
### Cautions

Uplift of -290 lbs found at span 1 - Left.

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.  
 Design based on Dry Service Condition.

### Connection Diagram



a minimum = 2"    c = 5-1/4"  
 b minimum = 3"    d = 24"

Calculated Side Load = 0.3 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.  
 Connectors are: 16d Sinker Nails



Triple 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP Basement\...\BM-116(i1594)

Dry | 1 span | No cantilevers | 0/12 slope

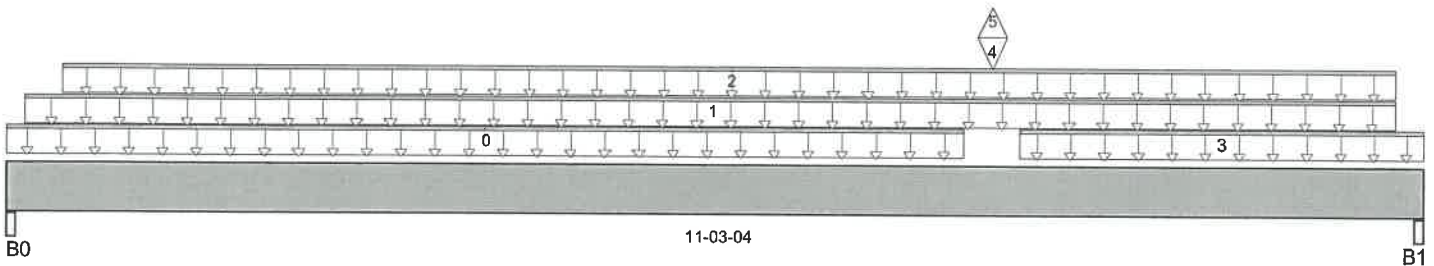
April 14, 2017 09:05:04

BC CALC® Design Report



Build 5033  
 Job Name:  
 Address:  
 City, State, Zip: ,  
 Customer:  
 Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl  
 Description: Designs\Flush Beams\Basement\Flush Beams\BM-116(i  
 Specifier:  
 Designer:  
 Company:  
 Misc:



Total Horizontal Product Length = 11-03-04

**Reaction Summary (Down / Uplift) ( lbs )**

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 5-1/4"	1,803 / 1	1,347 / 0			
B1, 5-1/4"	4,121 / 2	2,471 / 0			

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	I4- 42(i45)	Unf. Lin. (lb/ft)	L	00-00-00	07-07-01		73				n/a
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-01-12	11-00-10	8					n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	11-00-10	19	5				n/a
3	I4- 28(i336)	Unf. Lin. (lb/ft)	L	08-00-05	11-03-04		73				n/a
4	PBO109(i630)	Conc. Pt. (lbs)	L	07-09-11	07-09-11	5,630	2,713				n/a
5	PBO109(i630)	Conc. Pt. (lbs)	L	07-09-11	07-09-11	-3					n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	19,575 ft-lbs	98.3%	100%	1	07-09-11
End Shear	6,420 lbs	69.6%	100%	1	01-02-08
Total Load Defl.	L/283 (0.446")	84.8%	n/a	1	06-01-03
Live Load Defl.	L/451 (0.28")	79.8%	n/a	3	06-01-03
Max Defl.	0.446"	44.6%	n/a	1	06-01-03
Span / Depth	13.6	n/a	n/a	0	00-00-00

**Bearing Supports**

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Beam	5-1/4" x 5-1/4"	3,150 lbs	15.2%	15.2%	Unspecified
B1 Beam	5-1/4" x 5-1/4"	6,592 lbs	31.9%	31.9%	Unspecified

**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume member is fully braced.  
 Design based on Dry Service Condition.



Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\BM-116

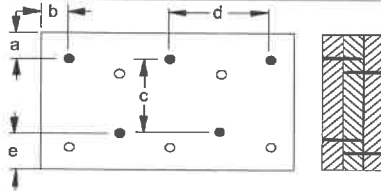
Specifier:

Designer:

Company:

Misc:

### Connection Diagram



a minimum = 2"      c = 4-1/4"

b minimum = 3"      d = 24"

e minimum = 3"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nailing schedule applies to both sides of the member.

Member has no side loads.

Connectors are: 16d Sinker Nails

### Disclosure

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# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-120(i1655)

Dry | 4 spans | No cantilevers | 0/12 slope

April 14, 2017 09:05:03

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip, :

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

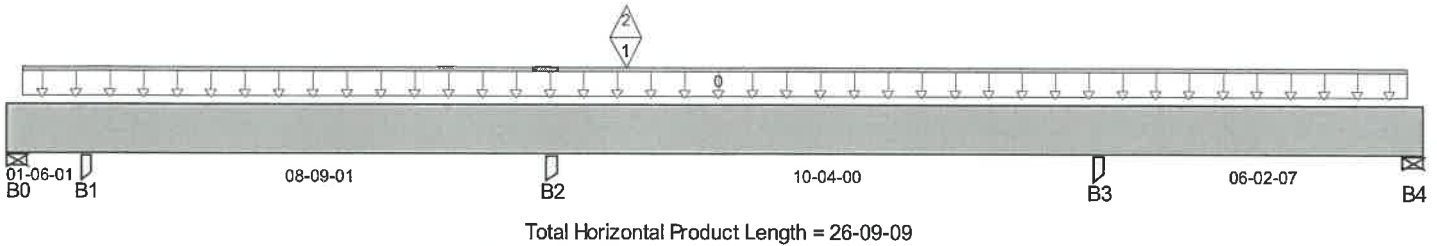
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\BM-1

Specifier:

Designer:

Company:

Msc:



### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	15 / 44	0 / 133	1 / 313		
B1, 5-1/2"	65 / 23	480 / 0	769 / 0		
B2, 5-1/2"	74 / 212	1,252 / 0	1,110 / 0		
B3, 5-1/2"	10 / 30	776 / 0	837 / 0		
B4, 3-1/2"	9 / 3	112 / 0	176 / 0		

### Load Summary

Tag	Description	Load Type	Ref.	Start	End	100%	90%	115%	160%	125%	Trib.
0	M1, M2 PLF	Unf. Lin. (lb/ft)	L	00-03-11	26-06-01		67	84			n/a
1	BM-111 (i1660)	Conc. Pt. (lbs)	L	11-07-13	11-07-13	74	481	248			n/a
2	BM-111 (i1660)	Conc. Pt. (lbs)	L	11-07-13	11-07-13	-212					n/a

### Controls Summary

	Value	% Allow able Duration		Case	Location
Pos. Moment	1,122 ft-lbs	11.4%	115%	13	15-00-00
Neg. Moment	-1,835 ft-lbs	18.8%	115%	12	10-03-02
End Shear	441 lbs	6.2%	115%	11	01-00-12
Cont. Shear	1,352 lbs	19.1%	115%	12	11-03-02
Uplift	-446 lbs	n/a	115%	11	00-00-00
Total Load Defl.	L/999 (0.037")	n/a	n/a	13	15-01-08
Live Load Defl.	L/999 (0.019")	n/a	n/a	51	15-03-00
Total Neg. Defl.	L/999 (-0.005")	n/a	n/a	13	08-06-04
Max Defl.	0.037"	n/a	n/a	13	15-01-08
Span / Depth	13.4	n/a	n/a	0	00-00-00

### Bearing Supports

	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material	
B0	Wall/Plate	3-1/2" x 3-1/2"	446 lbs	4.5%	4.9%	Unspecified
B1	Post	5-1/2" x 3-1/2"	1,250 lbs	8.1%	8.7%	Unspecified
B2	Post	5-1/2" x 3-1/2"	2,362 lbs	15.3%	16.4%	Unspecified
B3	Post	5-1/2" x 3-1/2"	1,613 lbs	10.5%	11.2%	Unspecified
B4	Wall/Plate	3-1/2" x 3-1/2"	288 lbs	2.9%	3.1%	Unspecified

### Cautions

Uplift of -446 lbs found at span 1 - Left.

### Notes



# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP 1st Floor\...\BM-120(i1655)

Dry | 4 spans | No cantilevers | 0/12 slope

April 14, 2017 09:05:03

BC CALC® Design Report



Build 5033  
Job Name:  
Address:  
City, State, Zip: ,  
Customer:  
Code reports: ESR-1040

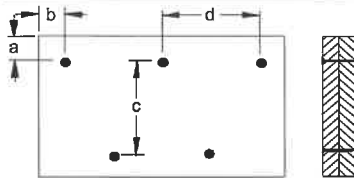
File Name: Harmon 2 EWP Model.mmdl  
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\BM  
Specifier:  
Designer:  
Company:  
Misc:

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets arbitrary (1") Maximum total load deflection criteria.  
Design meets arbitrary (0.75") Maximum live load deflection criteria.  
Calculations assume unbraced length of Top: 14-08-08, Bottom: 14-08-08.  
Unbalanced snow loads determined from building geometry were used in selected product's verification.  
Design based on Dry Service Condition.

### Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

### Connection Diagram



a minimum = 2"    c = 5-1/4"  
b minimum = 3"    d = 24"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Member has no side loads.

Connectors are: 16d Sinker Nails

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# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...BM-121(i1648)

Dry | 1 span | No cantilevers | 0/12 slope

April 14, 2017 09:05:02

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip: ,

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

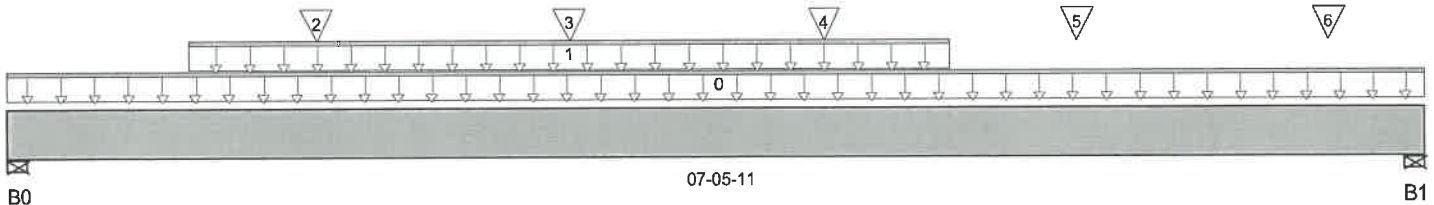
Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-121(i1648)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 07-05-11

### Reaction Summary (Down / Uplift) ( lbs )

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 6-3/16"	1,016 / 0	664 / 0			
B1, 5-7/8"	1,414 / 0	821 / 0			

Load Summary		Live	Dead	Snow	Wind	Roof Live	Trib.
Tag	Description	100%	90%	115%	160%	125%	
0	E4 59(i283)	Unf. Lin. (lb/ft)	L 00-00-00	07-05-11	81		n/a
1	Smoothed Load	Unf. Lin. (lb/ft)	L 00-11-08	04-11-08	364		n/a
2	J-100(i1635)	Conc. Pt. (lbs)	L 01-07-08	01-07-08	137		n/a
3	J-100(i1653)	Conc. Pt. (lbs)	L 02-11-08	02-11-08	137		n/a
4	J-100(i1618)	Conc. Pt. (lbs)	L 04-03-08	04-03-08	175		n/a
5	J-100(i1615)	Conc. Pt. (lbs)	L 05-07-08	05-07-08	486	198	n/a
6	J-100(i1601)	Conc. Pt. (lbs)	L 06-11-08	06-11-08	486	144	n/a

Controls Summary	Value	% Allowable	Duration	Case	Location
Pos. Moment	3,109 ft-lbs	14.6%	100%	1	04-03-08
End Shear	1,540 lbs	19.5%	100%	1	01-06-01
Total Load Defl.	L/999 (0.025")	n/a	n/a	1	03-09-08
Live Load Defl.	L/999 (0.016")	n/a	n/a	2	03-09-08
Max Defl.	0.025"	n/a	n/a	1	03-09-08
Span / Depth	6.7	n/a	n/a	0	00-00-00

Bearing Supports	Dim. (L x W)	Value	% Allow Support	% Allow Member	Material
B0 Wall/Plate	6-3/16" x 3-1/2"	1,680 lbs	18.2%	10.3%	Unspecified
B1 Wall/Plate	5-7/8" x 3-1/2"	2,235 lbs	25.6%	14.5%	Unspecified

### Notes

- Design meets Code minimum (L/240) Total load deflection criteria.
- Design meets Code minimum (L/360) Live load deflection criteria.
- Design meets arbitrary (1") Maximum total load deflection criteria.
- Design meets arbitrary (0.75") Maximum live load deflection criteria.
- Calculations assume member is fully braced.
- Design based on Dry Service Condition.



BC CALC® Design Report



Build 5033

Job Name:

Address:

City, State, Zip:

Customer:

Code reports: ESR-1040

File Name: Harmon 2 EWP Model.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\BM-121(

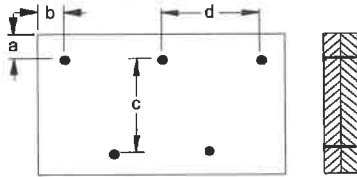
Specifier:

Designer:

Company:

Misc:

### Connection Diagram



a minimum = 2"    c = 7-7/8"  
b minimum = 3"    d = 12"

Calculated Side Load = 430.9 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Sinker Nails

### Disclosure

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