



RELEASE FOR CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
CODES ADMINISTRATION  
LEE'S SUMMIT, MISSOURI  
BY \_\_\_\_\_  
DATE \_\_\_\_\_

MiTek USA, Inc.  
16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314-434-1200

Re: 2770190  
Summit/Newhaven Mediterranean/MO

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Valley Center).

Pages or sheets covered by this seal: I45920361 thru I45920447  
My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: Engineering 001193



*Scott Sevier*

May 3, 2021

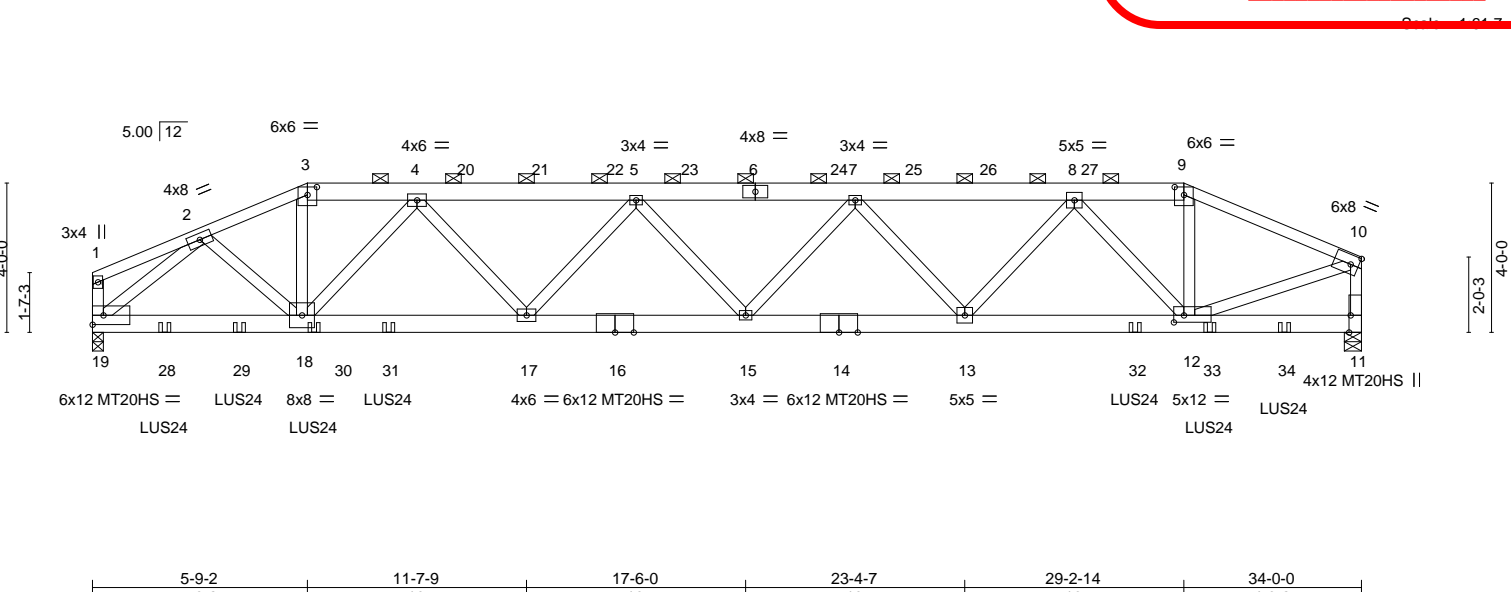
Sevier, Scott, Engineer

**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

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**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	A5	Hip Girder	1	2	Lee's Summit, MO

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:19 2021 Page 1  
 ID:S2jHDThFGhfBurkSX6GDfzAhVS-O5bwF...  
 DATE 4-9-2



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 0.81	Vert(LL)	-0.31	15	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.55	Vert(CT)	-0.57	15	>714	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	NO	WB 0.87	Horz(CT)	0.12	11	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS						
								Weight: 386 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except* 3-6,6-9: 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-2-6 max.): 3-9.
BOT CHORD 2x6 SP 2400F 2.0E *Except* 14-16: 2x6 SPF 2100F 1.8E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 19=0-3-8, 11=0-5-8  
 Max Horz 19=62(LC 7)  
 Max Uplift 19=1127(LC 8), 11=1107(LC 9)  
 Max Grav 19=5970(LC 1), 11=5982(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-461/112, 2-3=-8844/1667, 3-4=-8017/1532, 4-5=-12881/2314, 5-7=-14323/2523,  
 7-8=-12269/2209, 8-9=-6756/1289, 9-10=-7507/1403, 1-19=-325/84, 10-11=-5561/1037  
 BOT CHORD 18-19=-1172/6163, 17-18=-2013/11053, 15-17=-2547/14464, 13-15=-2493/14139,  
 12-13=-1885/10218  
 WEBS 2-18=-465/2724, 3-18=-634/3501, 9-12=-524/3008, 2-19=-7722/1445, 10-12=-1303/7122,  
 4-18=-4670/792, 4-17=-424/2892, 5-17=-2511/414, 7-15=-54/310, 7-13=-2949/493,  
 8-13=-459/3231, 8-12=-5328/960

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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.
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 19 and 11. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 7-11-4 to connect truss(es) to front face of bottom chord.



May 3, 2021

Job 2770190	Truss A5	Truss Type Hip Girder	Qty 1	Ply 2	Summit/Newh... en Mediter... Job Reference (optional)
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 LEE'S SUMMIT, MISSOURI  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:19 2021 Page 2  
 ID:S2jHDTFGhf8urkSX6GDfzAhVS-O5bwFnh3S0MseVktUKcUYMulwVvkbieqjNupgUzLTE2

**NOTES-**

- 12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 27-11-4 from the left end to 31-11-4 to connect truss(es) to front face of bottom chord.
- 13) Fill all nail holes where hanger is in contact with lumber.
- 14) LGT2 Hurricane ties must have two studs in line below the truss.
- 15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 536 lb down and 106 lb up at 9-11-4, 536 lb down and 106 lb up at 11-11-4, 536 lb down and 106 lb up at 13-11-4, 536 lb down and 106 lb up at 15-11-4, 536 lb down and 101 lb up at 17-11-4, 537 lb down and 104 lb up at 19-11-4, 537 lb down and 104 lb up at 21-11-4, and 537 lb down and 104 lb up at 23-11-4, and 537 lb down and 181 lb up at 25-11-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-70, 3-9=-70, 9-10=-70, 11-19=-20

Concentrated Loads (lb)

Vert: 6=-536 20=-536 21=-536 22=-536 23=-536 24=-537 25=-537 26=-537 27=-537 28=-572(F) 29=-572(F) 30=-572(F) 31=-572(F) 32=-602(F) 33=-602(F) 34=-602(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

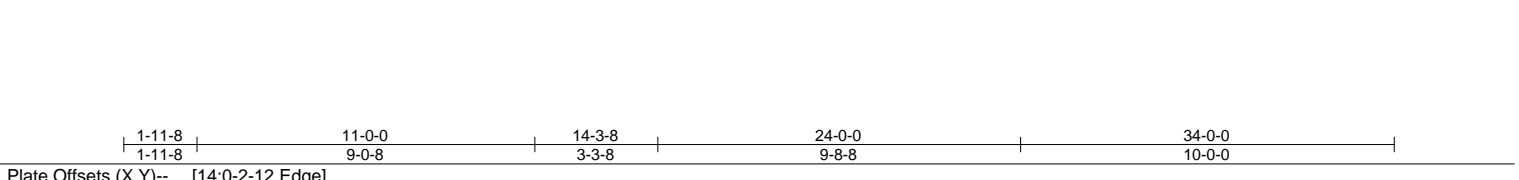
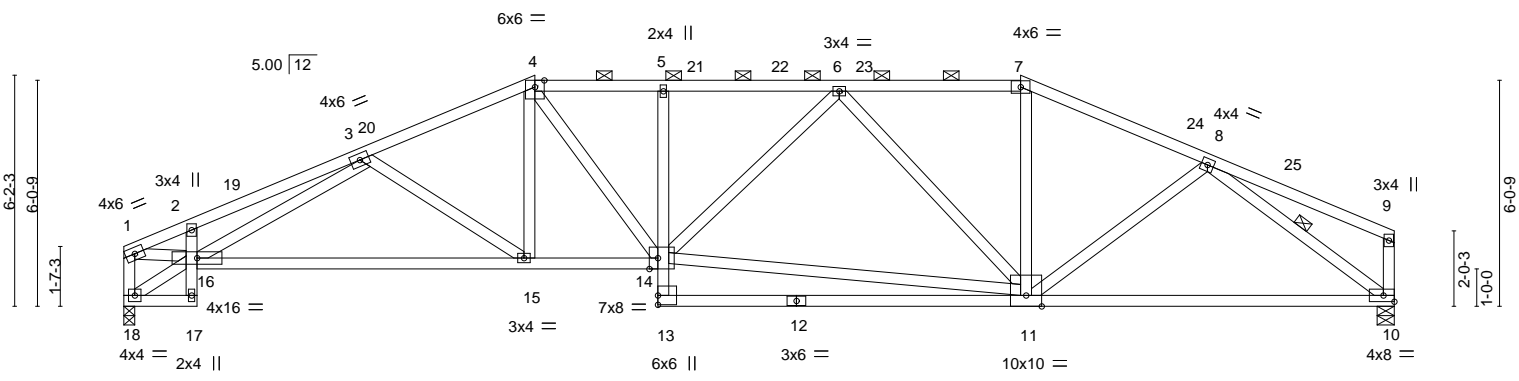
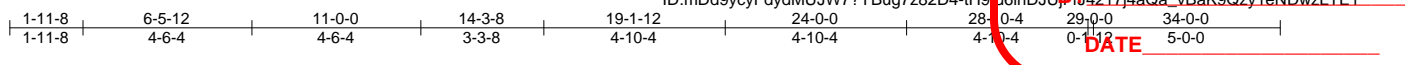


16023 Swingley Ridge Rd  
Chesterfield, MO 63017

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**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	A6	Hip	1	1	en Meditec

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:20 2021 Page 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 0.34	Vert(LL)	-0.20	11-13	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.83	Vert(CT)	-0.45	11-13	>892		
BCLL 0.0	Rep Stress Incr	YES	WB 0.84	Horz(CT)	0.18	10	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 164 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, excepting end verticals, and 2-0-0 oc purlins (3-5-2 max.): 4-7.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 8-10

**REACTIONS.** (size) 10=0-5-8, 18=0-3-8  
 Max Horz 18=61(LC 9)  
 Max Uplift 10=-259(LC 13), 18=-267(LC 12)  
 Max Grav 10=1517(LC 1), 18=1517(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-2378/440, 2-3=-2637/521, 3-4=-2619/464, 4-5=-2622/526, 5-6=-2601/521, 6-7=-1855/369, 7-8=-2079/378, 1-18=-1461/270  
 BOT CHORD 15-16=-483/2618, 14-15=-354/2358, 5-14=-329/126, 11-13=0/362, 10-11=-297/1671  
 WEBS 4-15=-39/408, 4-14=-144/570, 11-14=-430/2057, 6-14=-116/380, 6-11=-869/219, 7-11=-49/442, 1-16=-405/2164, 3-15=-312/188, 3-16=-306/132, 8-11=0/389, 8-10=-1968/362

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 11-0-0, Exterior(2R) 11-0-0 to 15-2-15, Interior(1) 15-2-15 to 24-0-0, Exterior(2R) 24-0-0 to 28-2-15, Interior(1) 28-2-15 to 33-10-4 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 18. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	A7	Hip	1	1	en Mediter...

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**LEE'S SUMMIT, MISSOURI**

DATE 6-1-12

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:21 2021 Page 1  
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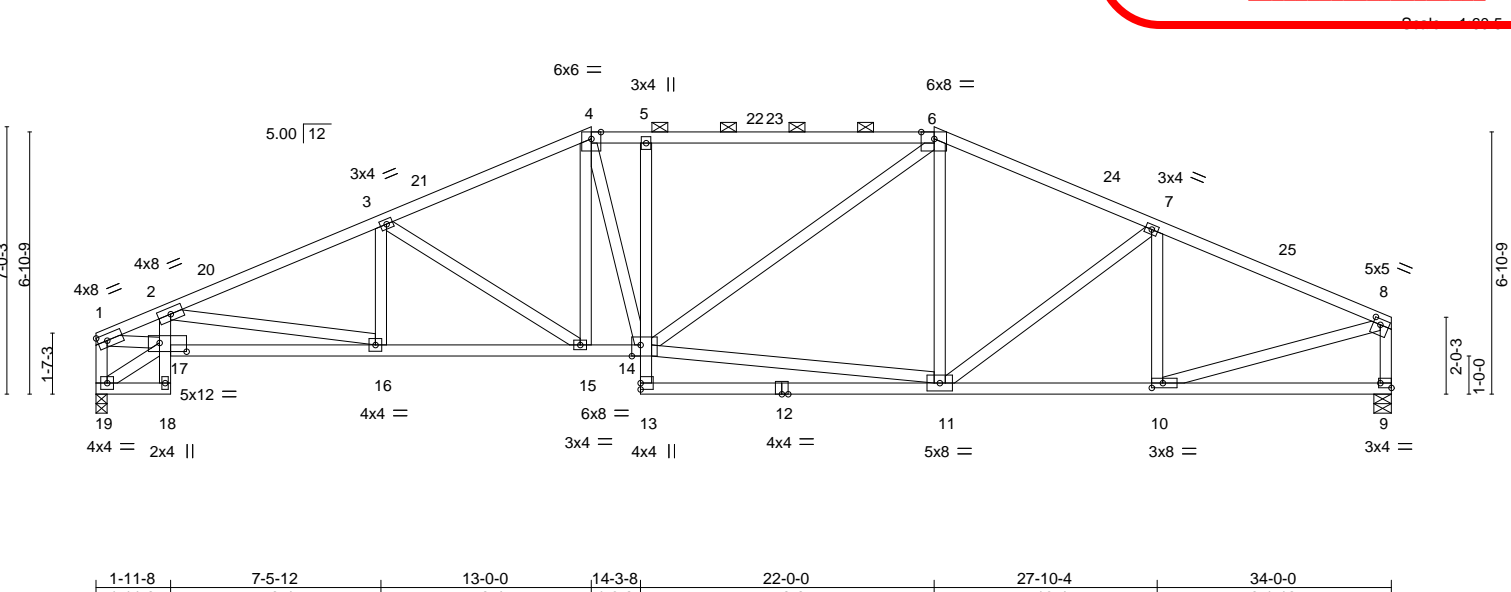


Plate Offsets (X, Y)--	[6:0-4-2,Edge], [8:0-2-4,0-1-12], [9:Edge,0-1-8], [10:0-3-8,0-1-8], [14:0-2-12,Edge], [17:0-8-8,0-2-12]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.84	Vert(LL)	-0.16	5	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.69	Vert(CT)	-0.32	11-13	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.58	Horz(CT)	0.17	9	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 170 lb	FT = 20%

**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, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-6.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 9=0-5-8, 19=0-3-8  
 Max Horz 19=59(LC 9)  
 Max Uplift 9=-259(LC 13), 19=-262(LC 12)  
 Max Grav 9=1517(LC 1), 19=1517(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-2615/516, 2-3=-2912/511, 3-4=-2419/452, 4-5=-2265/467, 5-6=-2268/471, 6-7=-2019/389, 7-8=-2032/350, 1-19=-1425/280, 8-9=-1451/280  
 BOT CHORD 16-17=-595/2657, 15-16=-453/2625, 14-15=-313/2155, 5-14=-584/218, 11-13=0/267, 10-11=-288/1806, 2-17=-288/125  
 WEBS 3-15=-559/205, 4-15=-80/470, 4-14=-151/570, 11-14=-266/1576, 6-14=-184/692, 7-10=-399/123, 8-10=-259/1765, 1-17=-473/2362

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 13-0-0, Exterior(2R) 13-0-0 to 17-2-15, Interior(1) 17-2-15 to 22-0-0, Exterior(2R) 22-0-0 to 26-2-15, Interior(1) 26-2-15 to 33-10-4 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 19. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job 2770190	Truss A8	Truss Type Hip	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64114
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**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:23 2021 Page 1

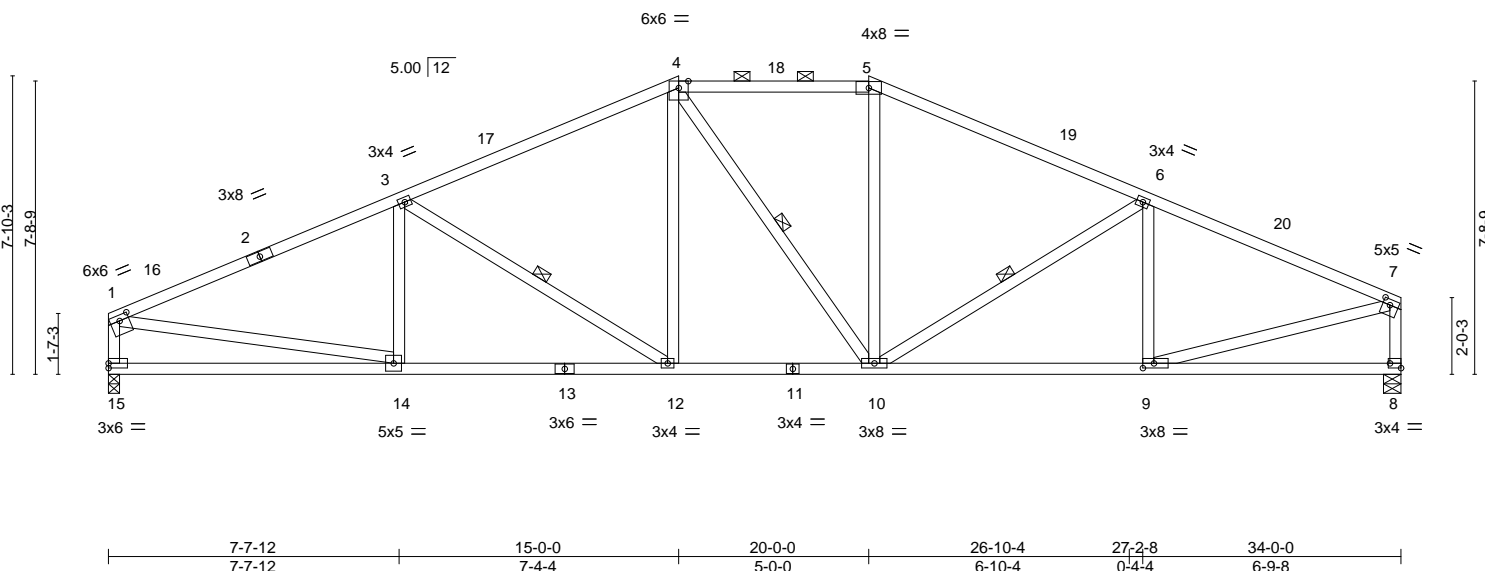
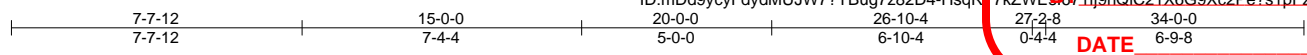


Plate Offsets (X,Y)--	[1:0-3-0,0-1-12], [7:0-2-4,0-1-12], [8:Edge,0-1-8], [9:0-3-8,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.58	Vert(LL)	-0.12 12-14	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.25 12-14	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.46	Horz(CT)	0.07 8	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 154 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-3-9 max.): 4-5.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 3-12, 4-10, 6-10

**REACTIONS.** (size) 15=0-3-8, 8=0-5-8  
 Max Horz 15=63(LC 16)  
 Max Uplift 15=-261(LC 12), 8=-253(LC 13)  
 Max Grav 15=1517(LC 1), 8=1517(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-2339/400, 3-4=-1965/402, 4-5=-1685/406, 5-6=-1930/397, 6-7=-2096/367, 1-15=-1440/287, 7-8=-1452/274  
 BOT CHORD 12-14=-377/2074, 10-12=-249/1713, 9-10=-297/1864  
 WEBS 3-12=-466/205, 4-12=-60/380, 5-10=-45/341, 1-14=-258/1885, 7-9=-266/1817, 6-9=-340/136, 6-10=-280/165

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-6-9, Interior(1) 3-6-9 to 15-0-0, Exterior(2E) 15-0-0 to 20-0-0, Exterior(2R) 20-0-0 to 24-9-11, Interior(1) 24-9-11 to 33-10-4 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 8. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021





Job 2770190	Truss A10	Truss Type Hip	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 Mitek Industries, Inc. Fri Apr 30 16:58:05 2021 Page 1

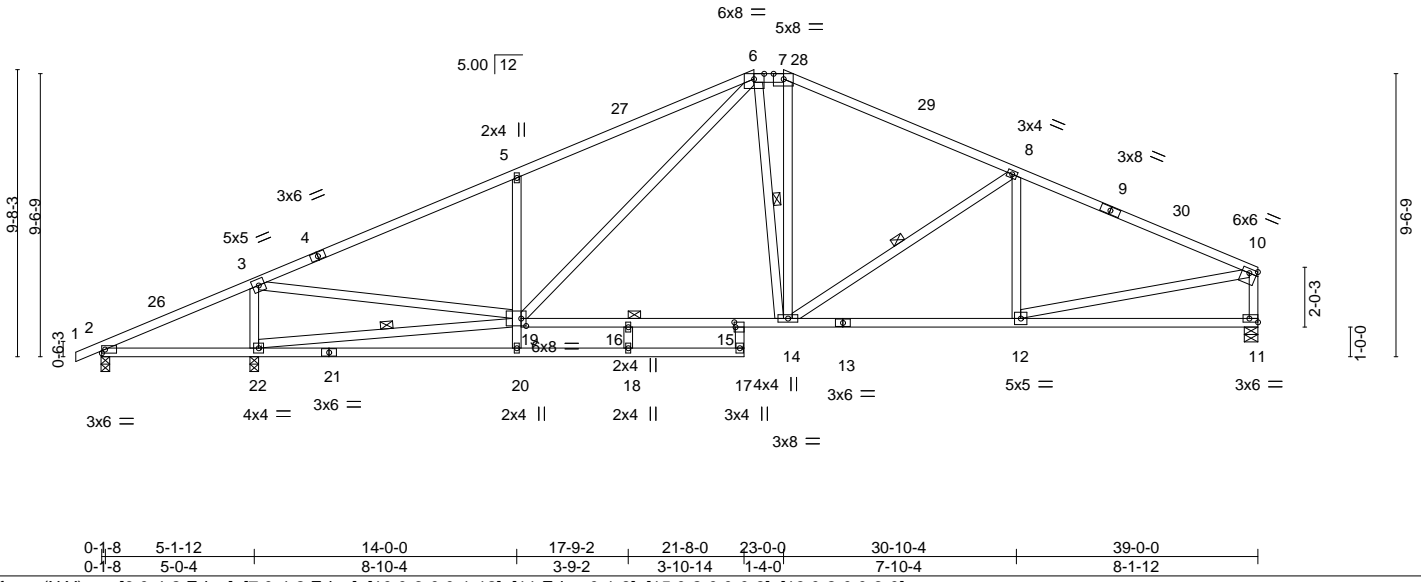
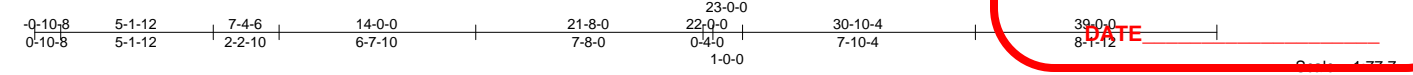


Plate Offsets (X, Y)-- [6:0-4-2,Edge], [7:0-4-2,Edge], [10:0-3-0,0-1-12], [11:Edge,0-1-8], [15:0-2-0,0-0-8], [19:0-2-0,0-3-0]

<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 0.69	Vert(LL) -0.13 20-22 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.60	Vert(CT) -0.29 20-22 >999 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.63	Horz(CT) 0.06 11 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS		Weight: 190 lb	FT = 20%

**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, except end verticals, and 2-0-0 oc purlins (4-2-9 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 8-14, 6-14, 19-22  
 JOINTS 1 Brace at Jt(s): 16

**REACTIONS.** (size) 2=0-3-8, 22=0-3-8, 11=0-5-8  
 Max Horz 22=197(LC 12)  
 Max Uplift 2=-15(LC 26), 22=-404(LC 12), 11=-244(LC 13)  
 Max Grav 2=107(LC 25), 22=2008(LC 1), 11=1482(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-157/393, 3-5=-2125/358, 5-6=-2103/509, 6-7=-1498/358, 7-8=-1740/348, 8-10=-2112/346, 10-11=-1402/273  
 BOT CHORD 2-22=-273/181, 20-22=0/303, 18-20=0/262, 17-18=0/262, 16-19=-181/1252, 15-16=-181/1252, 14-15=-174/1485, 12-14=-266/1860  
 WEBS 3-22=-1761/462, 19-20=0/322, 5-19=-613/319, 6-19=-264/619, 7-14=-120/468, 8-14=-509/219, 10-12=-222/1728, 6-14=-231/417, 19-22=-533/68, 3-19=-324/2152

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 22-0-0, Exterior(2E) 22-0-0 to 23-0-0, Exterior(2R) 23-0-0 to 27-2-15, Interior(1) 27-2-15 to 38-10-4 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 22, and 11. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

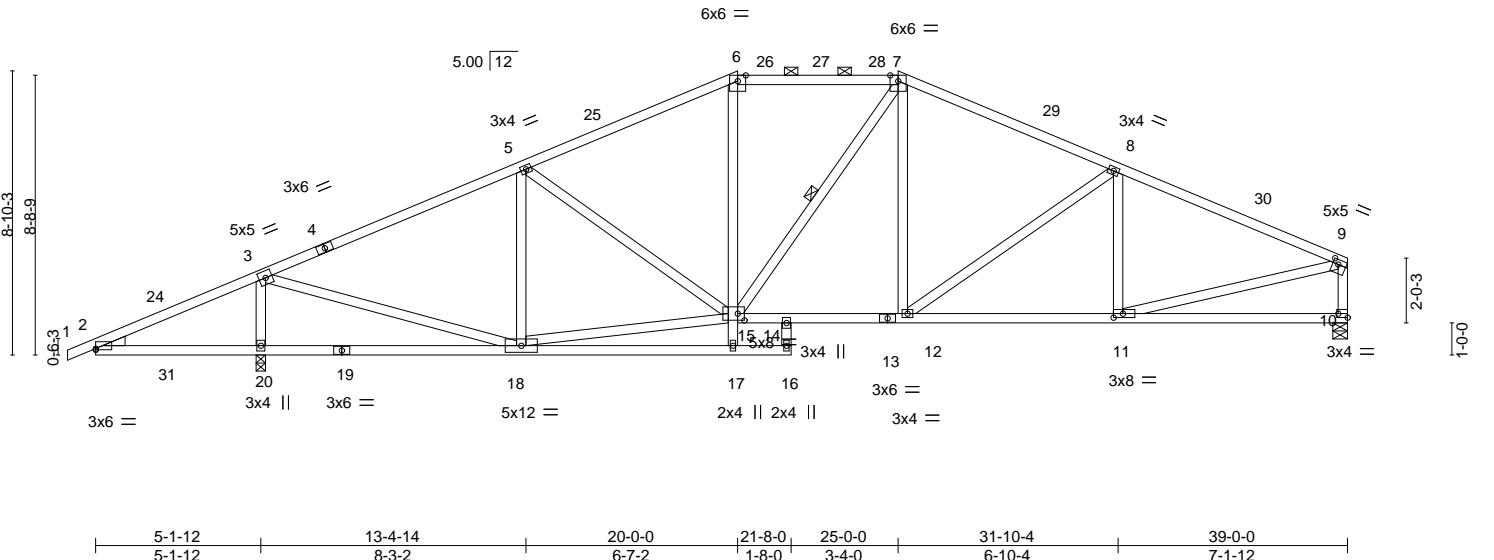




**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss A11	Truss Type Hip	Qty 1	Ply 1	Summit/Newh... en Mediter... 14929367
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:06 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-HbJ?hXvW0jiaPEOD5rWdr6aGUQ2uRvksEdjzL7EF  
 -0-10-8 5-1-12 6-9-12 13-4-14 20-0-0 21-8-0 25-0-0 31-10-4 39-0-0  
 0-10-8 5-1-12 1-8-0 6-7-2 6-7-2 1-8-0 3-4-0 6-10-4 7-1-12  
 DATE: 12



<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 0.66	Vert(LL) -0.11 12-14 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.50	Vert(CT) -0.20 12-14 >999 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.62	Horz(CT) 0.05 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS		Weight: 182 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-5-11 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 7-15

**REACTIONS.** (size) 20=0-3-8, 10=0-5-8  
 Max Horz 20=182(LC 12)  
 Max Uplift 20=391(LC 12), 10=251(LC 13)  
 Max Grav 20=2087(LC 1), 10=1471(LC 1)

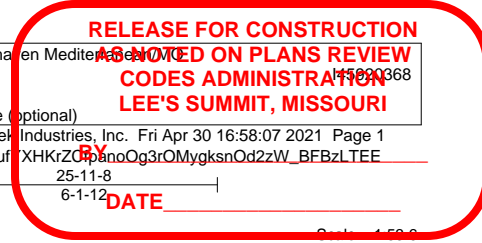
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-522/580, 3-5=-1708/299, 5-6=-1803/340, 6-7=-1580/351, 7-8=-1833/339,  
 8-9=-2044/350, 9-10=-1399/275  
 BOT CHORD 2-20=-447/517, 18-20=-447/474, 14-15=-148/1470, 12-14=-176/1599, 11-12=-279/1808  
 WEBS 3-20=-1911/575, 3-18=-496/2007, 5-18=-629/230, 6-15=-45/324, 7-12=-52/335,  
 8-12=-308/166, 8-11=-290/125, 9-11=-238/1722, 15-18=-254/1347

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 20-0-0, Exterior(2R) 20-0-0 to 24-2-15, Interior(1) 24-2-15 to 25-0-0, Exterior(2R) 25-0-0 to 29-2-15, Interior(1) 29-2-15 to 38-10-4 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20 and 10. This connection is for uplift only and does not consider lateral forces.
  - This truss is in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job 2770190	Truss A12	Truss Type Hip	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:07 2021 Page 1

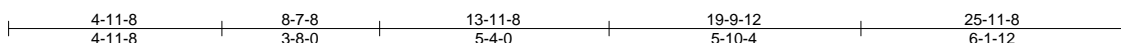
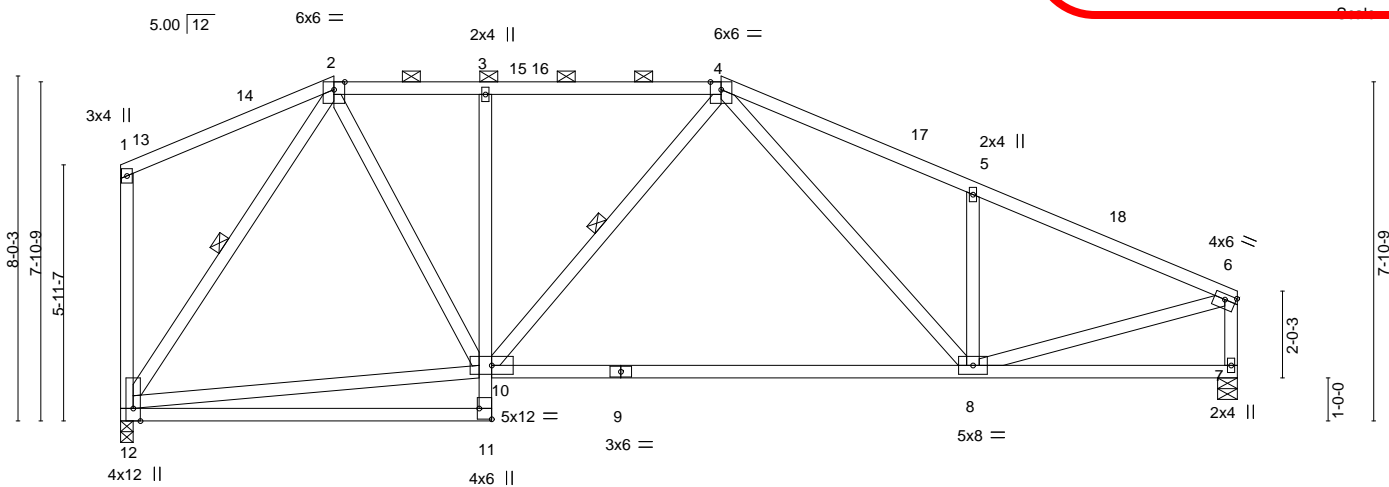
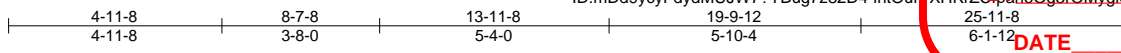


Plate Offsets (X,Y)-- [6:0-3-0,0-1-8], [11:Edge,0-3-8]

<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 0.36	Vert(LL)	-0.37	8-10	>830	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.87	Vert(CT)	-0.77	8-10	>402		
BCLL 0.0	Rep Stress Incr	YES	WB 0.43	Horz(CT)	0.04	7	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 135 lb	FT = 20%

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

**REACTIONS.** (size) 12=0-3-8, 7=0-5-8  
 Max Horz 12=-220(LC 10)  
 Max Uplift 12=-200(LC 8), 7=-220(LC 13)  
 Max Grav 12=1155(LC 1), 7=1155(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1016/277, 3-4=-1035/278, 4-5=-1524/391, 5-6=-1522/278, 6-7=-1121/229  
 BOT CHORD 3-10=-368/149, 8-10=-175/1106  
 WEBS 10-12=-71/624, 2-10=-132/842, 4-8=-118/362, 5-8=-432/229, 6-8=-180/1309, 2-12=-1151/245

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 4-11-8, Exterior(2R) 4-11-8 to 9-2-7, Interior(1) 9-2-7 to 13-11-8, Exterior(2R) 13-11-8 to 18-2-7, Interior(1) 18-2-7 to 25-9-12 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 7. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



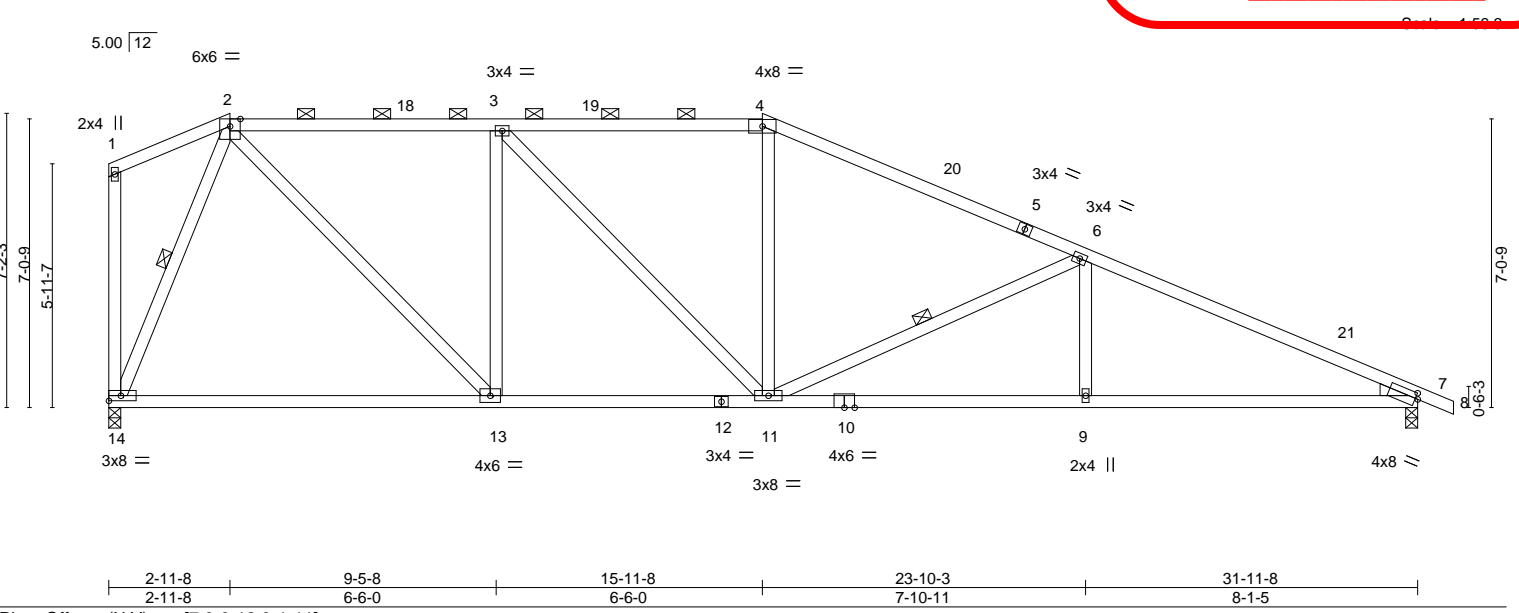
May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE: 8-1-5

Job 2770190	Truss A13	Truss Type HIP	Qty 1	Ply 1	Summit/Newh... en Medite... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:08 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-D\_Qm5?Z9zQppOr... Wwb2wRF36MWodCBakkodLTED



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.64	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.73	Vert(LL) -0.21 13-14 >999 240		
BCLL 0.0	Rep Stress Incr YES	WB 0.64	Vert(CT) -0.44 13-14 >873 180		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS	Horz(CT) 0.08 7 n/a n/a		
				Weight: 140 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, excepting end verticals, and 2-0-0 oc purlins (4-0-3 max.): 2-4.  
 BOT CHORD Rigid ceiling directly applied.  
 WEBS 1 Row at midpt 6-11, 2-14

**REACTIONS.** (size) 14=0-3-8, 7=0-3-8  
 Max Horz 14=251(LC 10)  
 Max Uplift 14=260(LC 8), 7=307(LC 13)  
 Max Grav 14=1431(LC 1), 7=1494(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1456/342, 3-4=-1718/439, 4-6=-1972/427, 6-7=-2839/567  
 BOT CHORD 13-14=0/545, 11-13=-133/1454, 9-11=-426/2522, 7-9=-426/2522  
 WEBS 2-13=-252/1328, 3-13=-788/252, 3-11=-154/381, 4-11=0/341, 6-11=-885/296, 6-9=0/319, 2-14=-1378/345

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 2-11-8, Exterior(2R) 2-11-8 to 7-2-7, Interior(1) 7-2-7 to 15-11-8, Exterior(2R) 15-11-8 to 20-2-7, Interior(1) 20-2-7 to 32-10-0 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14 and 7. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	A14	Hip	1	1	Lee's Summit, MO 64086

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:10 2021 Page 1  
 ID:mD9ycyFdydMUJW7?YBug7z82D4-9MYW... naPaFD... Y9SxyNhT0mrtnx\_cTVfUDrsVzLTEB  
 0-11-8 5-0-12 6-7-8 9-3-12 12-3-8 13-6-12 17-11-8 23-7-12 29-4-0 31-11-8 32-10-0  
 0-11-8 4-1-4 1-6-12 2-8-4 2-11-12 1-3-4 4-4-12 5-8-4 5-8-4 2-7-8 0-10-8  
**DATE** \_\_\_\_\_

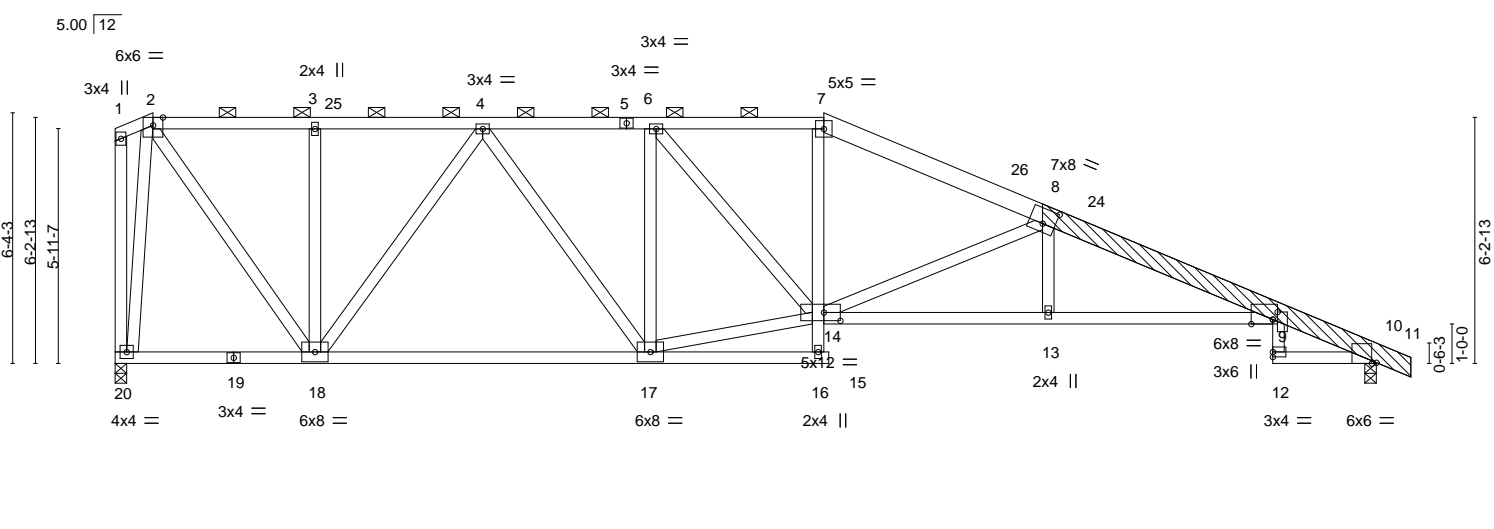


Plate Offsets (X,Y)--	[8:0-3-12,0-4-8], [9:0-6-9,Edge], [9:0-2-4,0-1-7], [10:0-1-6,Edge], [14:0-5-0,0-2-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.77	Vert(LL)	-0.40	9-13	>957	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(CT)	-0.73	9-13	>525		
BCLL 0.0	Rep Stress Incr	YES	WB 1.00	Horz(CT)	0.33	10	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 187 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except* 7-8: 2x6 SPF No.2, 8-11: 2x6 SPF 2100F 1.8E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-8-6 max.): 2-7.
BOT CHORD 2x4 SPF No.2 *Except* 9-14: 2x4 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x6 SPF 2100F 1.8E	
LBR SCAB 8-11 2x6 SPF 2100F 1.8E one side	

**REACTIONS.** (size) 20=0-3-8, 10=0-3-8  
 Max Horz 20=-255(LC 10)  
 Max Uplift 20=-295(LC 8), 10=-245(LC 13)  
 Max Grav 20=1432(LC 1), 10=1495(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1037/267, 3-4=-1035/266, 4-6=-1898/415, 6-7=-2275/445, 7-8=-2575/464, 8-9=-3753/547, 9-10=-674/139  
 BOT CHORD 18-20=-57/260, 17-18=-197/1575, 13-14=-438/3578, 9-13=-435/3586  
 WEBS 8-14=-1434/332, 8-13=0/266, 7-14=-74/681, 3-18=-325/130, 4-18=-928/219, 2-18=-288/1488, 2-20=-1383/371, 6-17=-727/160, 4-17=-87/564, 14-17=-232/1905, 6-14=-104/552

- NOTES-**
- Attached 10-3-10 scab 8 to 11, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 0-0-0 from end at joint 8, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 5-5-12 from end at joint 8, nail 2 row(s) at 3" o.c. for 4-8-4.
  - Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 0-11-8, Exterior(2R) 0-11-8 to 5-5-12, Interior(1) 5-5-12 to 17-11-8, Exterior(2R) 17-11-8 to 22-5-12, Interior(1) 22-5-12 to 32-10-0 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20 and 10. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	A15	Half Hip	1	1	Lee's Summit, MO 64086

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:11 2021 Page 1  
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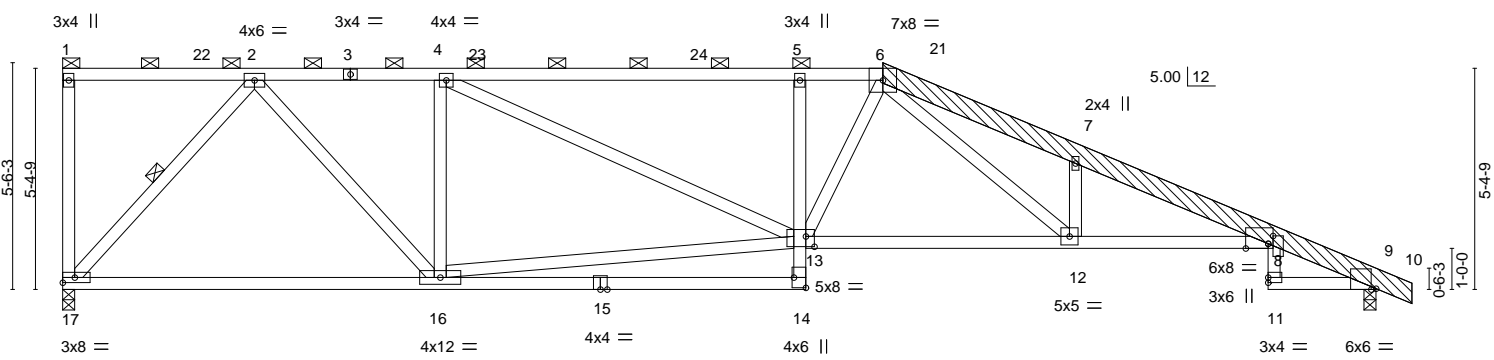
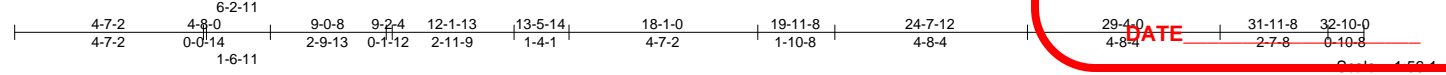


Plate Offsets (X, Y)--	[8:0-6-9,Edge], [8:0-2-4,0-1-7], [9:0-1-6,Edge], [13:0-2-8,0-3-0], [14:Edge,0-3-8]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.77	Vert(LL)	-0.36	8-12	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.81	Vert(CT)	-0.66	8-12	>582		
BCLL 0.0	Rep Stress Incr	YES	WB 0.45	Horz(CT)	0.31	9	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 180 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2 *Except* 6-10: 2x6 SPF 2100F 1.8E, 3-6: 2x4 SPF 1650F 1.5E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-9-7 max.): 1-6.
BOT CHORD 2x4 SPF No.2 *Except* 8-13: 2x4 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 2-17
OTHERS 2x6 SPF 2100F 1.8E	
LBR SCAB 6-10 2x6 SPF 2100F 1.8E one side	

**REACTIONS.** (size) 17=0-3-8, 9=0-3-8  
 Max Horz 17=-228(LC 10)  
 Max Uplift 17=-311(LC 8), 9=-309(LC 13)  
 Max Grav 17=1431(LC 1), 9=1494(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-1899/437, 4-5=-2815/612, 5-6=-2810/598, 6-7=-4365/925, 7-8=-4086/782, 8-9=-673/168  
 BOT CHORD 16-17=-132/1086, 5-13=-561/231, 12-13=-347/2582, 8-12=-662/3949  
 WEBS 2-17=-1594/381, 2-16=-232/1239, 13-16=-283/1718, 4-13=-266/991, 7-12=-1065/326, 6-13=-146/514, 6-12=-417/1814, 4-16=-939/281

- NOTES-**
- Attached 14-1-11 scab 6 to 10, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 4-0-15 from end at joint 6, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 9-3-12 from end at joint 6, nail 2 row(s) at 3" o.c. for 4-8-4.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-4-2, Interior(1) 3-4-2 to 19-11-8, Exterior(2R) 19-11-8 to 24-7-12, Interior(1) 24-7-12 to 32-10-0 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17 and 9. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Job 2770190	Truss A16	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTel Industries, Inc. Fri Apr 30 16:58:12 2021 Page 1  
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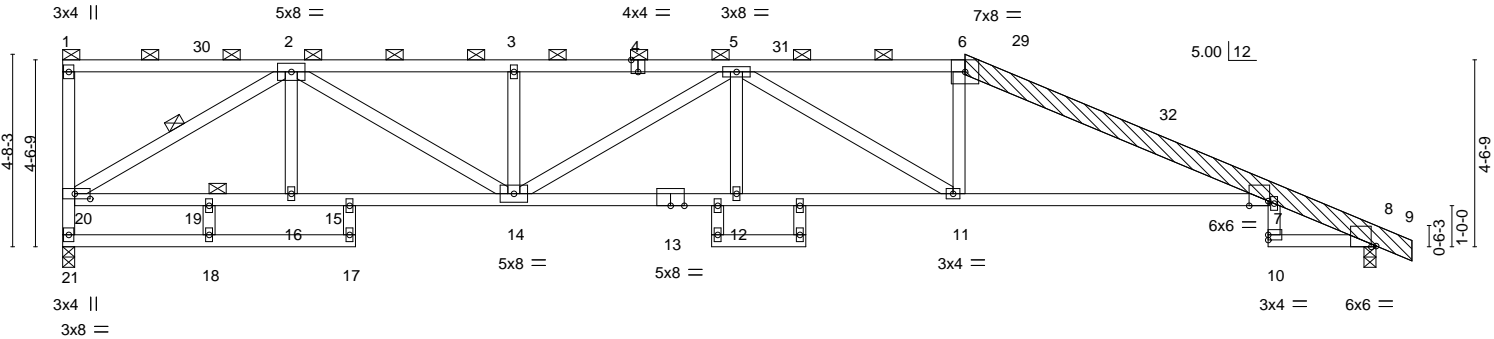
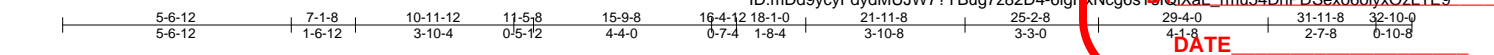


Plate Offsets (X, Y)--	[4:0-2-0,Edge], [7:0-5-9,Edge], [8:0-1-6,Edge], [20:0-4-8,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.84	Vert(LL)	-0.54	7-11	>701	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.99	Vert(CT)	-1.03	7-11	>372		
BCLL 0.0	Rep Stress Incr	YES	WB 0.49	Horz(CT)	0.45	8	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 164 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2 *Except* 6-9: 2x6 SPF 2100F 1.8E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-8-13 max.): 1-6.
BOT CHORD 2x4 SPF No.2 *Except* 13-20,7-13: 2x4 SPF 1650F 1.5E	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 2-20
OTHERS 2x6 SPF 2100F 1.8E	JOINTS 1 Brace at Jt(s): 1, 19
LBR SCAB 6-9 2x6 SPF 2100F 1.8E one side	

**REACTIONS.** (size) 21=0-3-8, 8=0-3-8  
 Max Horz 21=-192(LC 10)  
 Max Uplift 21=-315(LC 8), 8=-306(LC 13)  
 Max Grav 21=1431(LC 1), 8=1494(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 20-21=-1386/318, 2-3=-3201/688, 3-5=-3201/688, 5-6=-3159/643, 6-7=-3335/618, 7-8=-673/167  
 BOT CHORD 19-20=-355/1948, 16-19=-355/1948, 15-16=-355/1948, 14-15=-320/2017, 12-14=-606/3527, 11-12=-606/3527, 7-11=-475/3142  
 WEBS 6-11=-27/419, 3-14=-377/152, 2-20=-2311/489, 2-14=-284/1382, 5-14=-380/179, 5-11=-430/152

- NOTES-**
- Attached 11-11-11 scab 6 to 9, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 0-0-2 from end at joint 6, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 7-1-12 from end at joint 6, nail 2 row(s) at 4" o.c. for 4-8-4.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-4-2, Interior(1) 3-4-2 to 21-11-8, Exterior(2R) 21-11-8 to 26-5-12, Interior(1) 26-5-12 to 32-10-0 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 and 8. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss A17	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITel Industries, Inc. Fri Apr 30 16:58:14 2021 Page 1

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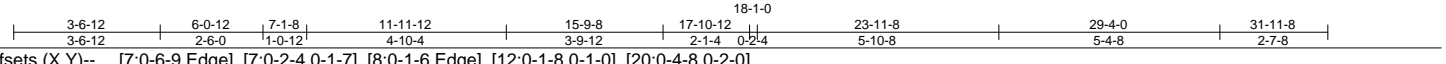
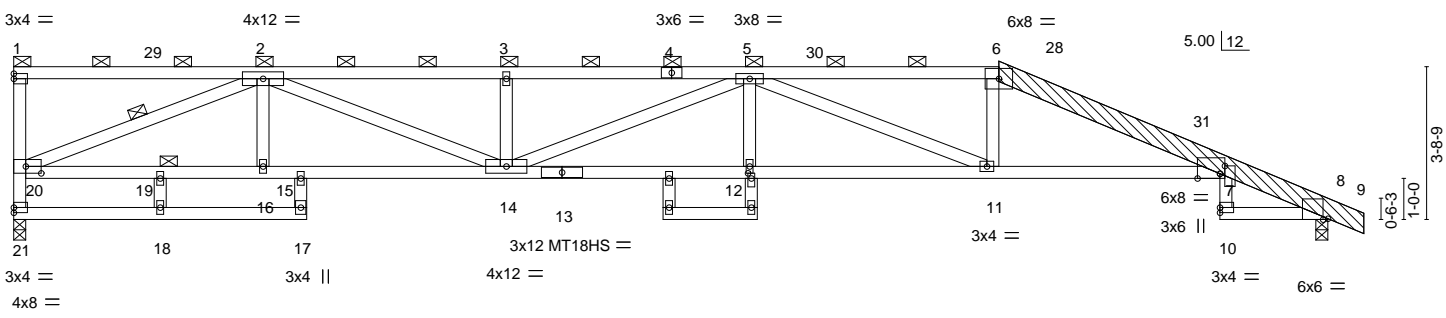
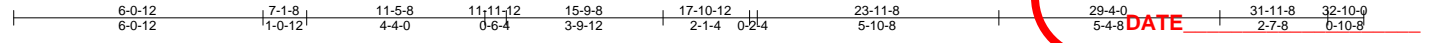


Plate Offsets (X, Y)-- [7:0-6-9,Edge], [7:0-2-4,0-1-7], [8:0-1-6,Edge], [12:0-1-8,0-1-0], [20:0-4-8,0-2-0]

<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 0.76	Vert(LL)	-0.53	12-14	>720	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.79	Vert(CT)	-0.96	12-14	>398	MT18HS	197/144
BCLL 0.0	Rep Stress Incr	YES	WB 0.75	Horz(CT)	0.45	8	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 160 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2 *Except* 6-9: 2x6 SPF 2100F 1.8E	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 1-6.
BOT CHORD 2x4 SPF No.2 *Except* 7-13: 2x4 SP 2400F 2.0E, 13-20: 2x4 SPF 1650F 1.5E	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 2-20
OTHERS 2x6 SPF 2100F 1.8E	JOINTS 1 Brace at Jt(s): 1, 19
LBR SCAB 6-9 2x6 SPF 2100F 1.8E one side	

**REACTIONS.** (size) 21=0-3-8, 8=0-3-8  
 Max Horz 21=-155(LC 10)  
 Max Uplift 21=-319(LC 8), 8=-302(LC 13)  
 Max Grav 21=1431(LC 1), 8=1494(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 20-21=-1383/325, 2-3=-4471/967, 3-5=-4471/967, 5-6=-3712/736, 6-7=-3840/733, 7-8=-673/165  
 BOT CHORD 19-20=-548/2829, 16-19=-548/2829, 15-16=-548/2829, 14-15=-537/2910, 12-14=-887/4698, 11-12=-887/4698, 7-11=-620/3679  
 WEBS 6-11=-62/545, 3-14=-405/165, 2-20=-3068/661, 2-14=-353/1687, 5-14=-257/189, 5-11=-1065/285

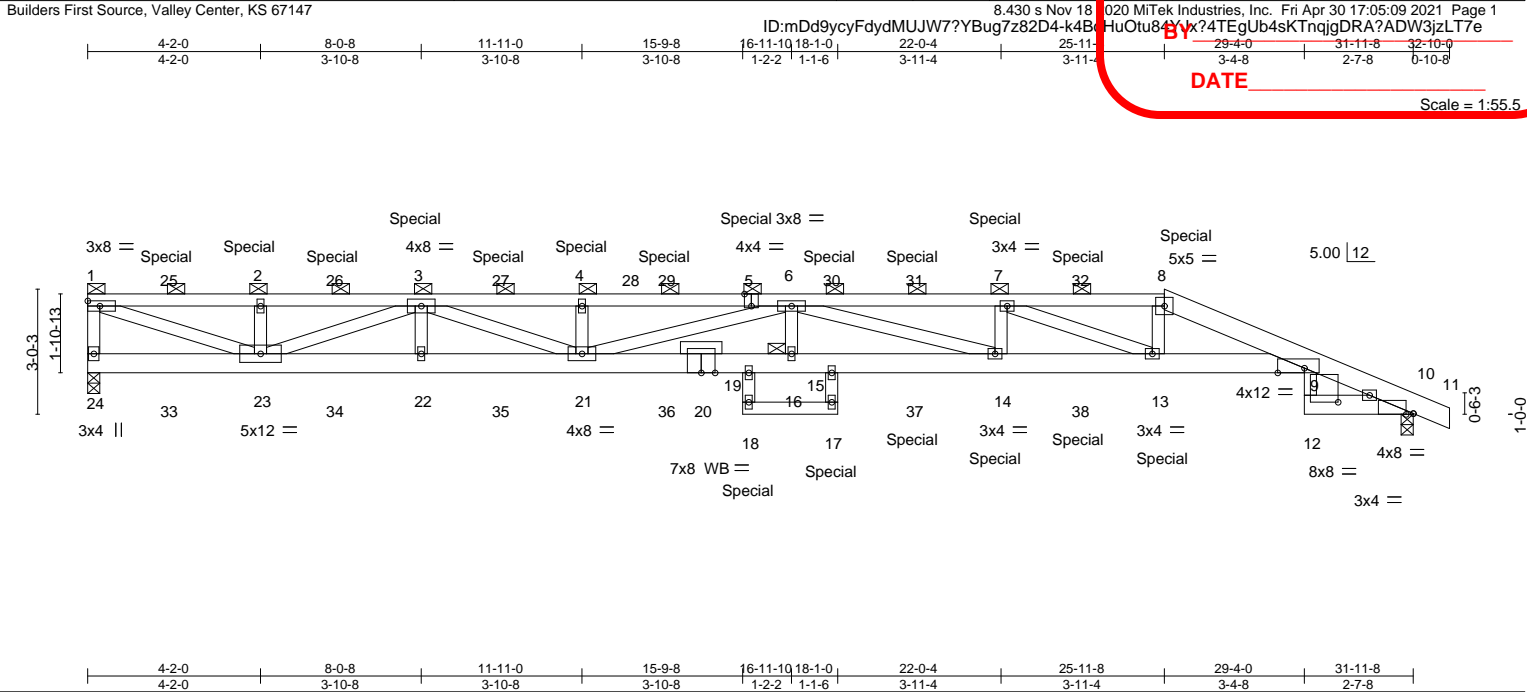
- NOTES-**
- Attached 9-9-11 scab 6 to 9, front face(s) 2x6 SPF 2100F 1.8E with 2 row(s) of 10d (0.131"x3") nails spaced 9" o.c. except : starting at 0-0-2 from end at joint 6, nail 2 row(s) at 7" o.c. for 2-0-0; starting at 3-10-13 from end at joint 6, nail 2 row(s) at 3" o.c. for 5-9-3.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-4-2, Interior(1) 3-4-2 to 23-11-8, Exterior(2R) 23-11-8 to 28-5-12, Interior(1) 28-5-12 to 32-10-0 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.
  - All plates are MT20 plates unless otherwise indicated.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21 and 8. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_  
 Scale = 1:55.5

Job 2770190	Truss A18	Truss Type HALF HIP GIRDER	Qty 1	Ply 3	Summit/Newhaven Mediterranean, MO 8.430 s Nov 18 020 MiTek Industries, Inc. Fri Apr 30 17:05:09 2021 Page 1 ID:mDd9ycFdydMUJW7?YBug7z82D4-k4BHuOt88Vx?4TEgUb4sKTnqjgDRA?ADW3jzLT7e
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.93	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.61	Vert(LL) -0.57 19 >672 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.53	Vert(CT) -1.03 19 >370 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-S	Horz(CT) 0.30 10 n/a n/a		
	Code IRC2018/TPI2014			Weight: 445 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2 \*Except\*  
 8-11: 2x6 SP 2400F 2.0E  
 BOT CHORD 2x4 SPF No.2 \*Except\*  
 20-24,9-20: 2x6 SPF 2100F 1.8E, 10-12: 2x6 SPF No.2  
 WEBS 2x4 SPF No.2  
 OTHERS 2x6 SPF No.2 \*Except\*  
 20-20: 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-7 max.): 1-8.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 JOINTS 1 Brace at Jt(s): 1, 16

**REACTIONS.** (size) 24=0-3-8, 10=0-3-8  
 Max Horz 24=-101(LC 4)  
 Max Uplift 24=-792(LC 4), 10=-777(LC 9)  
 Max Grav 24=2783(LC 1), 10=2808(LC 1)


**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-24=-2574/755, 1-25=-6339/1826, 2-25=-6339/1826, 2-26=-6339/1826, 3-26=-6339/1826, 3-27=-13495/3863, 4-27=-13495/3863, 4-28=-13495/3863, 28-29=-13495/3863, 5-29=-13495/3863, 5-6=-13495/3863, 6-30=-12727/3604, 30-31=-12727/3604, 7-31=-12727/3604, 7-32=-9820/2751, 8-32=-9820/2751, 8-9=-9988/2771, 9-10=-1388/409  
 BOT CHORD 23-34=-3116/11151, 22-34=-3116/11151, 22-35=-3116/11151, 21-35=-3116/11151, 21-36=-4177/14939, 20-36=-4177/14939, 19-20=-4177/14939, 16-19=-4125/14764, 15-16=-4125/14764, 15-37=-4177/14939, 14-37=-4177/14939, 14-38=-3516/12727, 13-38=-3516/12727, 9-13=-2595/9590, 9-12=-111/463  
 WEBS 1-23=-1865/6538, 2-23=-605/235, 3-23=-5172/1483, 3-22=-47/333, 3-21=-726/2520, 4-21=-645/248, 7-14=-78/569, 7-13=-3133/928, 8-13=-611/2322, 6-16=-49/426, 6-14=-2311/691, 6-21=-1509/508

- 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 0-7-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 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.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; 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.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
  - Two RT7 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 24 and 10. This connection is for



May 3, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 2770190	Truss A18	Truss Type HALF HIP GIRDER	Qty 1	Ply 3	Summit/Newhaven Mediterranean, MI 4920374 Job Reference (optional) 8.430 s Nov 18 10:20 MiTek Industries, Inc. Fri Apr 30 17:05:09 2021 Page 2 ID:mDd9ycyFdydMUJW7?YBug7z82D4-k4B4HuOtu8?x?4TEgUb4sKTncjgDRA?ADW3jzLT7e
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Builders First Source, Valley Center, KS 67147



**NOTES-**

- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Double installations of RT7 require the two hurricane ties to be installed on opposite sides of top plate to avoid nail interference in single ply truss.
- 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 176 lb down and 99 lb up at 1-11-0, 176 lb down and 99 lb up at 3-11-0, 176 lb down and 99 lb up at 5-11-0, 176 lb down and 99 lb up at 7-11-0, 176 lb down and 99 lb up at 9-11-0, 176 lb down and 99 lb up at 11-11-0, 176 lb down and 98 lb up at 13-11-0, 82 lb down and 69 lb up at 15-10-12, 82 lb down and 69 lb up at 17-10-12, 149 lb down and 103 lb up at 19-10-12, 149 lb down and 103 lb up at 21-10-12, and 149 lb down and 103 lb up at 23-10-12, and 149 lb down and 103 lb up at 25-11-8 on top chord, and at 1-11-0, at 3-11-0, at 5-11-0, at 7-11-0, at 9-11-0, at 11-11-0, at 13-11-0, 91 lb down and 43 lb up at 15-11-4, 91 lb down and 43 lb up at 17-11-4, 42 lb down at 19-10-12, 42 lb down at 21-10-12, and 42 lb down at 23-10-12, and 431 lb down and 159 lb up at 25-10-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-8=-70, 8-9=-70, 9-11=-70, 19-24=-20, 9-15=-20, 17-18=-20, 10-12=-20

Concentrated Loads (lb)

Vert: 5=-82(B) 8=-149(B) 19=-91(B) 15=-91(B) 2=-176(B) 3=-176(B) 4=-176(B) 7=-149(B) 14=-21(B) 13=-431(B) 25=-176(B) 26=-176(B) 27=-176(B) 29=-176(B) 30=-82(B) 31=-149(B) 32=-149(B) 37=-21(B) 38=-21(B)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



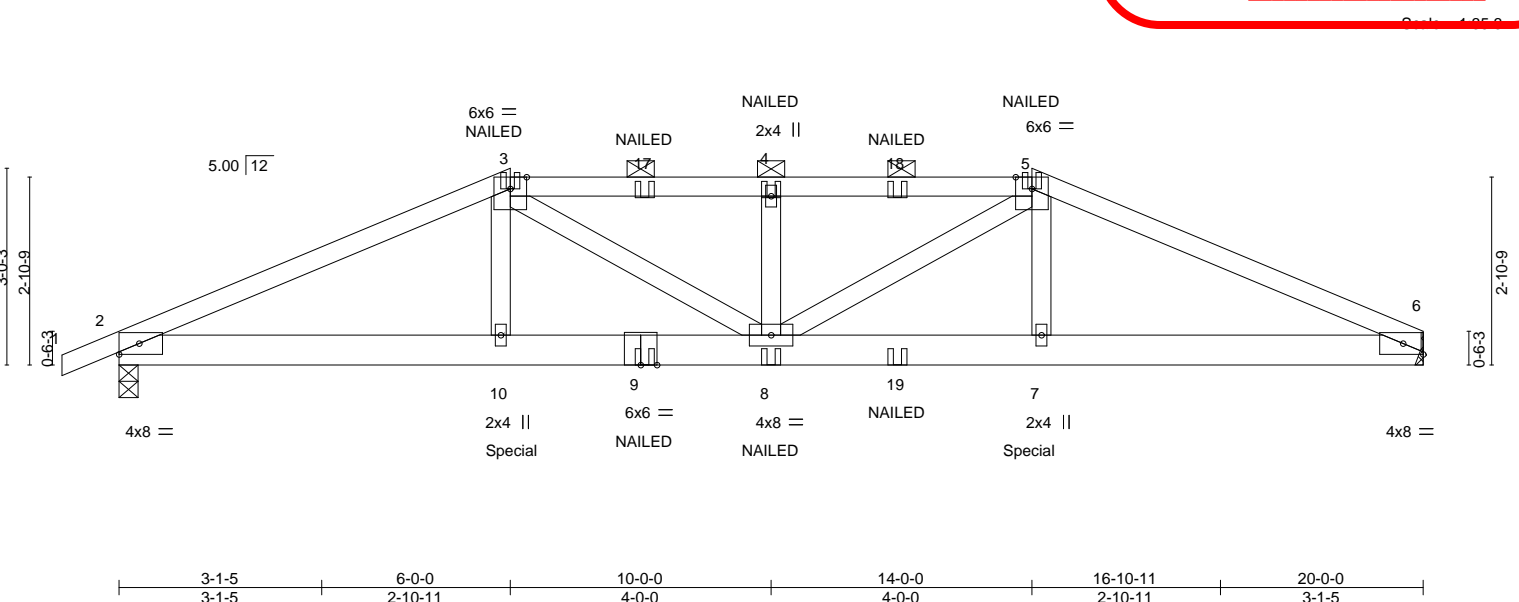
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Job 2770190	Truss B1	Truss Type Hip Girder	Qty 1	Ply 1	Summit/Newh... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:26 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-hRWZt...mSp9EzEamEOIE7KrgIT7KE\_k1PrKz5hPazLTDx



<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	BC 0.87	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.83	Vert(LL) -0.16 8 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.23	Vert(CT) -0.29 8 >833 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.06 6 n/a n/a		
	Code IRC2018/TPI2014			Weight: 79 lb	FT = 20%

**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 2-5-3 oc purlins, except 2-0-0 oc purlins (2-3-10 max.): 3-5.  
 BOT CHORD Rigid ceiling directly applied or 7-9-4 oc bracing.

**REACTIONS.** (size) 6=Mechanical, 2=0-3-8  
 Max Horz 2=55(LC 12)  
 Max Uplift 6=455(LC 9), 2=-475(LC 8)  
 Max Grav 6=1726(LC 1), 2=1791(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3752/1014, 3-4=-4069/1149, 4-5=-4069/1149, 5-6=-3758/1017  
 BOT CHORD 2-10=-911/3404, 8-10=-904/3371, 7-8=-866/3377, 6-7=-873/3410  
 WEBS 3-10=-122/577, 5-7=-124/582, 4-8=-600/229, 3-8=-280/940, 5-8=-280/938

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) 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) 6=455.
  - 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 487 lb down and 182 lb up at 6-0-0, and 487 lb down and 182 lb up at 13-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 12) 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, 3-5=-70, 5-6=-70, 11-14=-20





Job	Truss	Truss Type	Qty	Ply	Summit/Newh	en Mediter	an
2770190	B1	Hip Girder	1	1			

RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 CODES ADMINISTRATION  
 LEE'S SUMMIT, MISSOURI  
 BY \_\_\_\_\_  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:26 2021 Page 2  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-hRWZtmSp9EizamEOIE7KrgI7KE\_k1PrKz5hPazLTDx

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 3=-82(B) 5=-82(B) 9=-91(B) 10=-487(B) 7=-487(B) 4=-82(B) 8=-91(B) 17=-82(B) 18=-82(B) 19=-91(B)

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	B2	Hip	1	1	en Mediter...



Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:27 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-Ae4x5Vh4aTMkRlQy?IM2DgYkeBTWb?ZdqEy0zLTDw  
 8-0-0 12-0-0 20-0-0 8-0-0  
 8-0-0 4-0-0 8-0-0

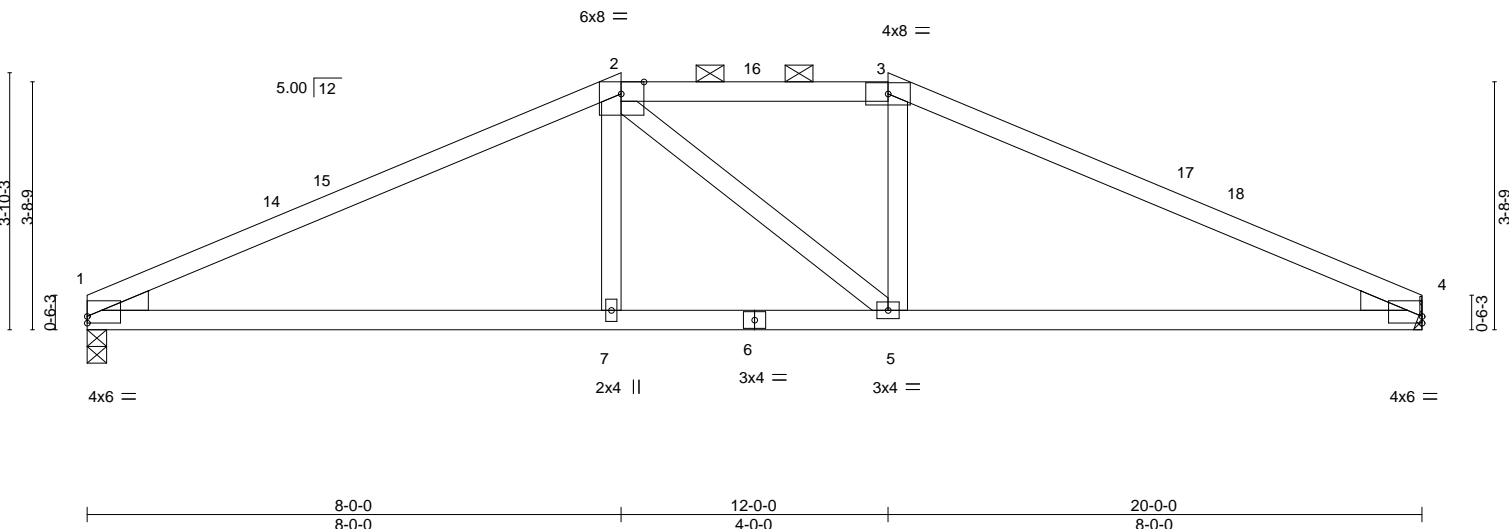


Plate Offsets (X,Y)-- [1:0-0-0,0-1-3], [2:0-4-2,Edge], [4:0-0-0,0-1-3]

<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 0.77	Vert(LL)	-0.09	7-10	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.21	7-10	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.11	Horz(CT)	0.03	4	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 63 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-8-12 max.): 2-3.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 1=0-3-8, 4=Mechanical  
 Max Horz 1=-58(LC 13)  
 Max Uplift 1=-155(LC 12), 4=-155(LC 13)  
 Max Grav 1=900(LC 1), 4=900(LC 1)

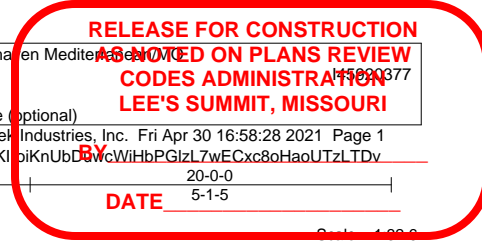
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1539/328, 2-3=-1321/352, 3-4=-1539/327  
 BOT CHORD 1-7=-232/1327, 5-7=-233/1321, 4-5=-226/1327

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 8-0-0, Exterior(2E) 8-0-0 to 12-0-0, Exterior(2R) 12-0-0 to 16-2-15, Interior(1) 16-2-15 to 20-0-0 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) 4=155.
  - 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

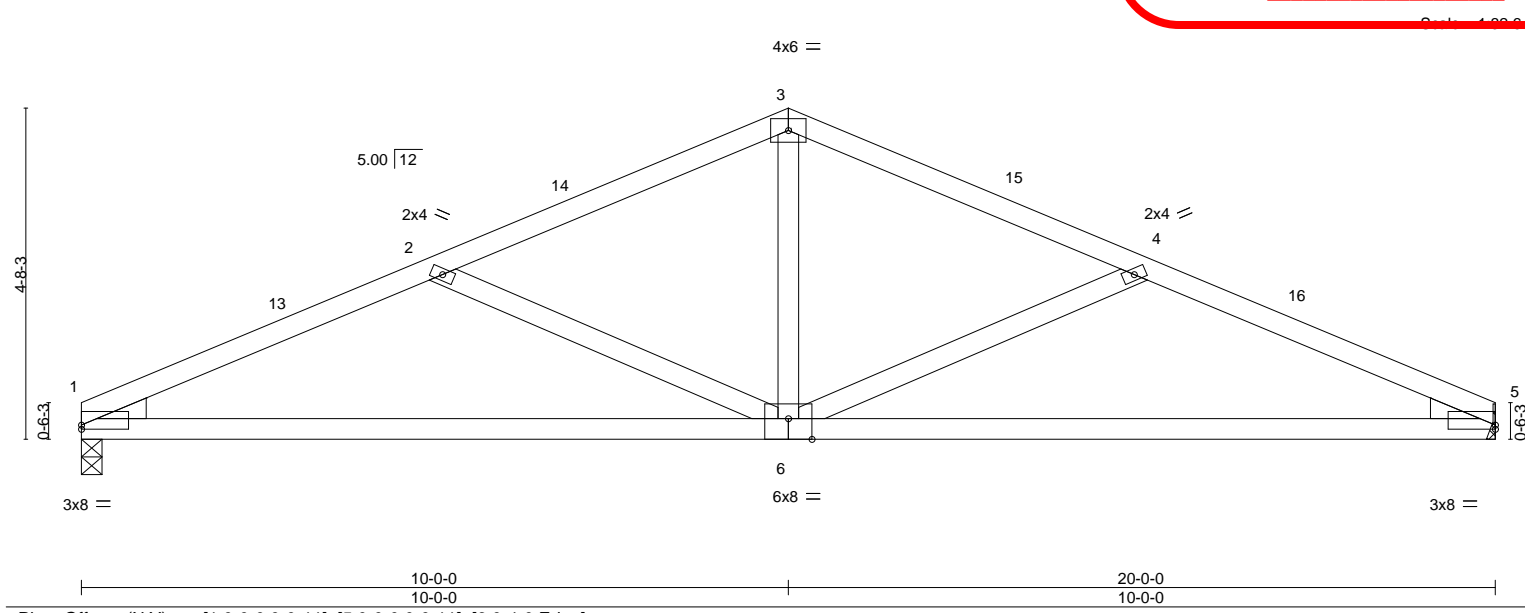


May 3, 2021

Job 2770190	Truss B3	Truss Type Common	Qty 7	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:28 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-eqeKlbiKnUbDwCWiHbPGlzL7wECxc8oHaoUJzLTDv



<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 0.25	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.78	Vert(LL) -0.15 6-12 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.25	Vert(CT) -0.31 6-12 >765 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.04 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 67 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 1=0-3-8, 5=Mechanical  
 Max Horz 1=-73(LC 13)  
 Max Uplift 1=-152(LC 12), 5=-152(LC 13)  
 Max Grav 1=900(LC 1), 5=900(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1677/426, 2-3=-1249/315, 3-4=-1249/315, 4-5=-1677/426  
 BOT CHORD 1-6=-342/1490, 5-6=-337/1490  
 WEBS 3-6=-73/557, 4-6=-474/222, 2-6=-474/222

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 20-0-0 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) 5=152.
  - 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

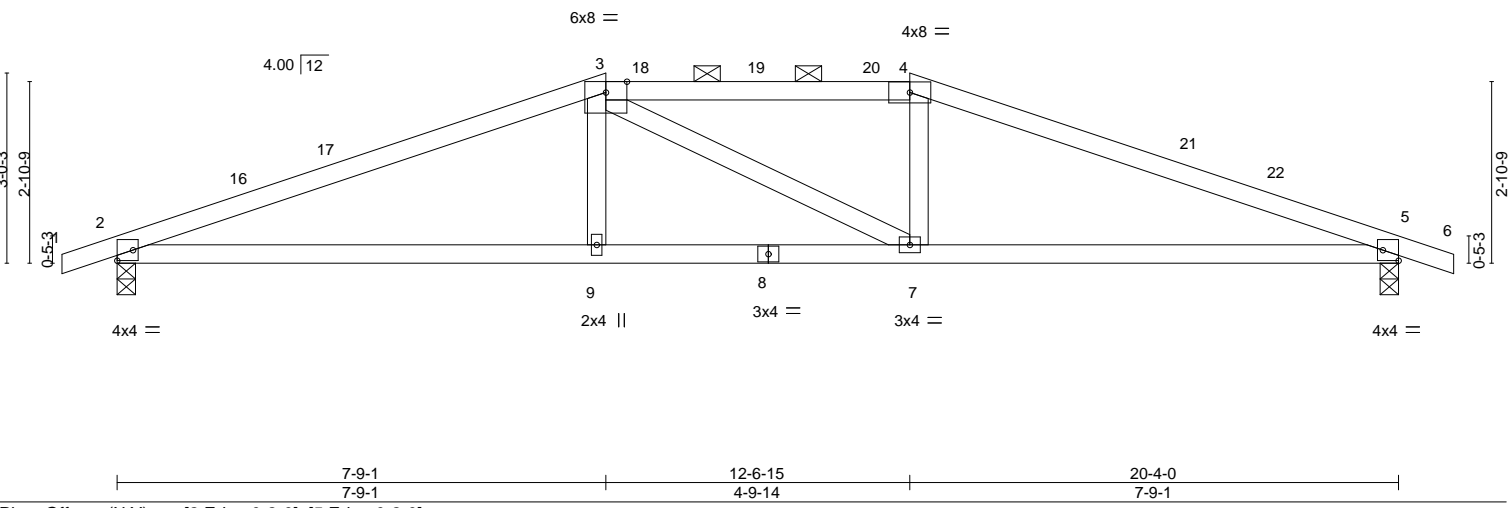


May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	C1	Hip	1	1	Lee's Summit, MO 64086

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:29 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-60CWBpK54832Vo4QoqyT10IXHxPgl1xJLQvzLTDu  
 0-10-8 7-9-1 12-6-15 20-4-0 21-2-8  
 0-10-8 7-9-1 4-9-14 7-9-1 0-10-8



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.75	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.66	Vert(LL) -0.11 9-12 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.13	Vert(CT) -0.24 9-12 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.04 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 61 lb	FT = 20%

**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, except 2-0-0 oc purlins (4-2-2 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 5=0-3-8  
 Max Horz 2=50(LC 16)  
 Max Uplift 2=-224(LC 8), 5=-224(LC 9)  
 Max Grav 2=976(LC 1), 5=976(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1919/574, 3-4=-1743/595, 4-5=-1919/574  
 BOT CHORD 2-9=-468/1751, 7-9=-470/1743, 5-7=-465/1751  
 WEBS 3-9=0/252, 4-7=0/252

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 7-9-1, Exterior(2R) 7-9-1 to 12-0-0, Interior(1) 12-0-0 to 12-6-15, Exterior(2R) 12-6-15 to 16-9-14, Interior(1) 16-9-14 to 21-2-8 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

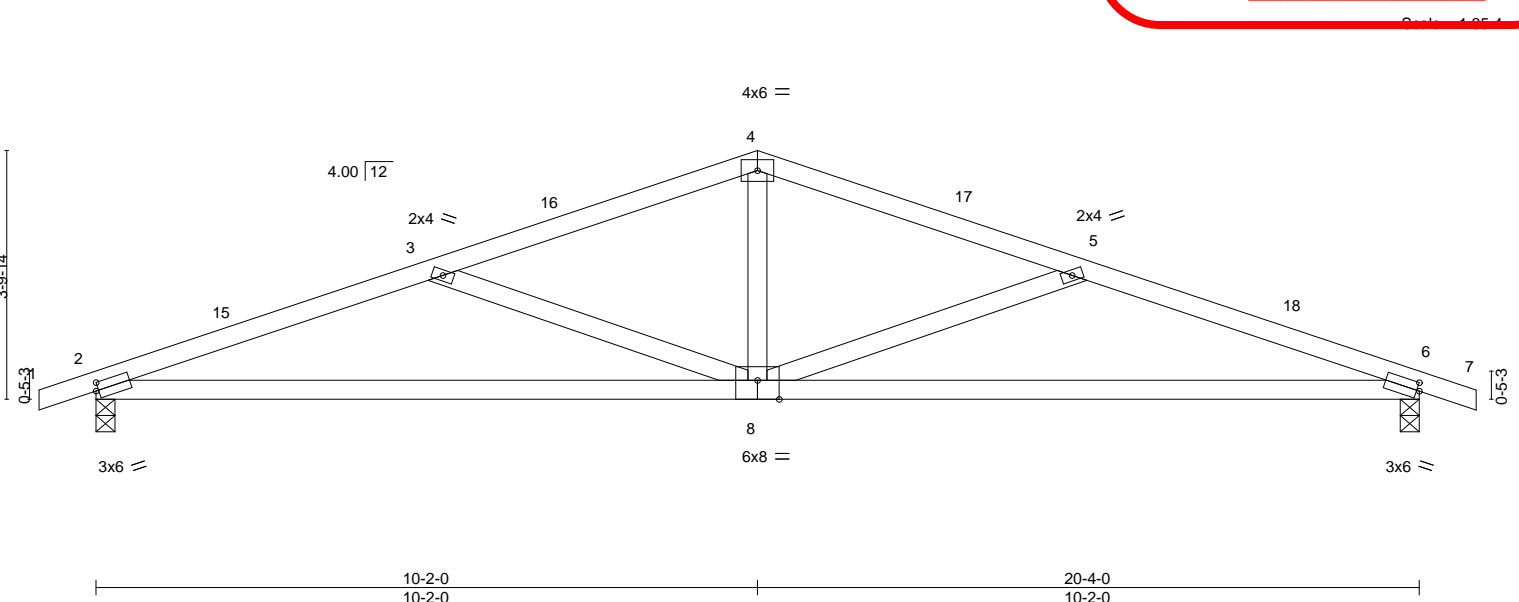
**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Job 2770190	Truss C2	Truss Type Common	Qty 1	Ply 1	Summit/Newh... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:29 2021 Page 1

ID:mDd9ycyFdydMUJW7?YBug7z82D4-60CivBpK54csqzVo4QoqyTl7hXFbXNGI1xJLQvzLTDu



<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 0.84	Vert(LL) -0.16 8-14 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.29	Vert(CT) -0.35 8-14 >688 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.05 6 n/a n/a		
	Code IRC2018/TPI2014			Weight: 65 lb	FT = 20%

**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.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
Max Horz 2=-65(LC 13)  
Max Uplift 2=-208(LC 8), 6=-208(LC 9)  
Max Grav 2=976(LC 1), 6=976(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2053/534, 3-4=-1523/382, 4-5=-1523/382, 5-6=-2055/534  
BOT CHORD 2-8=-447/1904, 6-8=-450/1906  
WEBS 4-8=-60/578, 5-8=-587/244, 3-8=-586/243

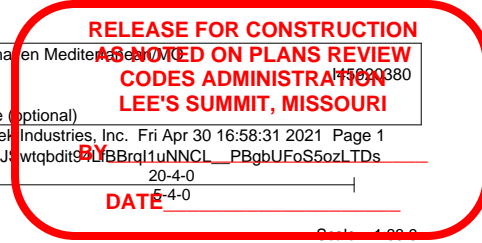
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-2-0, Exterior(2R) 10-2-0 to 13-2-0, Interior(1) 13-2-0 to 21-2-8 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



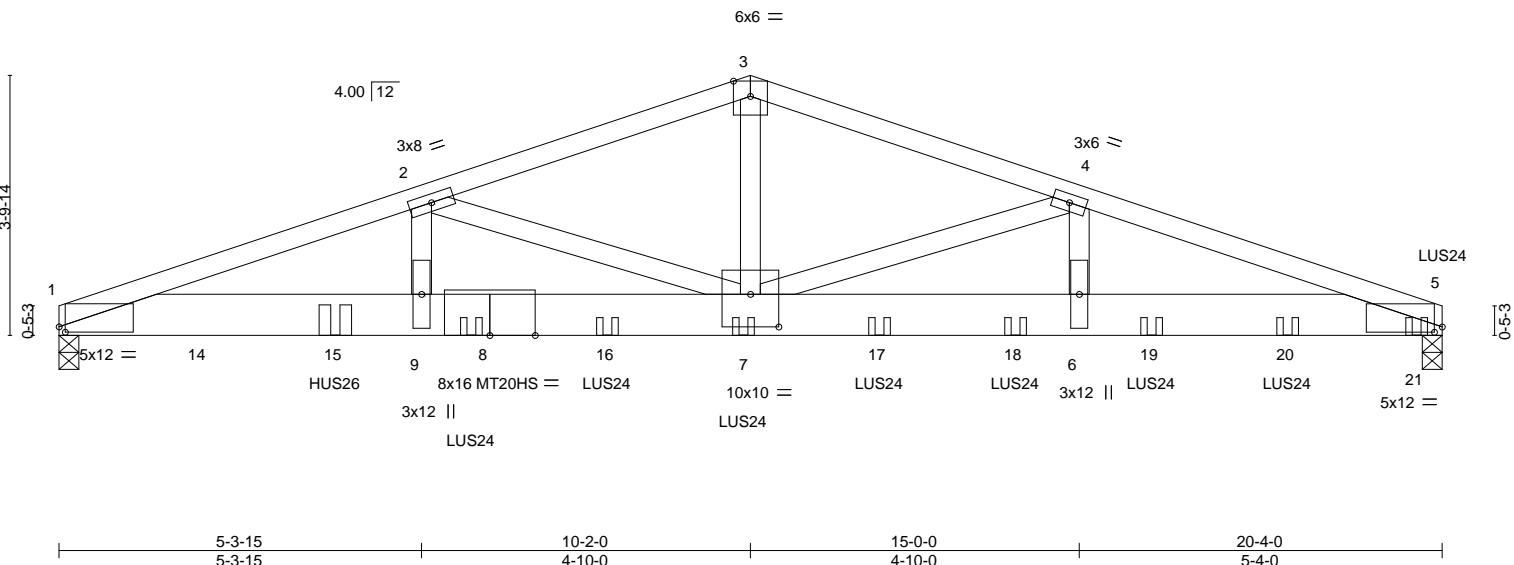
May 3, 2021



Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	C3	Common Girder	1	2	en Mediter...



Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:31 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-2PJ... wtqbdit9... LIBBrq11uNNCL\_PBgUfFoS5ozLTDs



<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 0.66	Vert(LL)	-0.24	7-9	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.58	Vert(CT)	-0.42	7-9	>578	MT20HS	187/143
BCLL 0.0	Rep Stress Incr	NO	WB 0.68	Horz(CT)	0.07	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS						
								Weight: 209 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SPF 1650F 1.5E  
 BOT CHORD 2x8 SP 2400F 2.0E  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-1 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=-60(LC 30)  
 Max Uplift 1=-1046(LC 4), 5=-1091(LC 5)  
 Max Grav 1=4985(LC 1), 5=5819(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-13080/2681, 2-3=-9367/1802, 3-4=-9368/1803, 4-5=-12709/2411  
 BOT CHORD 1-9=-2538/12382, 7-9=-2538/12382, 6-7=-2238/12034, 5-6=-2238/12034  
 WEBS 3-7=-1020/5521, 4-7=-3430/698, 4-6=-295/1914, 2-7=-3800/970, 2-9=-474/2172


- NOTES-**
- 2-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: 2x8 - 2 rows staggered at 0-6-0 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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent at 4-0-12 from the left end to connect truss(es) to front face of bottom chord, skewed 0.0 deg. to the left, sloping 0.0 deg. down.
  - Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 19-11-8 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) 221 lb down and 64 lb up at 2-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



May 3, 2021

**LOAD CASE(S)** Standard  
 Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

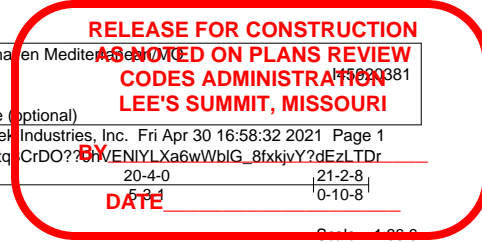
Job 2770190	Truss C3	Truss Type Common Girder	Qty 1	Ply 2	Summit/Newh... en Mediter... Job Reference (optional)
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RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 CODES ADMINISTRATION  
 LEE'S SUMMIT, MISSOURI  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:31 2021 Page 2  
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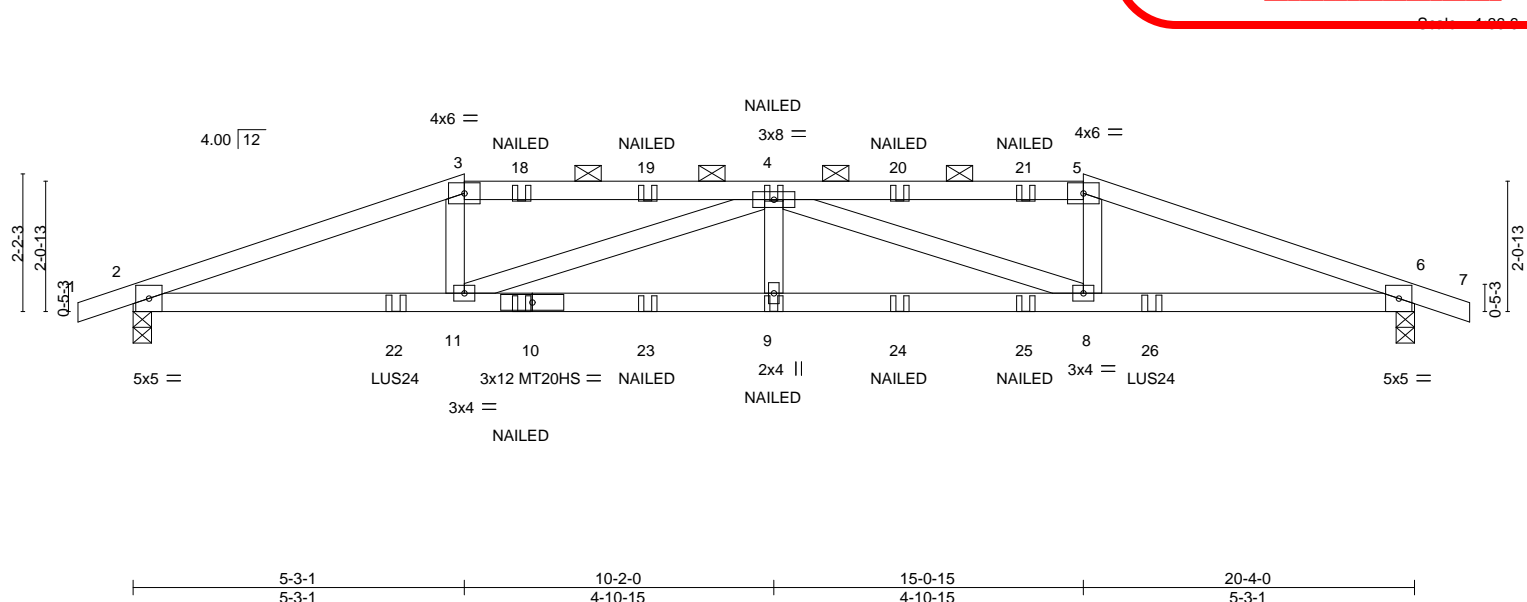
**LOAD CASE(S)** Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf)
  - Vert: 1-3=-70, 3-5=-70, 1-5=-20
- Concentrated Loads (lb)
  - Vert: 8=-880(F) 7=-880(F) 14=-221 15=-1706(F) 16=-880(F) 17=-880(F) 18=-880(F) 19=-880(F) 20=-880(F) 21=-886(F)



Job 2770190	Truss C4	Truss Type Roof Special Girder	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:32 2021 Page 1  
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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 0.81	Vert(LL) -0.25	9	>972	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.86	Vert(CT) -0.45	9	>539	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	NO	WB 0.61	Horz(CT) 0.11	6	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS					
							Weight: 66 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF 1650F 1.5E  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-9-9 oc purlins, except 2-0-0 oc purlins (2-6-7 max.): 3-5.  
 BOT CHORD Rigid ceiling directly applied or 7-2-11 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=34(LC 33)  
 Max Uplift 2=381(LC 4), 6=381(LC 5)  
 Max Grav 2=1481(LC 1), 6=1482(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3537/849, 3-4=-3256/820, 4-5=-3256/820, 5-6=-3538/849  
 BOT CHORD 2-11=-776/3313, 9-11=-991/4298, 8-9=-991/4298, 6-8=-744/3313  
 WEBS 3-11=-122/767, 4-11=-1236/299, 4-9=0/278, 4-8=-1235/299, 5-8=-122/768

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 9) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 11-11-15 oc max. starting at 4-2-1 from the left end to 16-2-0 to connect truss(es) to front face of bottom chord.
  - 10) Fill all nail holes where hanger is in contact with lumber.
  - 11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 12) 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, 3-5=-70, 5-7=-70, 12-15=-20



May 3, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd  
 Chesterfield, MO 63017

Job 2770190	Truss C4	Truss Type Roof Special Girder	Qty 1	Ply 1	Summit/Newh en Mediter anean Job Reference (optional)
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RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 CODES ADMINISTRATION  
 LEE'S SUMMIT, MISSOURI  
 DATE \_\_\_\_\_

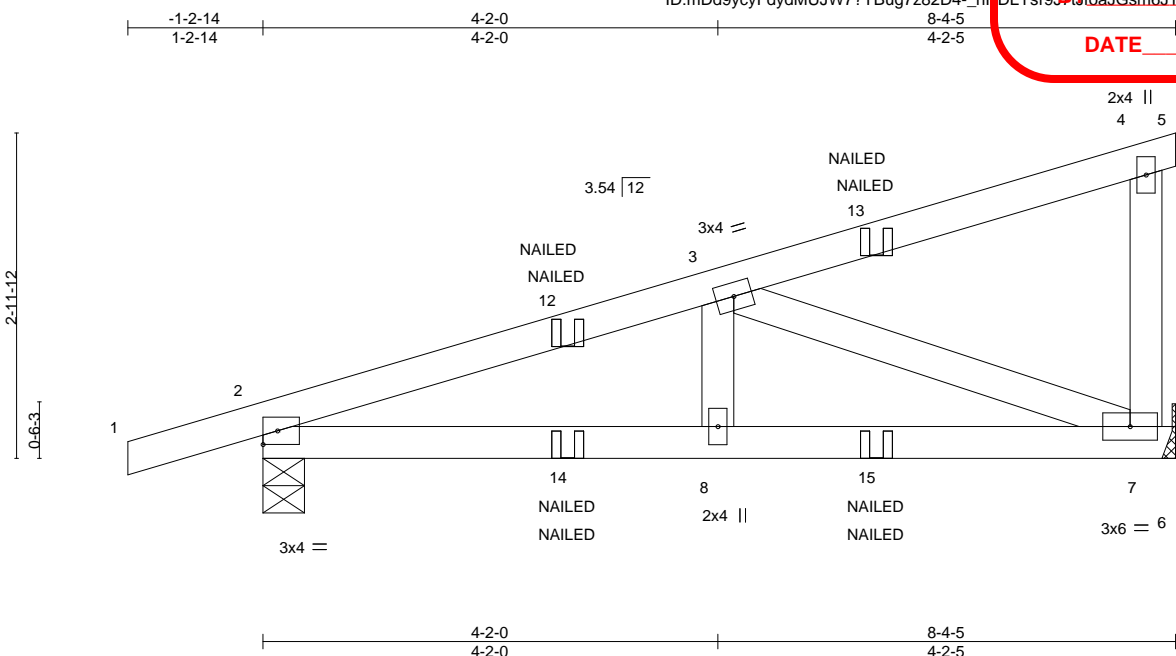
Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:32 2021 Page 2  
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**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 10=-31(F) 9=-31(F) 4=-50(F) 18=-50(F) 19=-50(F) 20=-50(F) 21=-50(F) 22=-304(F) 23=-31(F) 24=-31(F) 25=-31(F) 26=-304(F)

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss CJ1	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:33 2021 Page 1  
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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 0.27	Vert(LL)	-0.02	7-8	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.31	Vert(CT)	-0.04	7-8	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.21	Horz(CT)	0.01	7	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP					Weight: 29 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-4-9, 7=Mechanical  
 Max Horz 2=120(LC 7)  
 Max Uplift 2=-137(LC 4), 7=-110(LC 8)  
 Max Grav 2=484(LC 1), 7=424(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-714/144  
 BOT CHORD 2-8=-156/648, 7-8=-156/648  
 WEBS 3-7=-691/193

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) except (jt=lb) 7=110.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 8) 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: 1-4=-70, 4-5=-20, 6-9=-20  
 Concentrated Loads (lb)  
 Vert: 13=-35(F=-18, B=-18) 14=-5(F=-3, B=-3) 15=-42(F=-21, B=-21)



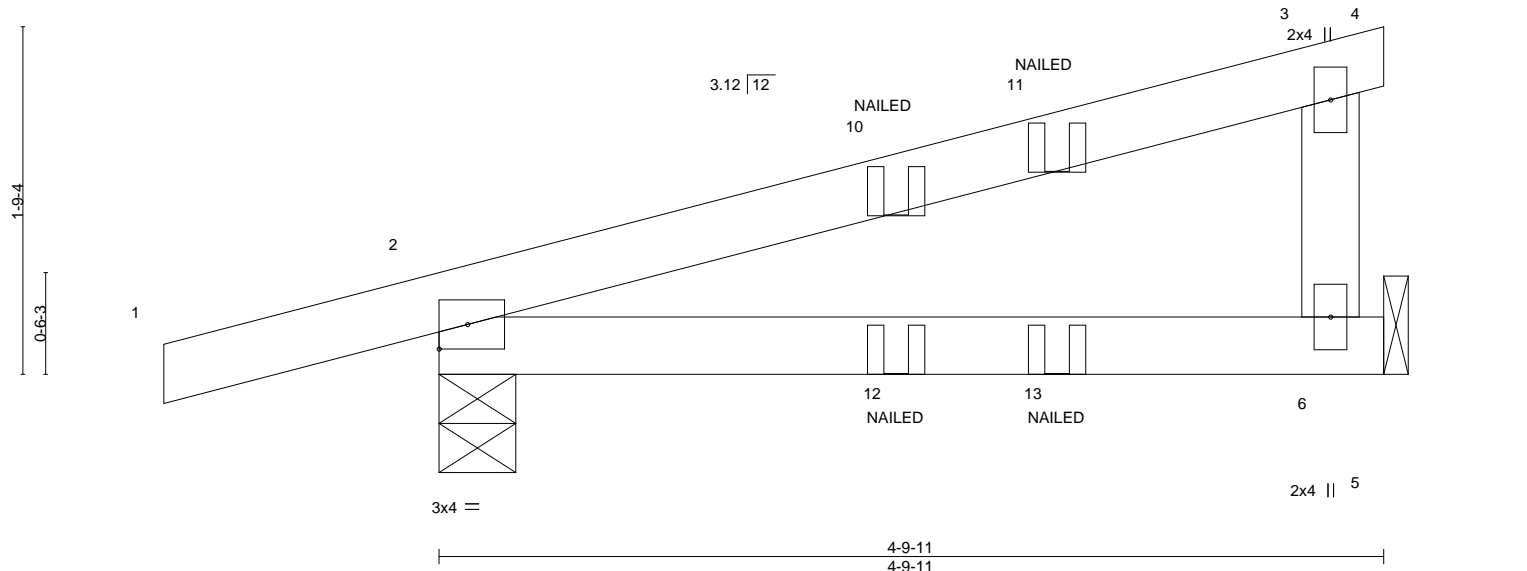
May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss CJ2	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	Summit/Newh... Lee's Summit, MO 64083
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:34 2021 Page 1  
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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 0.32	Vert(LL)	-0.02 6-9	>999	240	MT20	197/144
BCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(CT)	-0.04 6-9	>999	180		
BCLL 0.0	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.01 2	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP					Weight: 14 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-9-11 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 6=Mechanical, 2=0-4-11  
 Max Horz 2=66(LC 7)  
 Max Uplift 6=51(LC 8), 2=110(LC 4)  
 Max Grav 6=206(LC 1), 2=319(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 8) 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=-20, 5-7=-20
Concentrated Loads (lb)
Vert: 12=1(F) 13=9(B)



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss CJ3	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:36 2021 Page 1  
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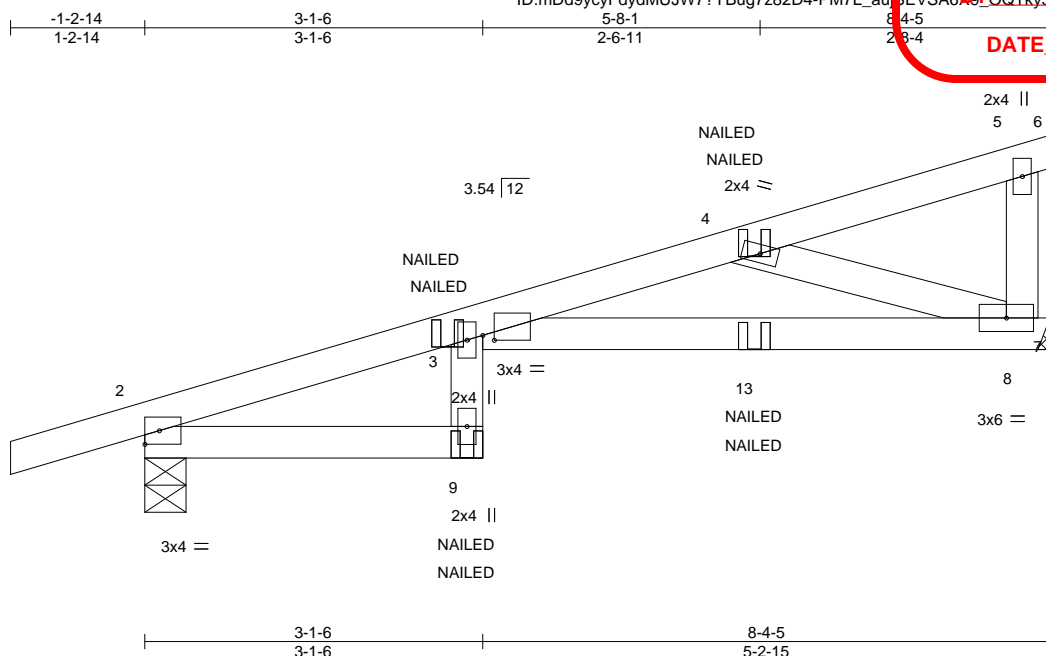


Plate Offsets (X,Y)--	[3:0-1-4,0-0-9]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.93	Vert(LL)	-0.24	9	>400	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.68	Vert(CT)	-0.43	9	>227		
BCLL 0.0	Rep Stress Incr	NO	WB 0.18	Horz(CT)	0.18	8	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP						
								Weight: 30 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 5-1-10 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 9-11-1 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-4-9, 8=Mechanical  
 Max Horz 2=101(LC 22)  
 Max Uplift 2=-144(LC 4), 8=-131(LC 8)  
 Max Grav 2=491(LC 1), 8=438(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 3-4=-1018/310  
 BOT CHORD 3-8=-342/1056  
 WEBS 4-8=-1101/373

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) except (jt=lb) 8=131.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 8) 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, 3-5=-70, 5-6=-20, 9-10=-20, 3-7=-20  
 Concentrated Loads (lb)  
 Vert: 9=-5(F=-3, B=-3) 4=-16(F=-8, B=-8) 13=-82(F=-41, B=-41)



May 3, 2021

Job 2770190	Truss CJ4	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	Summit/Newh... en Medite... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:37 2021 Page 1  
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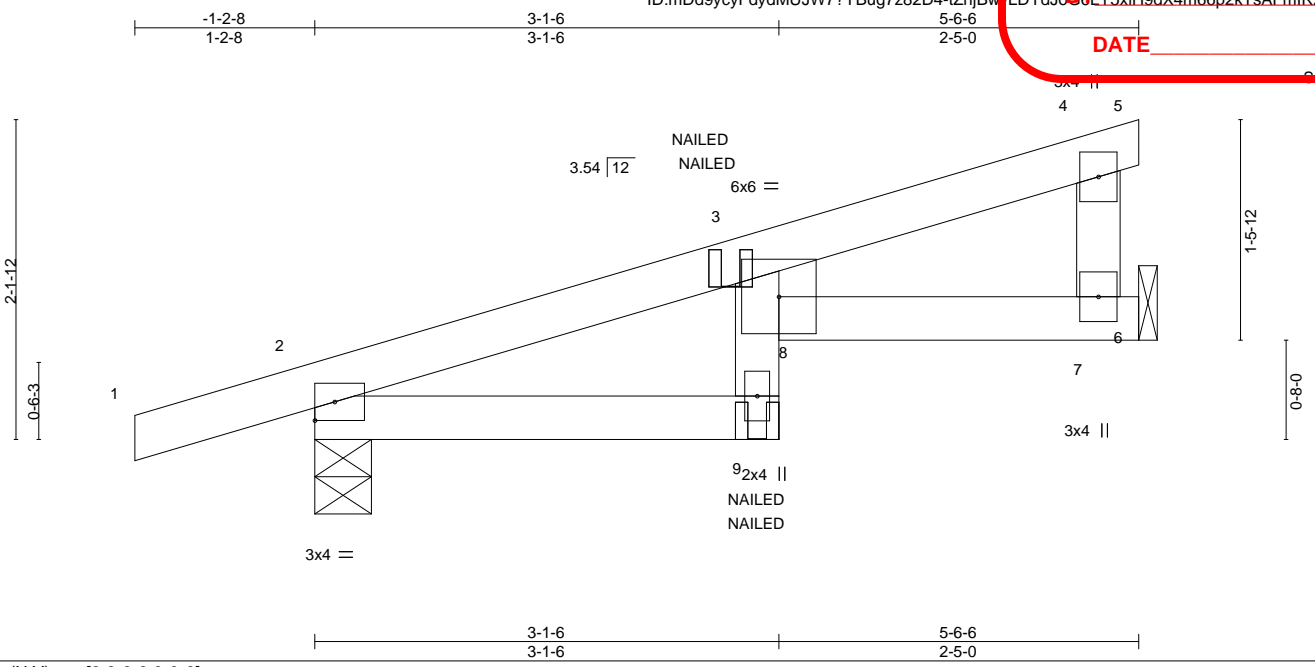


Plate Offsets (X,Y)--	[3:0-0-0,0-0-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.19	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.35	Vert(LL) -0.02 8 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.03 8 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MR	Horz(CT) 0.01 7 n/a n/a		
	Code IRC2018/TPI2014			Weight: 16 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-6-6 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 7=Mechanical, 2=0-4-9  
 Max Horz 2=70(LC 5)  
 Max Uplift 7=-62(LC 8), 2=-103(LC 4)  
 Max Grav 7=241(LC 1), 2=333(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-327/59  
 BOT CHORD 2-9=-75/280

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 8) 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: 1-4=-70, 4-5=-20, 9-10=-20, 6-8=-20

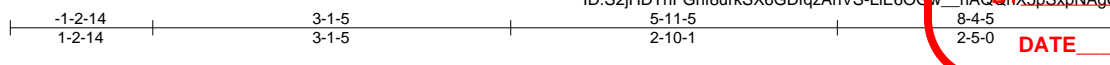
Concentrated Loads (lb)  
 Vert: 9=-5(F=-3, B=-3)



May 3, 2021

Job 2770190	Truss CJ5	Truss Type Diagonal Hip Girder	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:38 2021 Page 1  
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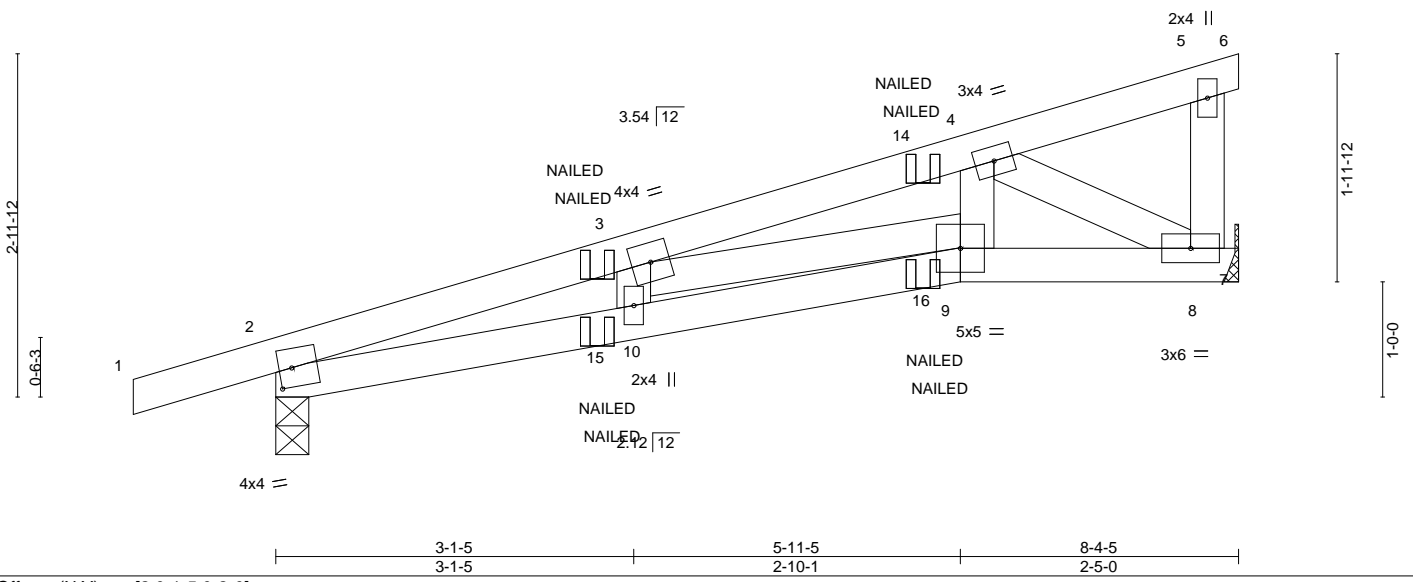


Plate Offsets (X,Y)--	[2:0-1-5,0-2-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.29	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.04 9-10 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.11	Vert(CT) -0.07 9-10 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MP	Horz(CT) 0.02 8 n/a n/a		
	Code IRC2018/TPI2014			Weight: 29 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-4-13 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-3-7, 8=Mechanical  
 Max Horz 2=101(LC 5)  
 Max Uplift 2=-136(LC 4), 8=-114(LC 8)  
 Max Grav 2=484(LC 1), 8=424(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1086/249, 3-4=-786/190  
 BOT CHORD 2-10=-283/1007, 9-10=-282/1025, 8-9=-193/696  
 WEBS 3-9=-257/77, 4-9=-33/300, 4-8=-780/233

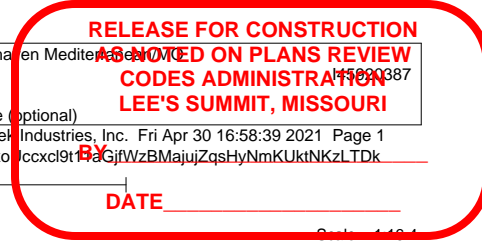
- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) This truss has been 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=114.
  - 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 9) 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: 1-5=-70, 5-6=-20, 9-11=-20, 7-9=-20  
 Concentrated Loads (lb)  
 Vert: 14=-37(F=-19, B=-19) 15=-4(F=-2, B=-2) 16=-41(F=-20, B=-20)



May 3, 2021



Job 2770190	Truss CJ6	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	Summit/Newh... Job Reference (optional)
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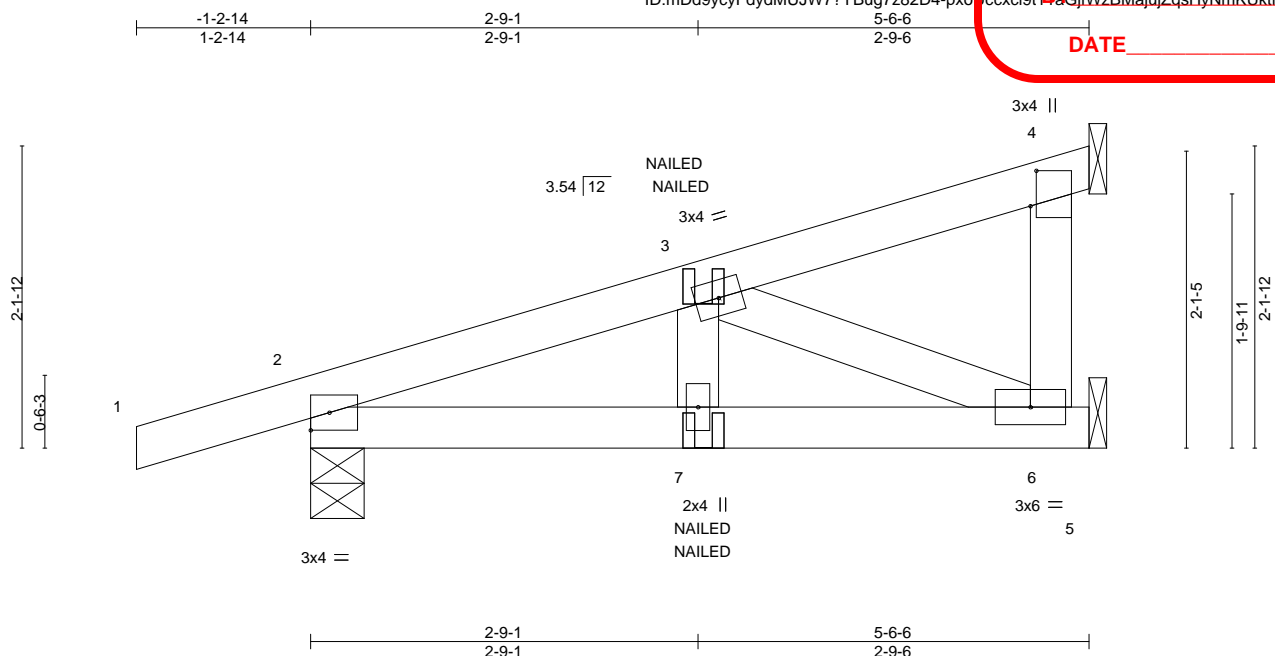


Plate Offsets (X,Y)--	[4:0-3-0,0-0-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.11	Vert(LL)	-0.00	7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.14	Vert(CT)	-0.01	7	>999		
BCLL 0.0	Rep Stress Incr	NO	WB 0.05	Horz(CT)	0.00	6	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP						
								Weight: 20 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-6-6 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 4=Mechanical, 2=0-4-9, 6=Mechanical  
 Max Horz 2=82(LC 7)  
 Max Uplift 4=-28(LC 4), 2=-107(LC 4), 6=-26(LC 8)  
 Max Grav 4=77(LC 1), 2=336(LC 1), 6=158(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-342/64  
 BOT CHORD 2-7=-67/302, 6-7=-67/302  
 WEBS 3-6=-327/92

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) 4, 6.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
  - 8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 9) 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: 1-4=-70, 5-8=-20  
 Concentrated Loads (lb)  
 Vert: 7=-5(F=-3, B=-3)



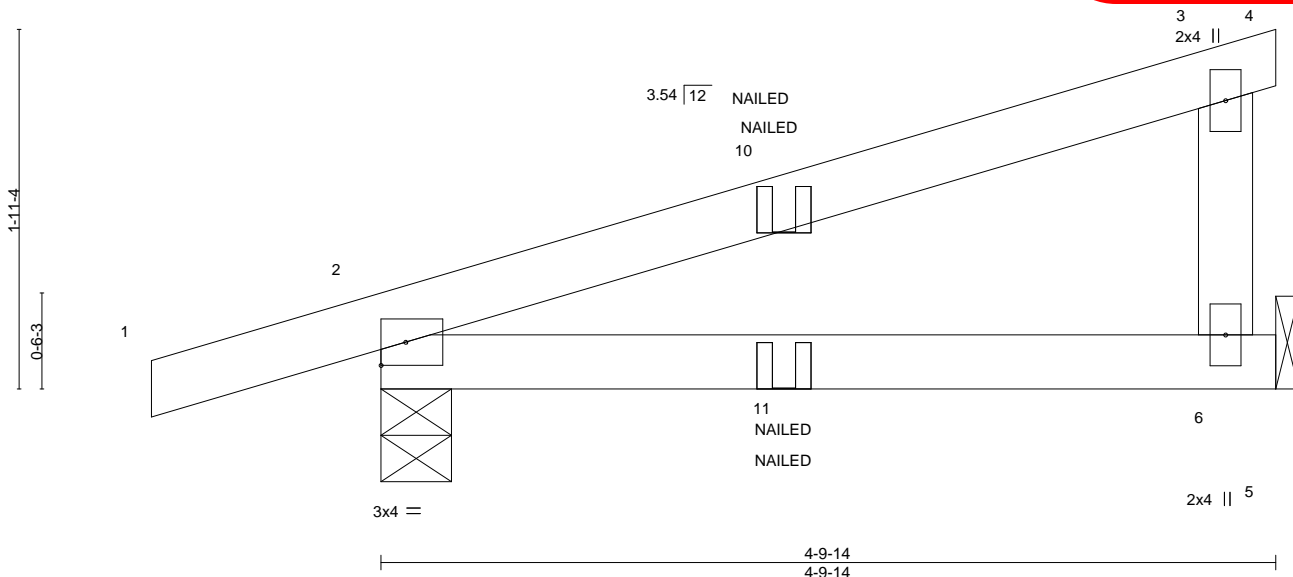
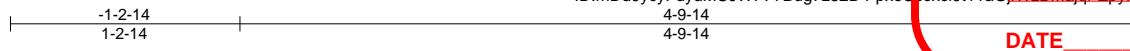
May 3, 2021



Job 2770190	Truss CJ7	Truss Type Diagonal Hip Girder	Qty 2	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:39 2021 Page 1



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 0.33	Vert(LL)	-0.02 6-9	>999	240	MT20	197/144
BCDL 10.0	Lumber DOL	1.15	BC 0.19	Vert(CT)	-0.04 6-9	>999	180		
BCLL 0.0	Rep Stress Incr	NO	WB 0.00	Horz(CT)	0.01 2	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP					Weight: 14 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-9-14 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 6=Mechanical, 2=0-4-9  
 Max Horz 2=74(LC 7)  
 Max Uplift 6=53(LC 8), 2=100(LC 4)  
 Max Grav 6=204(LC 1), 2=303(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. This connection is for uplift only and does not consider lateral forces.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 8) 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=-20, 5-7=-20  
 Concentrated Loads (lb)  
 Vert: 11=1(F=0, B=0)



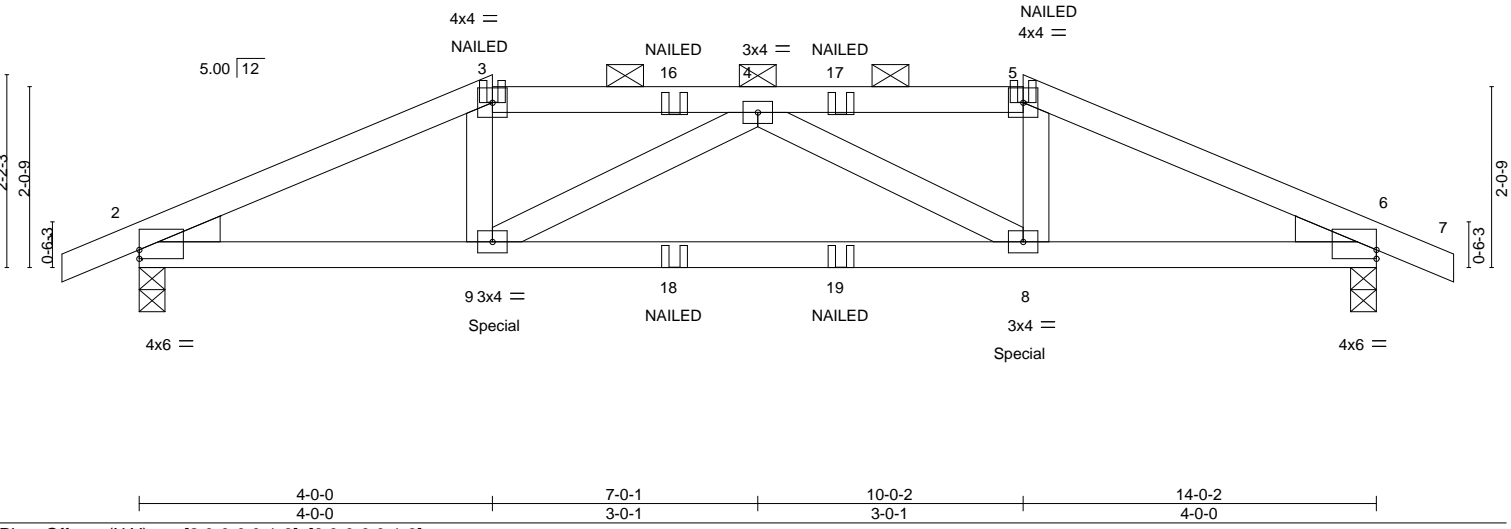
May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	D1	Hip Girder	1	1	en Mediter...

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTel Industries, Inc. Fri Apr 30 16:58:41 2021 Page 1  
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 -0-10-8 | 4-0-0 | 7-0-1 | 10-0-2 | 14-0-2 | 14-10-10 |  
 0-10-8 | 4-0-0 | 3-0-1 | 3-0-1 | 4-0-0 | 0-10-8 |



<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 0.47	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.80	Vert(LL) -0.09 8-9 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.12	Vert(CT) -0.21 8-9 >788 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.04 6 n/a n/a		
	Code IRC2018/TPI2014			Weight: 48 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except 2-0-0 oc purlins (4-5-14 max.): 3-5.  
 BOT CHORD Rigid ceiling directly applied or 8-8-14 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8  
 Max Horz 2=-34(LC 9)  
 Max Uplift 2=-226(LC 8), 6=-226(LC 9)  
 Max Grav 2=982(LC 1), 6=982(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1842/390, 3-4=-1613/379, 4-5=-1613/380, 5-6=-1842/390  
 BOT CHORD 2-9=-338/1647, 8-9=-455/1956, 6-8=-313/1647  
 WEBS 3-9=-48/480, 4-9=-455/175, 4-8=-455/175, 5-8=-47/480

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 8) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 159 lb down and 55 lb up at 4-0-0, and 159 lb down and 55 lb up at 9-11-6 on bottom 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  
 Uniform Loads (plf)  
 Vert: 1-3=-70, 3-5=-70, 5-7=-70, 10-13=-20



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Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	D1	Hip Girder	1	1	

RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 CODES ADMINISTRATION  
 LEE'S SUMMIT, MISSOURI  
 DATE \_\_\_\_\_

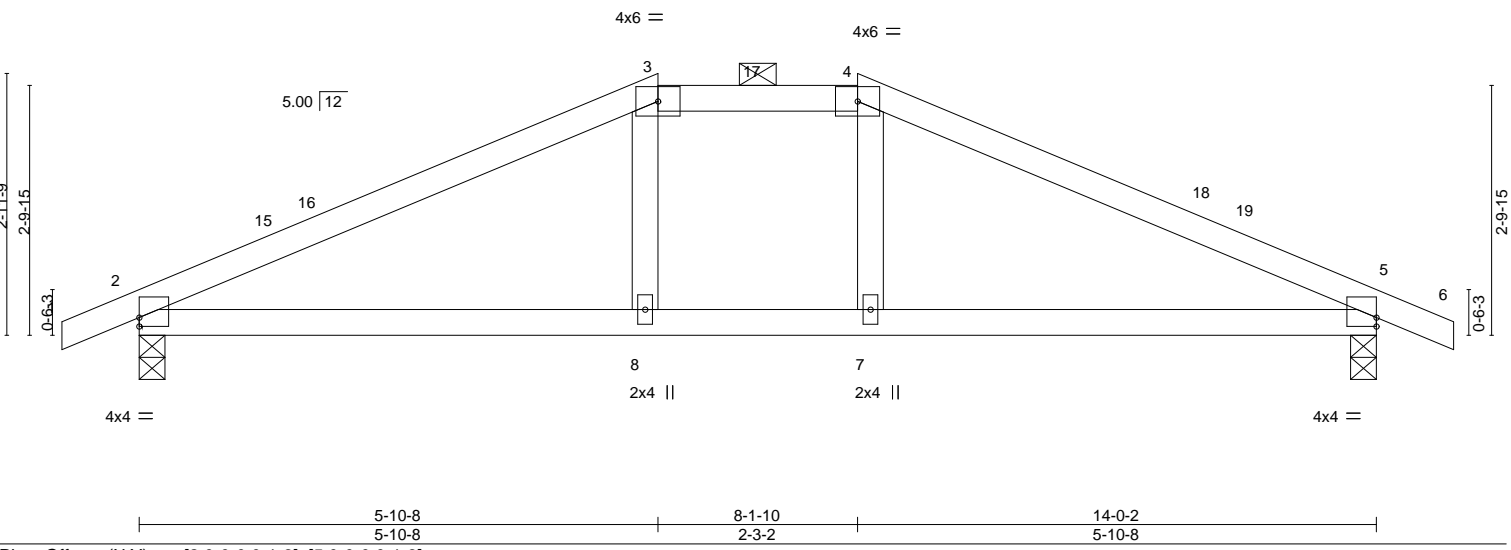
Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:41 2021 Page 2  
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**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 3=-51(B) 5=-51(B) 9=-159(B) 8=-159(B) 16=-51(B) 17=-51(B) 18=-30(B) 19=-30(B)

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss D2	Truss Type Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:47 2021 Page 1  
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 DATE \_\_\_\_\_



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 0.40	Vert(LL)	-0.08	7-14	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.36	Vert(CT)	-0.12	7-14	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.02	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 41 lb	FT = 20%

**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, except 2-0-0 oc purlins (6-0-0 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 5=0-3-8  
 Max Horz 2=-48(LC 17)  
 Max Uplift 2=-128(LC 12), 5=-128(LC 13)  
 Max Grav 2=692(LC 1), 5=692(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1023/294, 3-4=-870/302, 4-5=-1023/294  
 BOT CHORD 2-8=-180/875, 7-8=-180/870, 5-7=-178/875

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-10-8, Exterior(2E) 5-10-8 to 8-1-10, Exterior(2R) 8-1-10 to 12-4-9, Interior(1) 12-4-9 to 14-10-10 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 5. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTE ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Job 2770190	Truss D3	Truss Type Common	Qty 3	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:47 2021 Page 1  
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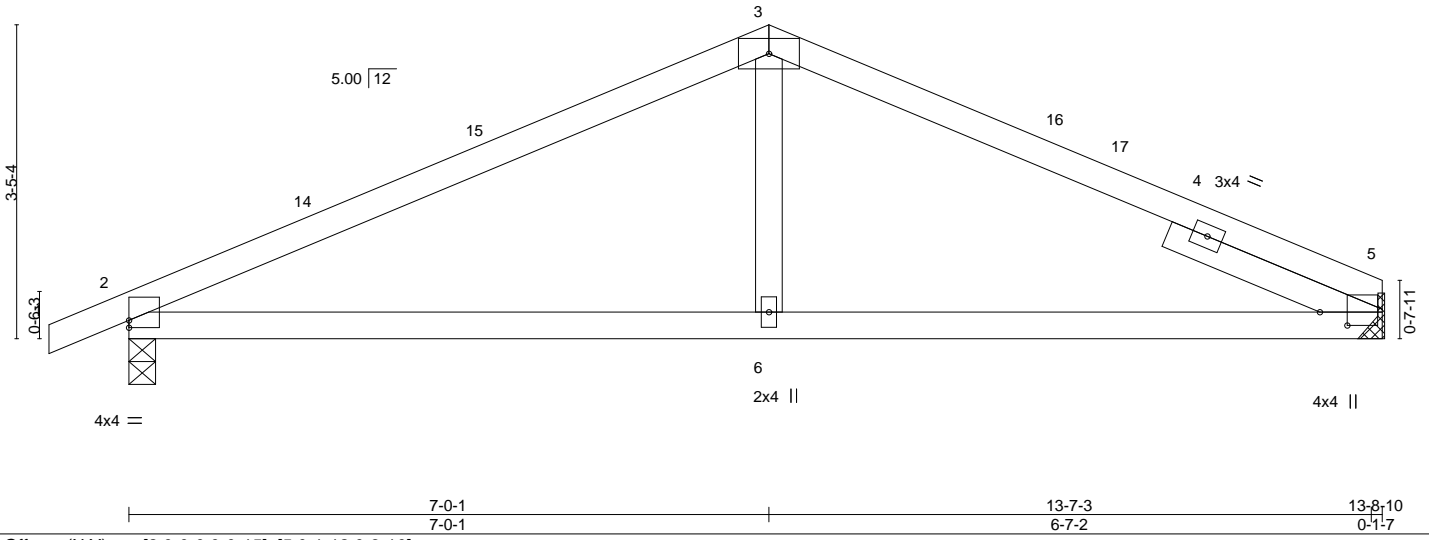


Plate Offsets (X,Y)-- [2:0-0-0,0-0-15], [5:0-1-12,0-3-10]

<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 0.52	Vert(LL)	-0.07	6-13	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.40	Vert(CT)	-0.12	6-13	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.07	Horz(CT)	0.02	2	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-AS						
								Weight: 40 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2  
 SLIDER Right 2x4 SPF No.2 - t 2-6-0

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 5=Mechanical, 2=0-3-8  
 Max Horz 2=67(LC 12)  
 Max Uplift 5=-102(LC 13), 2=-125(LC 12)  
 Max Grav 5=615(LC 1), 2=681(LC 1)

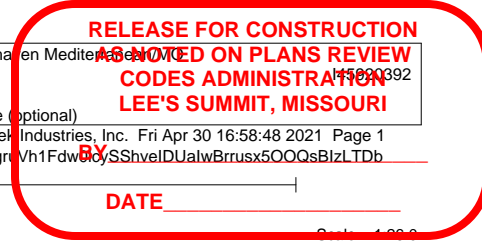
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-933/315, 3-5=-858/324  
 BOT CHORD 2-6=-213/778, 5-6=-213/778  
 WEBS 3-6=0/292

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 7-0-1, Exterior(2R) 7-0-1 to 10-0-1, Interior(1) 10-0-1 to 13-8-10 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) 5=102.
  - 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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Job	Truss	Truss Type	Qty	Ply	Summit/Newh
2770190	D4	Half Hip	1	1	Lee's Summit, MO



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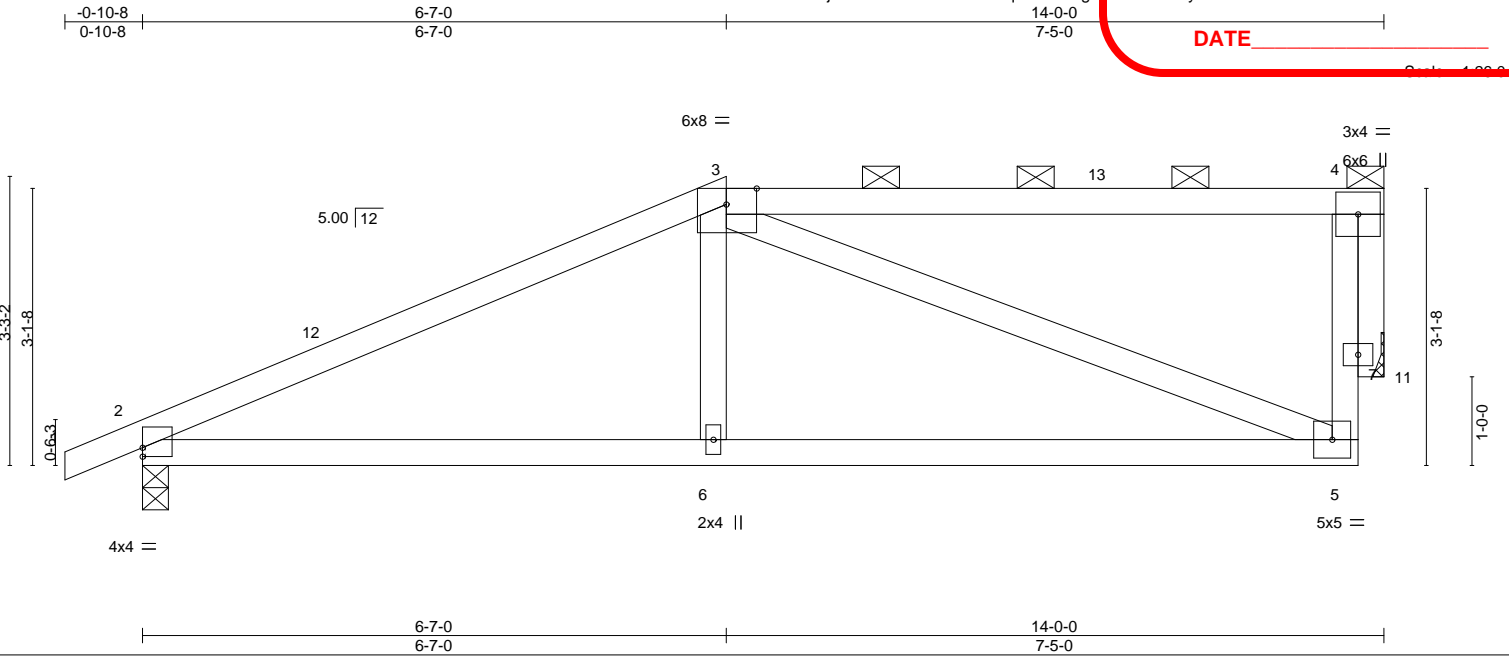


Plate Offsets (X, Y)--	[2:0-0-0,0-1-3], [3:0-4-2,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.60	Vert(LL) -0.06 5-6 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.40	Vert(CT) -0.12 5-6 >999 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.74	Horz(CT) 0.03 11 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS		Weight: 50 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-3-8, 11=Mechanical  
 Max Horz 2=104(LC 12)  
 Max Uplift 2=-117(LC 12), 11=-124(LC 8)  
 Max Grav 2=690(LC 1), 11=592(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1005/221, 5-7=-60/348, 4-7=-60/348  
 BOT CHORD 2-6=-260/856, 5-6=-262/849  
 WEBS 3-6=0/292, 3-5=-725/231, 4-11=-613/159

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-7-0, Exterior(2R) 6-7-0 to 10-9-15, Interior(1) 10-9-15 to 13-6-12 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) 11=124.
  - 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job 2770190	Truss D5	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:49 2021 Page 1

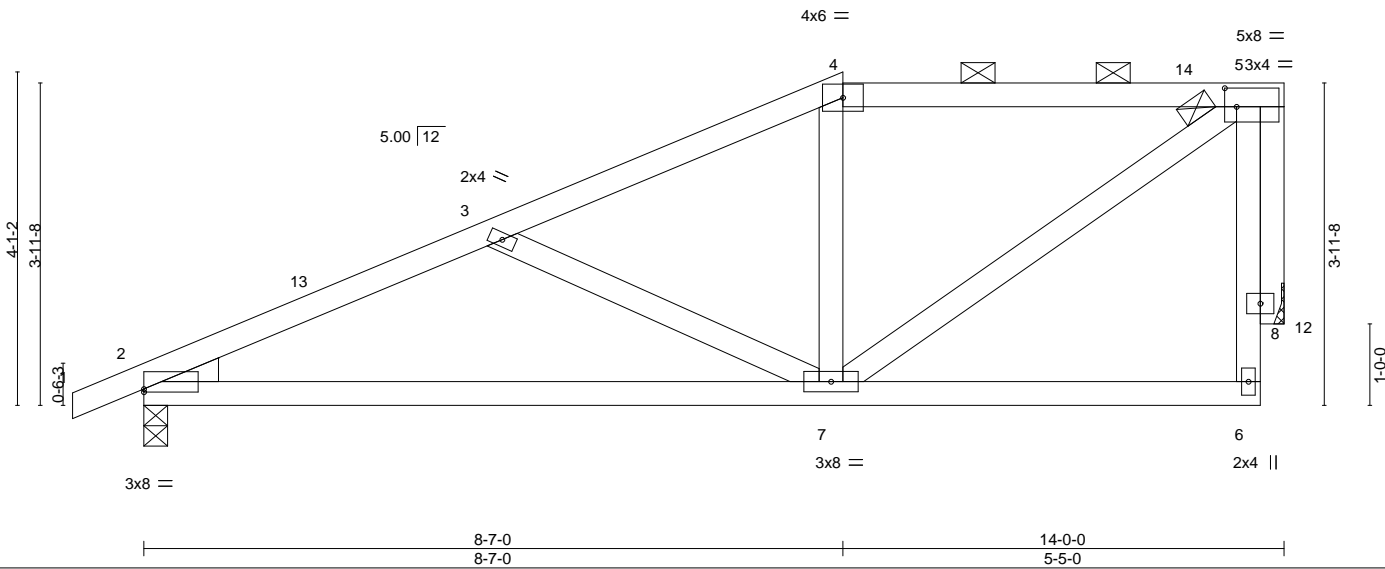
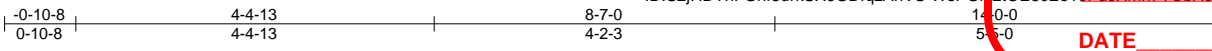


Plate Offsets (X,Y)--	[2:0-0-0,0-0-7], [5:0-1-12,0-2-12]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.31	Vert(LL)	-0.09	7-11	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.46	Vert(CT)	-0.19	7-11	>865		
BCLL 0.0	Rep Stress Incr	YES	WB 0.16	Horz(CT)	0.02	12	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 57 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	
WEDGE	
Left: 2x4 SP No.3	

REACTIONS.
(size) 2=0-3-8, 12=Mechanical
Max Horz 2=138(LC 12)
Max Uplift 2=-125(LC 12), 12=-117(LC 8)
Max Grav 2=690(LC 25), 12=592(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1064/257, 3-4=-714/150, 4-5=-616/176
BOT CHORD 2-7=-361/935
WEBS 3-7=-358/190, 5-7=-187/637, 5-12=-600/170

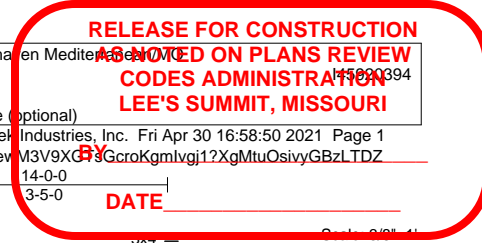
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-7-0, Exterior(2R) 8-7-0 to 12-9-15, Interior(1) 12-9-15 to 13-6-12 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) except (jt=lb) 12=117.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021



Job 2770190	Truss D6	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:50 2021 Page 1

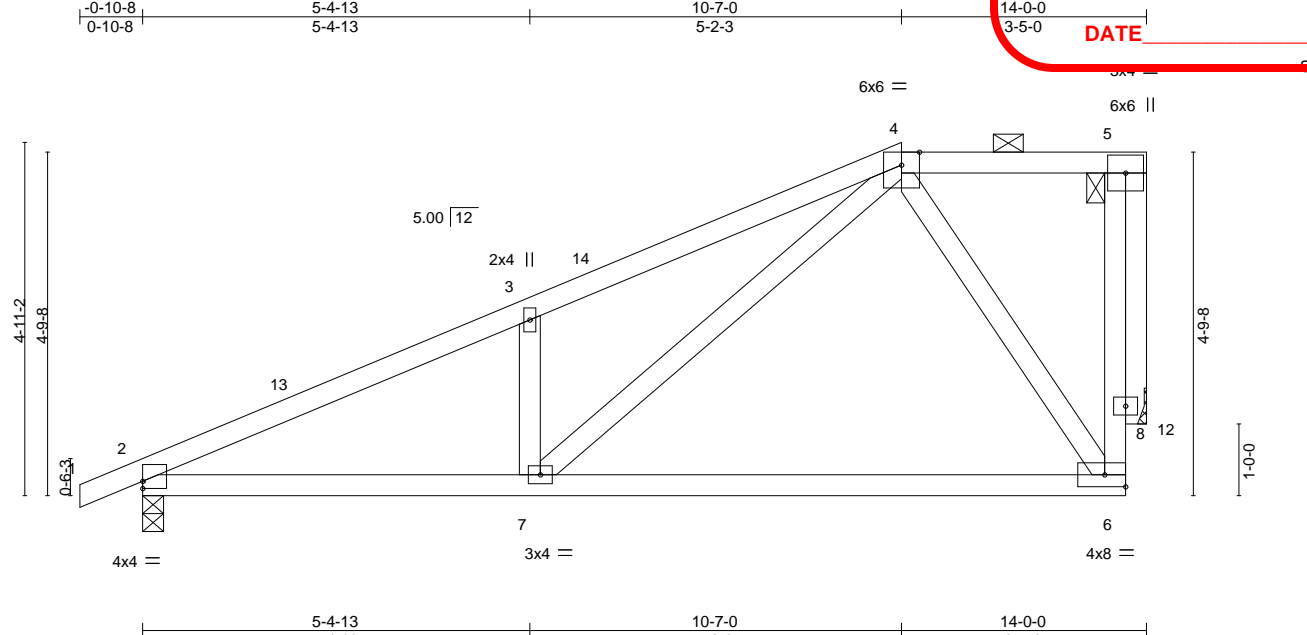


Plate Offsets (X, Y)--	[2:0-0-0,0-1-3]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.30	Vert(LL)	-0.12	6-7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.44	Vert(CT)	-0.24	6-7	>701		
BCLL 0.0	Rep Stress Incr	YES	WB 0.26	Horz(CT)	-0.01	12	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 58 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-3-8, 12=Mechanical  
 Max Horz 2=172(LC 12)  
 Max Uplift 2=-126(LC 12), 12=-118(LC 12)  
 Max Grav 2=690(LC 1), 12=592(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1077/168, 3-4=-1075/267, 6-8=-158/508, 5-8=-158/508  
 BOT CHORD 2-7=-304/930, 6-7=-149/352  
 WEBS 3-7=-363/204, 4-6=-510/226, 4-7=-217/770, 5-12=-595/173

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-7-0, Exterior(2E) 10-7-0 to 13-6-12 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) 12=118.
  - 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

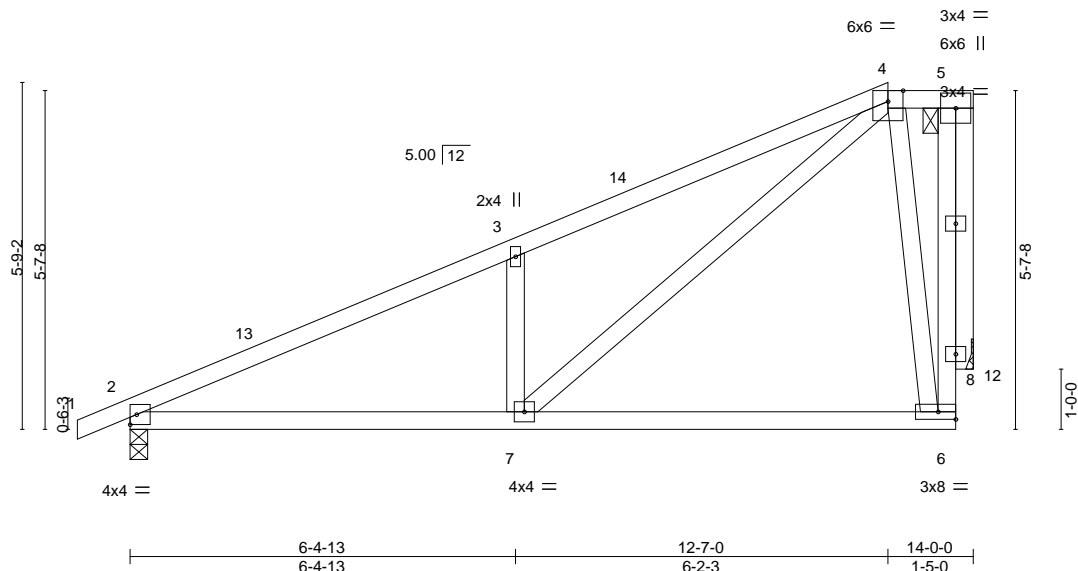
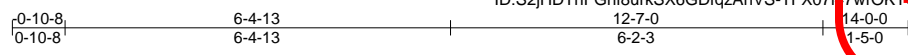


May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss D7	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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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 0.38	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.40	Vert(LL) -0.07 6-7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.34	Vert(CT) -0.14 6-7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) -0.01 12 n/a n/a		
	Code IRC2018/TPI2014			Weight: 63 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and
BOT CHORD 2x4 SPF No.2	2-0-0 oc purlins (6-0-0 max.); 4-5.
WEBS 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-3-8, 12=Mechanical  
 Max Horz 2=206(LC 12)  
 Max Uplift 2=-120(LC 12), 12=-159(LC 12)  
 Max Grav 2=690(LC 1), 12=592(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1012/136, 3-4=-1021/257, 6-8=-270/648, 5-8=-270/648  
 BOT CHORD 2-7=-278/863  
 WEBS 3-7=-462/244, 4-6=-589/301, 4-7=-288/929, 5-12=-594/194

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-7-0, Exterior(2E) 12-7-0 to 13-6-12 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) except (jt=lb) 12=159.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job 2770190	Truss D8	Truss Type Jack-Closed	Qty 5	Ply 1	Summit/Newhaven Mediterranean, MO 8.430 s Nov 18 2020 MiTek Industries, Inc. Fri Apr 30 17:06:29 2021 Page 1
Builders First Source, Valley Center, KS 67147					Job Reference (optional) 8.430 s Nov 18 2020 MiTek Industries, Inc. Fri Apr 30 17:06:29 2021 Page 1

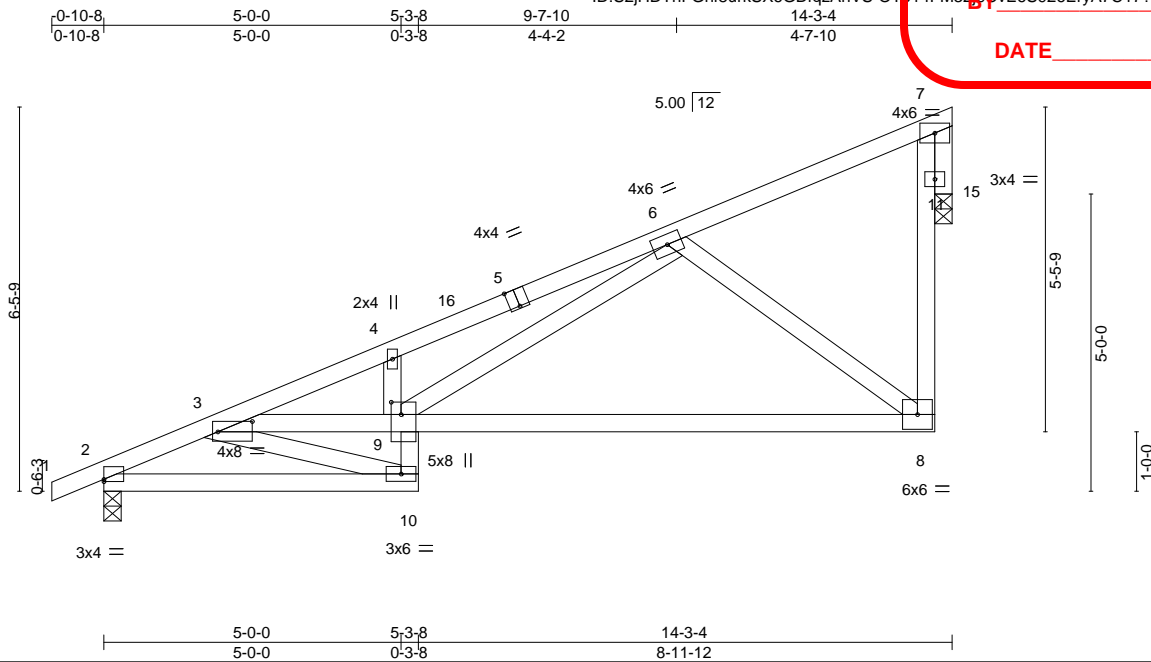


Plate Offsets (X,Y)-- [2:Edge,0-0-7], [3:0-6-15,0-2-2], [5:0-2-0,Edge], [9:0-2-8,0-2-0]

<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 0.43	Vert(LL)	-0.17	8-9	>969	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.64	Vert(CT)	-0.38	8-9	>448	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.36	Horz(CT)	-0.03	15	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						Weight: 63 lb	FT = 20%

**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 Sheathed, except end verticals.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 15=0-3-8  
Max Horz 2=228(LC 9)  
Max Uplift 2=-107(LC 12), 15=-95(LC 12)  
Max Grav 2=702(LC 1), 15=610(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1055/176, 3-4=-1885/248, 4-16=-1893/300, 5-16=-1855/304, 5-6=-1850/316, 8-11=-110/523, 7-11=-110/523  
BOT CHORD 2-10=-315/903, 9-10=-45/336, 3-9=-374/1724, 8-9=-241/634  
WEBS 6-8=-718/231, 6-9=-230/1304, 3-10=-957/269, 7-15=-635/166

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 1-10-10, Interior(1) 1-10-10 to 13-10-0 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
  - 4) Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) One RT4 USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



Job 2770190	Truss D9	Truss Type Jack-Closed	Qty 3	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:53 2021 Page 1

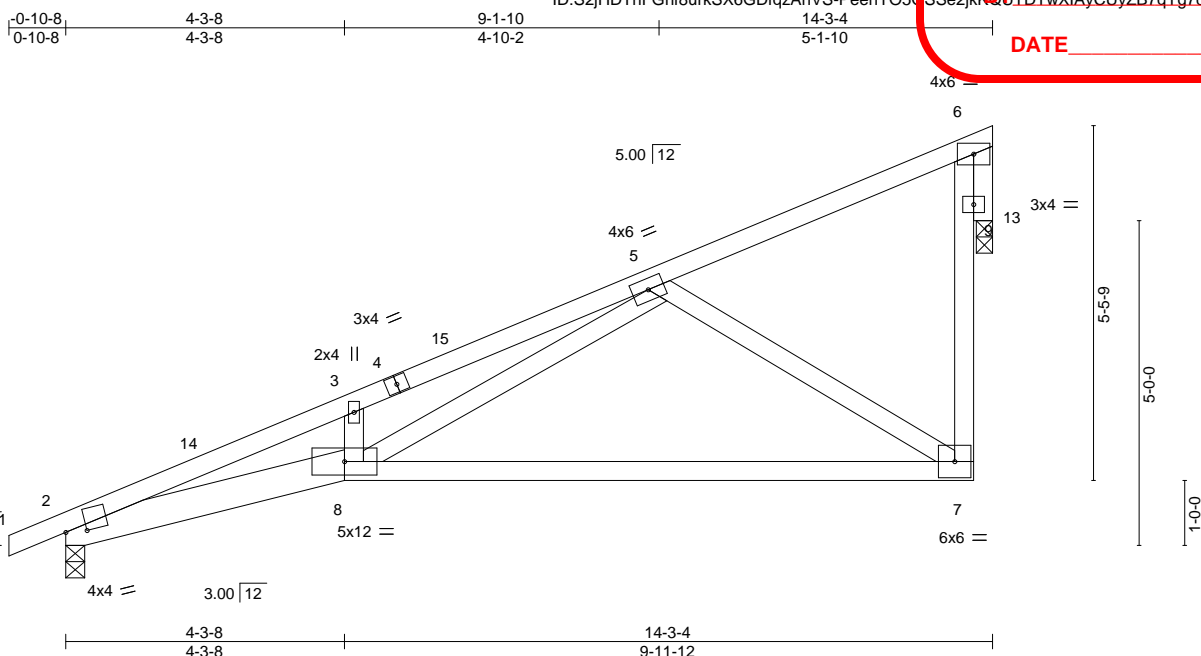


Plate Offsets (X,Y)--	[2:0-3-14,0-0-10]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.51	Vert(LL) -0.25 7-8 >675 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.66	Vert(CT) -0.53 7-8 >320 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.42	Horz(CT) -0.03 13 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS		Weight: 58 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SPF No.2 *Except* 2-8: 2x6 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

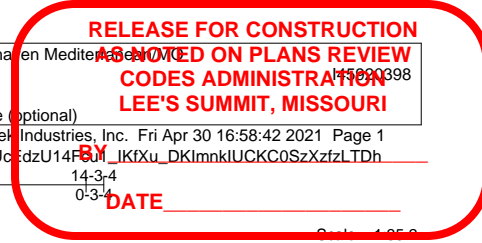
**REACTIONS.** (size) 2=0-3-8, 13=0-3-0  
 Max Horz 2=228(LC 9)  
 Max Uplift 2=-109(LC 12), 13=-96(LC 12)  
 Max Grav 2=699(LC 1), 13=607(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2125/302, 3-5=-2129/386, 7-9=-101/504, 6-9=-101/504  
 BOT CHORD 2-8=-516/1966, 7-8=-271/712  
 WEBS 5-8=-293/1445, 5-7=-761/255, 6-13=-637/168

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 13-10-0 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) 2, 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 4) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021



Job 2770190	Truss D10	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO
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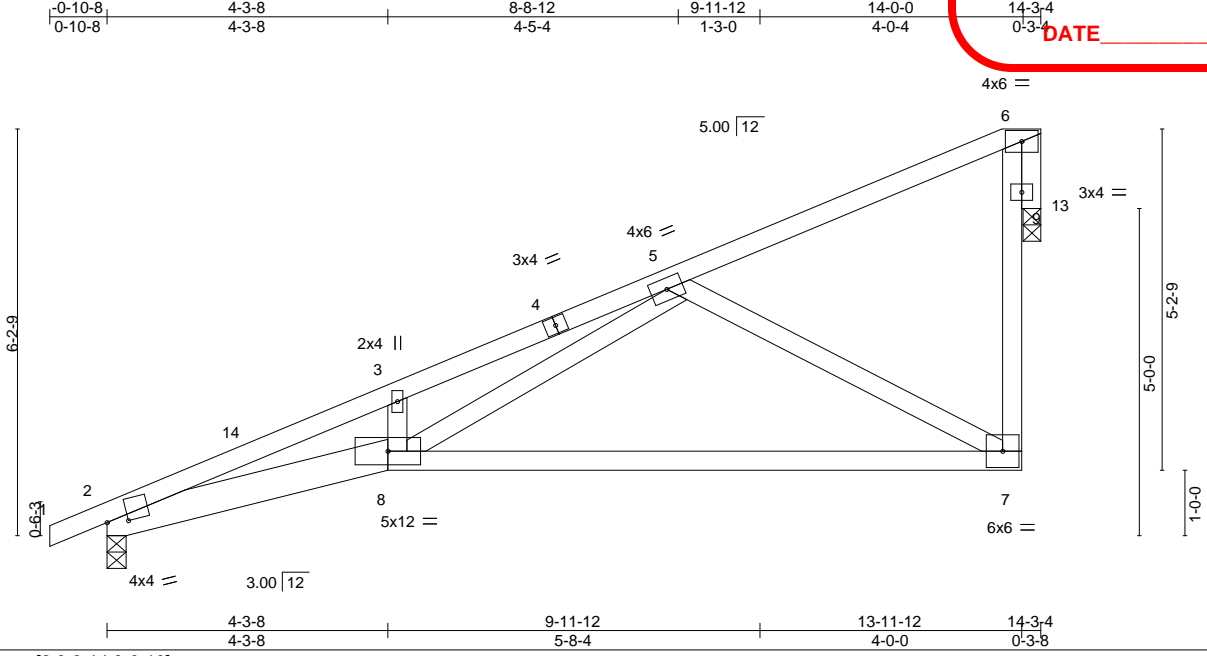


Plate Offsets (X,Y)--	[2:0-3-14,0-0-10]
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<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL	1.15	TC 0.51	Vert(LL)	-0.25	7-8	>679	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.67	Vert(CT)	-0.52	7-8	>324		
BCLL 0.0	Rep Stress Incr	YES	WB 0.49	Horz(CT)	-0.03	13	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 58 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SPF No.2 *Except* 2-8: 2x6 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 2=0-3-8, 13=0-3-4  
 Max Horz 2=228(LC 9)  
 Max Uplift 2=-129(LC 12), 13=-173(LC 12)  
 Max Grav 2=699(LC 1), 13=607(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2113/396, 3-5=-2102/480, 7-9=-106/485, 6-9=-106/485  
 BOT CHORD 2-8=-510/1953, 7-8=-290/777  
 WEBS 5-8=-309/1360, 5-7=-805/301, 6-13=-639/185

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 13-10-0 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) 2, 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 4) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



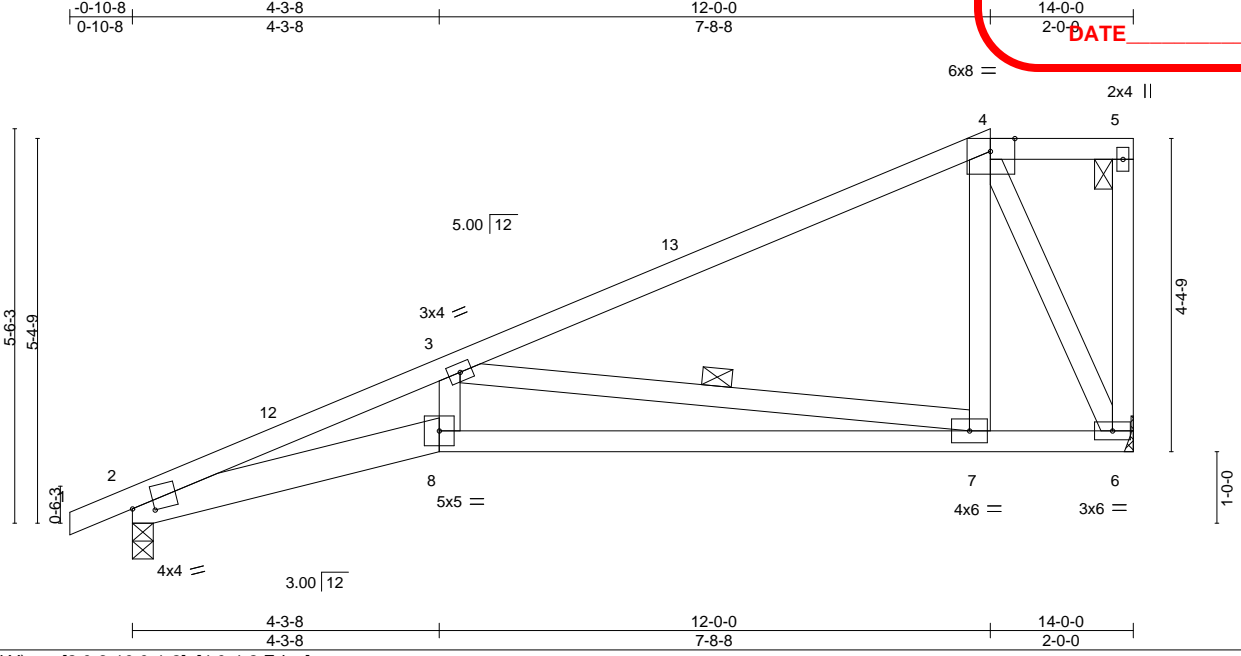
May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss D11	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:43 2021 Page 1  
 ID:S2jHDThFGhf8urkSX6GDfzAhVS-ij?Sz\_6cDNSWB...M27WQrRSAs?DgLMF6i5W5zLTDg



<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 0.58	Vert(LL) -0.11 7-8 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.64	Vert(CT) -0.25 7-8 >669 180		
BCLL 0.0	Rep Stress Incr YES	WB 0.44	Horz(CT) 0.08 6 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-AS		Weight: 60 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 4-5.
BOT CHORD 2x4 SPF No.2 *Except* 2-8: 2x6 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	WEBS 1 Row at midpt 3-7

**REACTIONS.** (size) 2=0-3-8, 6=Mechanical  
 Max Horz 2=207(LC 9)  
 Max Uplift 2=-139(LC 12), 6=-131(LC 12)  
 Max Grav 2=687(LC 1), 6=622(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2159/500, 3-4=-461/110  
 BOT CHORD 2-8=-718/2017, 7-8=-695/1906, 6-7=-166/322  
 WEBS 3-8=-77/504, 3-7=-1586/534, 4-7=-31/457, 4-6=-804/299

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-0-0, Exterior(2E) 12-0-0 to 13-10-4 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=131.
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021



Job 2770190	Truss D12	Truss Type Half Hip	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:43 2021 Page 1

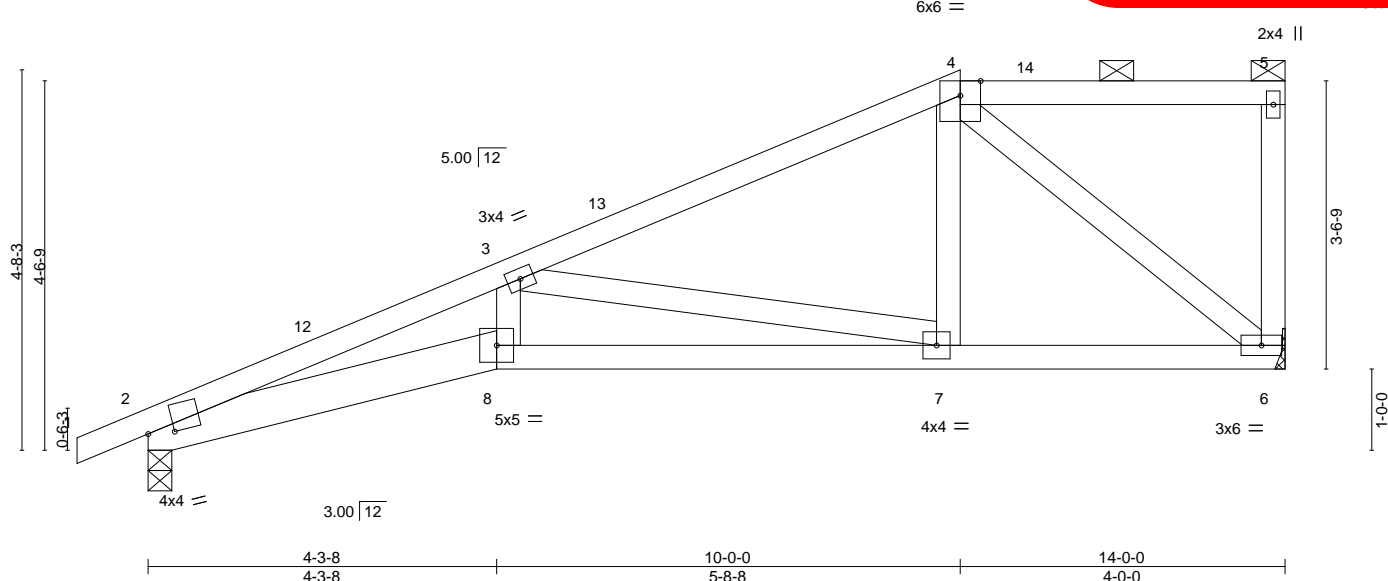
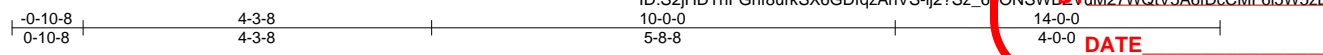


Plate Offsets (X,Y)--	[2:0-3-14,0-0-10]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 1.15		TC 0.35	Vert(LL) -0.08	7-8	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15		BC 0.53	Vert(CT) -0.16	7-8	>999	180		
BCLL 0.0	Rep Stress Incr YES		WB 0.64	Horz(CT) 0.06	6	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						
								Weight: 56 lb	FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied, except end verticals, and
BOT CHORD	2x4 SPF No.2 *Except* 2-8: 2x6 SPF No.2	BOT CHORD	2-0-0 oc purlins (6-0-0 max.): 4-5. Rigid ceiling directly applied.
WEBS	2x4 SPF No.2		

<b>REACTIONS.</b>	(size) 2=0-3-8, 6=Mechanical Max Horz 2=170(LC 9) Max Uplift 2=-138(LC 12), 6=-119(LC 9) Max Grav 2=687(LC 1), 6=622(LC 1)
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<b>FORCES.</b>	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-2042/543, 3-4=-711/175
BOT CHORD	2-8=-716/1894, 7-8=-687/1787, 6-7=-251/579
WEBS	3-8=-97/457, 3-7=-1215/442, 4-7=-43/382, 4-6=-746/279

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-0-0, Exterior(2E) 10-0-0 to 13-10-4 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=119.
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>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 <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p>16023 Swingley Ridge Rd Chesterfield, MO 63017</p>
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Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	D13	Half Hip	1	1	en Mediter...

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:44 2021 Page 1  
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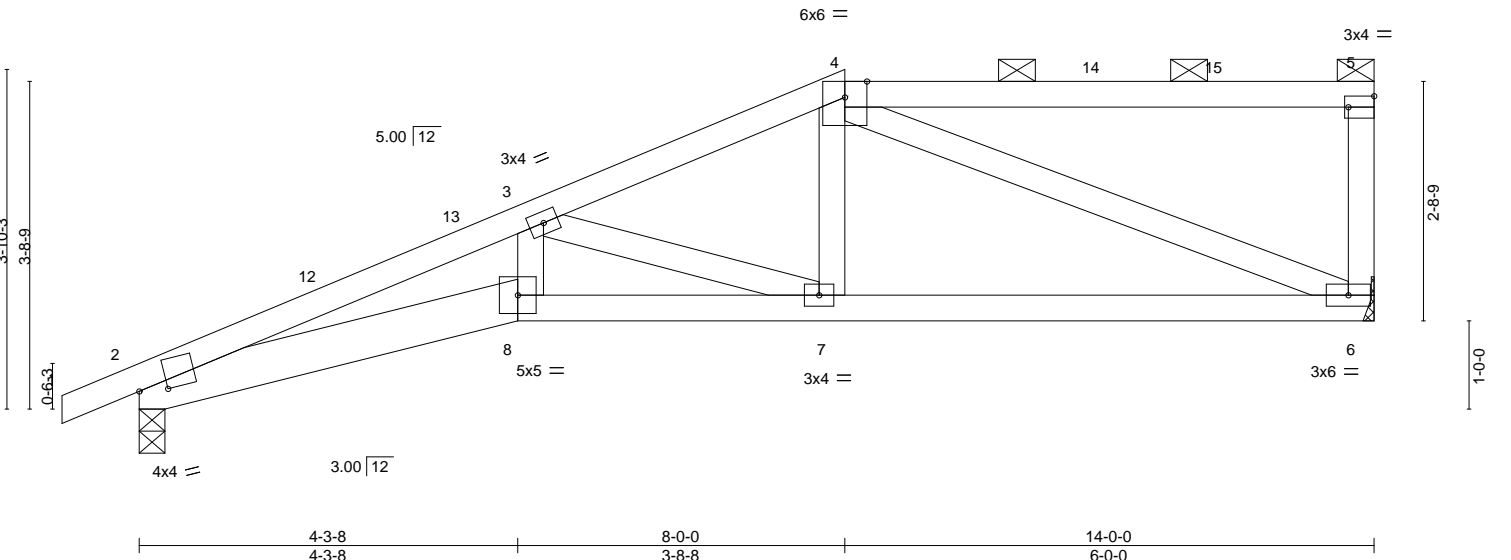


Plate Offsets (X,Y)--	[2:0-3-14,0-0-10], [5:Edge,0-1-8]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.41	Vert(LL)	-0.07	7-8	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.47	Vert(CT)	-0.12	7-8	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.66	Horz(CT)	0.05	6	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						

Weight: 54 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD 2x4 SPF No.2 *Except* 2-8: 2x6 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	

REACTIONS.
(size) 2=0-3-8, 6=Mechanical
Max Horz 2=134(LC 9)
Max Uplift 2=-131(LC 12), 6=-127(LC 9)
Max Grav 2=687(LC 1), 6=622(LC 1)

FORCES.
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1945/572, 3-4=-1031/271
BOT CHORD 2-8=-689/1793, 7-8=-655/1691, 6-7=-333/916
WEBS 3-8=-118/416, 3-7=-789/333, 4-7=-54/387, 4-6=-910/309

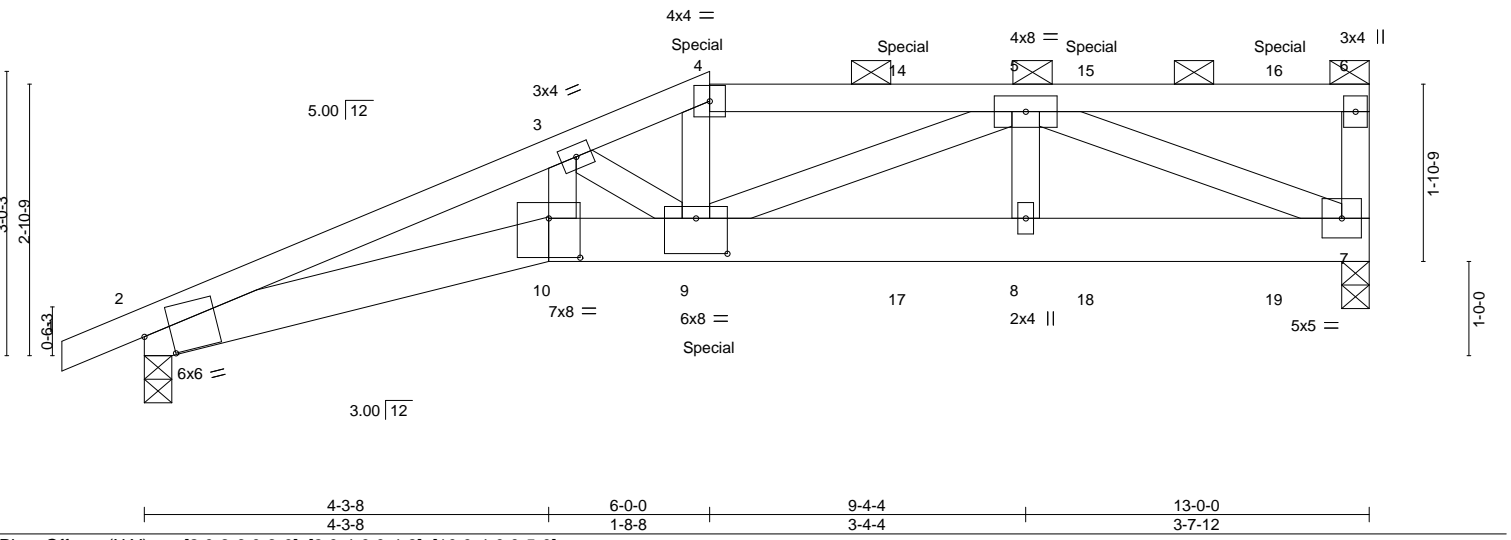
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior(1) 12-2-15 to 13-10-4 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=127.
  - 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	D14	Half Hip Girder	1	1	en Mediter...

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:58:46 2021 Page 1  
 ID:S2jHDThFGhf8urkSX6GDFqzAhVS-6Hj742075Jm...M4ZUbq83V\_901TQ\_gox4x16QzLTDd...  
 -0-10-8 | 4-3-8 | 6-0-0 | 9-4-4 | 13-0-0  
 0-10-8 | 4-3-8 | 1-8-8 | 3-4-4 | 3-7-12  
 DATE \_\_\_\_\_



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.48	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.91	Vert(LL) -0.11 9-10 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.58	Vert(CT) -0.20 9-10 >763 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.08 7 n/a n/a		
	Code IRC2018/TPI2014			Weight: 54 lb	FT = 20%

**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 2-8-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-2-14 max.): 4-6.  
 BOT CHORD Rigid ceiling directly applied or 7-6-3 oc bracing.

**REACTIONS.** (size) 7=0-3-8, 2=0-3-8  
 Max Horz 2=96(LC 5)  
 Max Uplift 7=-358(LC 5), 2=-271(LC 8)  
 Max Grav 7=1260(LC 1), 2=1066(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3699/1000, 3-4=-3007/828, 4-5=-2768/774, 6-7=-277/102  
 BOT CHORD 2-10=-956/3431, 9-10=-909/3261, 8-9=-632/2197, 7-8=-632/2197  
 WEBS 3-10=-155/620, 3-9=-531/183, 4-9=-164/652, 5-9=-197/617, 5-7=-2279/639

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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.
  - Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 200 lb down and 99 lb up at 6-0-0, 176 lb down and 99 lb up at 8-0-12, and 176 lb down and 99 lb up at 10-0-12, and 184 lb down and 98 lb up at 12-0-12 on top chord, and 396 lb down and 142 lb up at 6-0-0 on bottom 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: 1-4=-70, 4-6=-70, 10-11=-20, 7-10=-20



May 3, 2021

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Summit/Newh
2770190	D14	Half Hip Girder	1	1	

**RELEASE FOR CONSTRUCTION**  
**NOTE**  
**READ NOTES ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

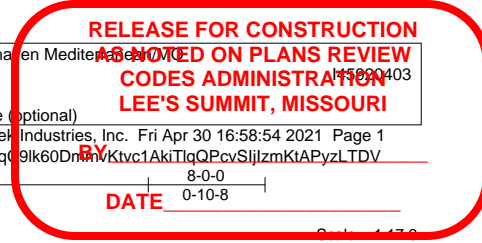
Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:46 2021 Page 2  
 ID:S2jHDThFGhf8urkSX6GdfqzAhVS-6Hj74?0?5JmW14ZUbq83V\_9O1TQ\_qox4xl6QzLTDd

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 4=-176(F) 9=-396(F) 14=-176(F) 15=-176(F) 16=-184(F)

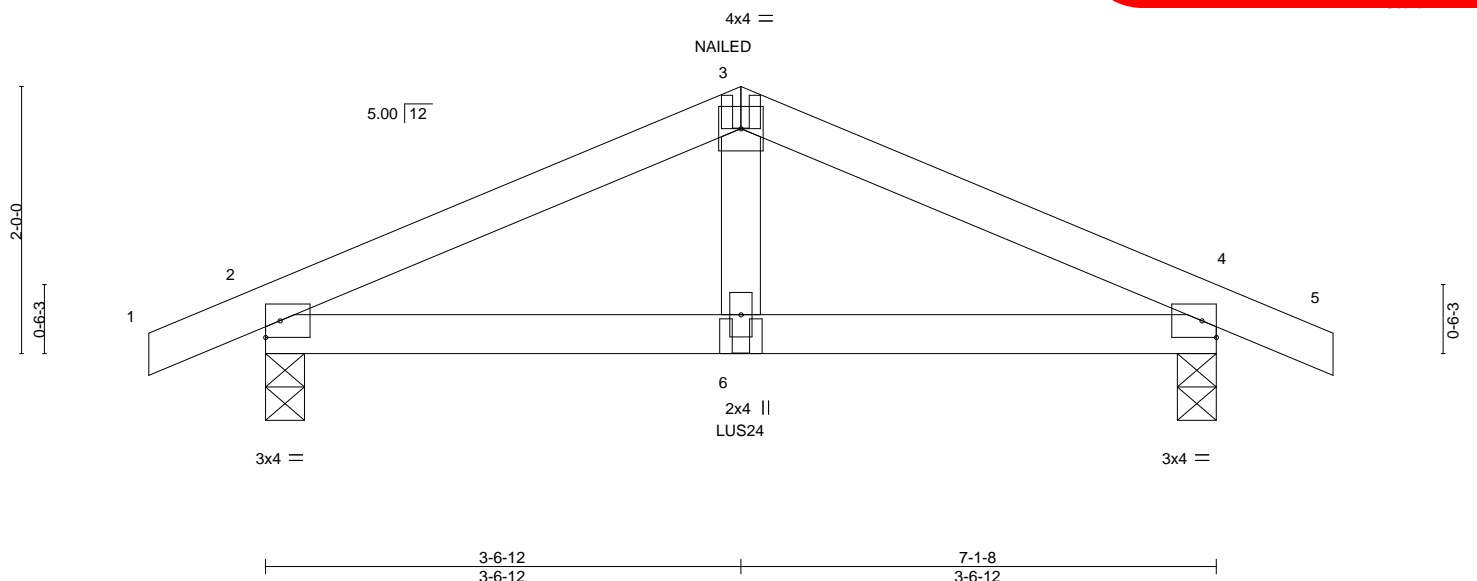
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 2770190	Truss E1	Truss Type Common Girder	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:54 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-tq9Ik60DmVtKvc1AkiTlqQPcvSljzmKtAPyzLTDV



<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) -0.01 6 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.32	Vert(CT) -0.02 6 >999 180		
BCLL 0.0	Rep Stress Incr NO	WB 0.11	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-MP		Weight: 21 lb	FT = 20%

**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 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 4=0-3-8  
 Max Horz 2=33(LC 8)  
 Max Uplift 2=-152(LC 8), 4=-152(LC 9)  
 Max Grav 2=602(LC 1), 4=602(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-891/231, 3-4=-891/231  
 BOT CHORD 2-6=-180/770, 4-6=-180/770  
 WEBS 3-6=-87/432

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 3-6-12 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.
  - "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 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, 3-5=-70, 7-10=-20  
 Concentrated Loads (lb)  
 Vert: 6=-404(B) 3=-35(B)



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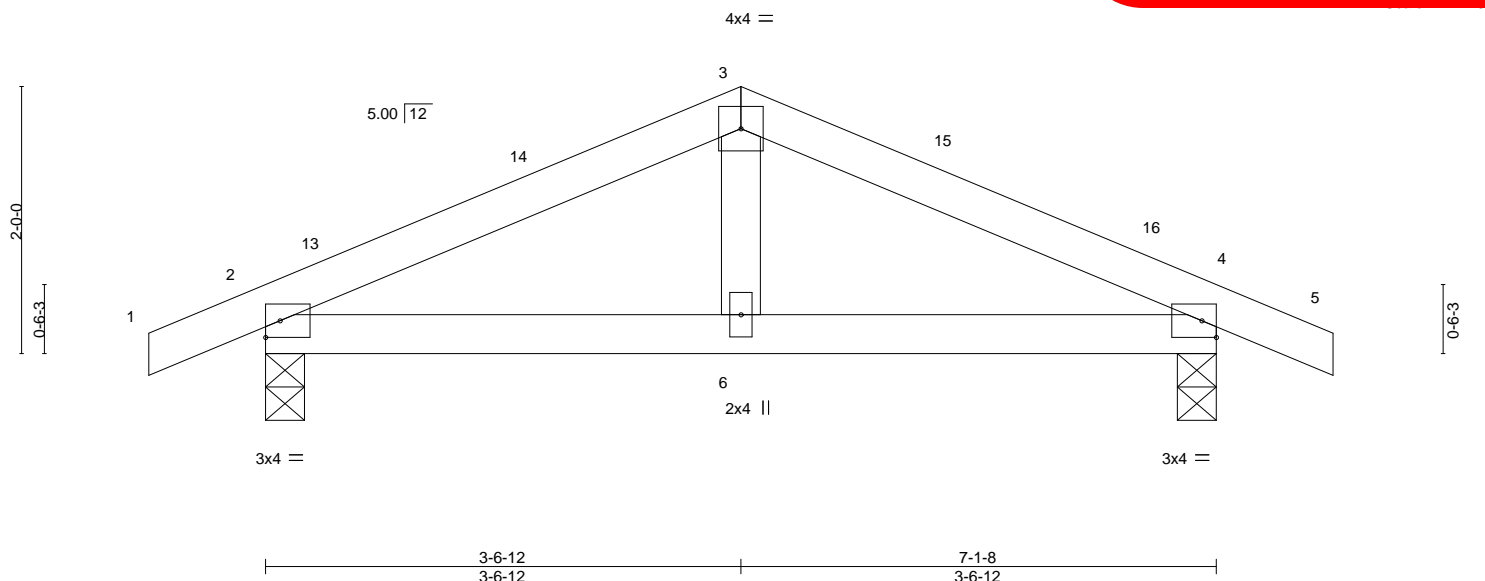
**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss E2	Truss Type Common	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:55 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-L0mXz7e\_4umy1UobtGx?yNbE0Jw1Bh7?\_cjoZLTDU



DATE 0-10-8



<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 0.14	Vert(LL)	-0.01 6-9	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.12	Vert(CT)	-0.01 6-9	>999	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00 4	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 21 lb	FT = 20%

**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.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 4=0-3-8  
 Max Horz 2=33(LC 12)  
 Max Uplift 2=74(LC 12), 4=74(LC 13)  
 Max Grav 2=382(LC 1), 4=382(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-417/221, 3-4=-417/221  
 BOT CHORD 2-6=-113/336, 4-6=-113/336

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-6-12, Exterior(2R) 3-6-12 to 6-6-12, Interior(1) 6-6-12 to 8-0-0 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss G1	Truss Type Hip Girder	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64085
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:56 2021 Page 1

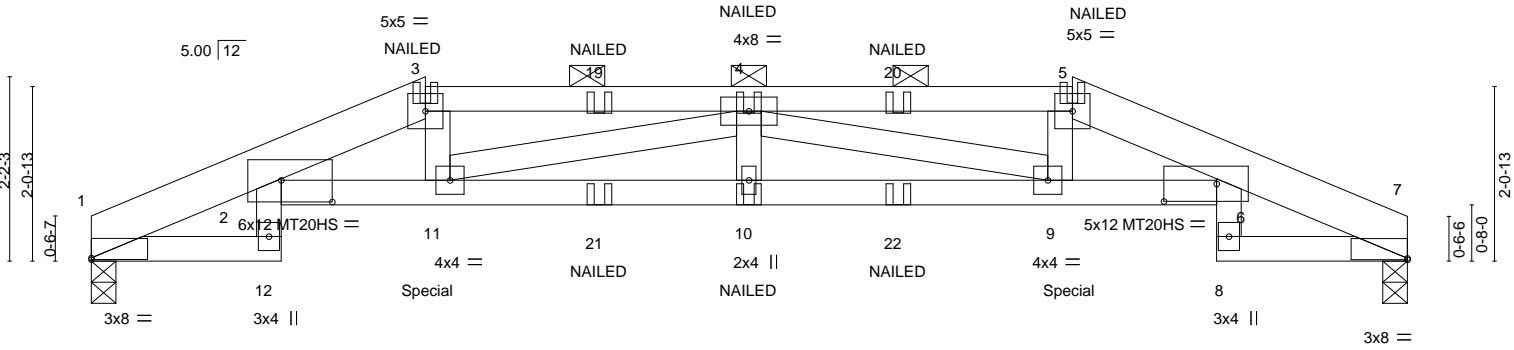
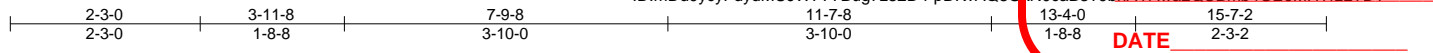


Plate Offsets (X,Y)-- [1:0-0-0,0-0-4], [2:0-7-4,0-3-1], [6:0-7-8,0-2-8], [7:0-0-0,0-0-3]

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 0.91	Vert(LL)	-0.27	10	>692	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.82	Vert(CT)	-0.48	10	>388	180	MT20HS	148/108
BCLL 0.0	Rep Stress Incr	NO	WB 0.22	Horz(CT)	0.30	7	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MS							
									Weight: 64 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP 2400F 2.0E *Except* 3-5: 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-14 oc purlins, except 2-0-0 oc purlins (2-8-15 max.): 3-5.
BOT CHORD 2x4 SPF No.2 *Except* 2-6: 2x4 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 7-8-7 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=0-3-8, 7=0-3-8  
 Max Horz 1=-29(LC 30)  
 Max Uplift 1=-301(LC 8), 7=-301(LC 9)  
 Max Grav 1=1118(LC 1), 7=1118(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-14=-533/165, 2-3=-3477/981, 3-4=-3533/1013, 4-5=-3538/1001, 5-6=-3481/976,  
 6-7=-534/166  
 BOT CHORD 2-11=-969/3494, 10-11=-1180/4252, 9-10=-1180/4252, 6-9=-944/3499  
 WEBS 3-11=-102/368, 4-11=-827/259, 4-9=-822/255, 5-9=-98/367

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 7. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
  - 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 267 lb down and 126 lb up at 3-11-8, and 267 lb down and 126 lb up at 11-6-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 11) 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



May 3, 2021

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd  
Chesterfield, MO 63017

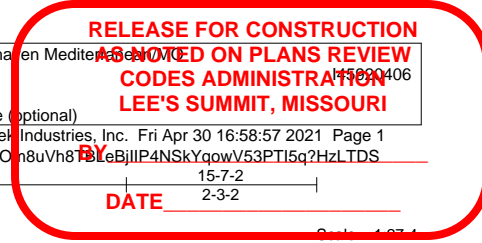
Job 2770190	Truss G1	Truss Type Hip Girder	Qty 1	Ply 1	Summit/Newh... en Mediter... Job Reference (optional)
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RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 CODES ADMINISTRATION  
 LEE'S SUMMIT, MISSOURI  
 DATE \_\_\_\_\_

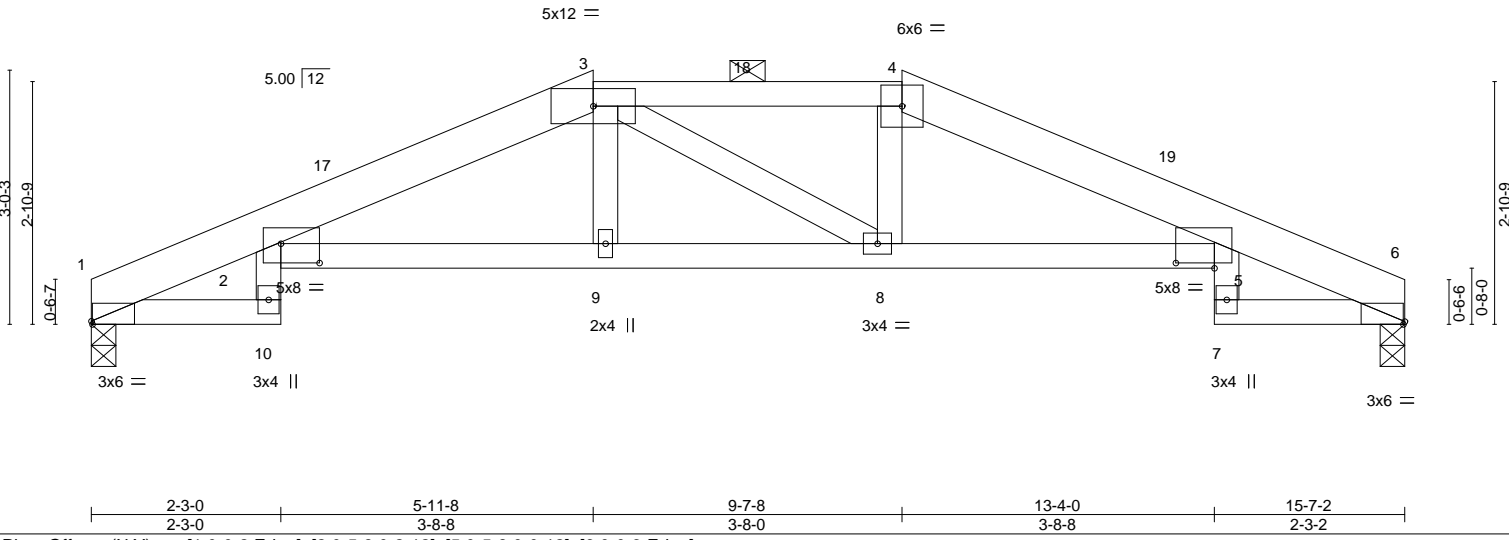
Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:56 2021 Page 2  
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**LOAD CASE(S)** Standard  
 Uniform Loads (plf)  
 Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 12-13=-20, 2-6=-20, 8-16=-20  
 Concentrated Loads (lb)  
 Vert: 3=-27(F) 5=-27(F) 11=-267(F) 4=-27(F) 10=-54(F) 9=-267(F) 19=-27(F) 20=-27(F) 21=-54(F) 22=-54(F)

Job	Truss	Truss Type	Qty	Ply	Summit/Newh...
2770190	G2	Hip	1	1	Lee's Summit, MO 6406



Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:58:57 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.99	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.85	Vert(LL) -0.20 5-8 >917 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.04	Vert(CT) -0.37 5-8 >502 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.28 6 n/a n/a		
	Code IRC2018/TPI2014			Weight: 55 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x6 SPF No.2 \*Except\*  
 3-4: 2x4 SPF No.2  
 BOT CHORD 2x4 SPF No.2  
 WEBS 2x4 SPF No.2

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except  
 2-0-0 oc purlins (4-8-14 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 1=0-3-8, 6=0-3-8  
 Max Horz 1=-43(LC 13)  
 Max Uplift 1=-120(LC 12), 6=-120(LC 13)  
 Max Grav 1=704(LC 1), 6=704(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-12=-370/123, 2-3=-1504/414, 3-4=-1444/432, 4-5=-1505/411, 5-6=-371/119  
 BOT CHORD 2-9=-337/1440, 8-9=-334/1442, 5-8=-329/1441

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 5-11-8, Exterior(2E) 5-11-8 to 9-7-8, Exterior(2R) 9-7-8 to 13-7-3, Interior(1) 13-7-3 to 15-7-2 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

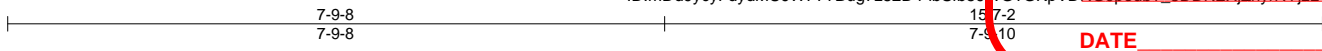


May 3, 2021

Job 2770190	Truss G3	Truss Type Common	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:58 2021 Page 1



5x8 =

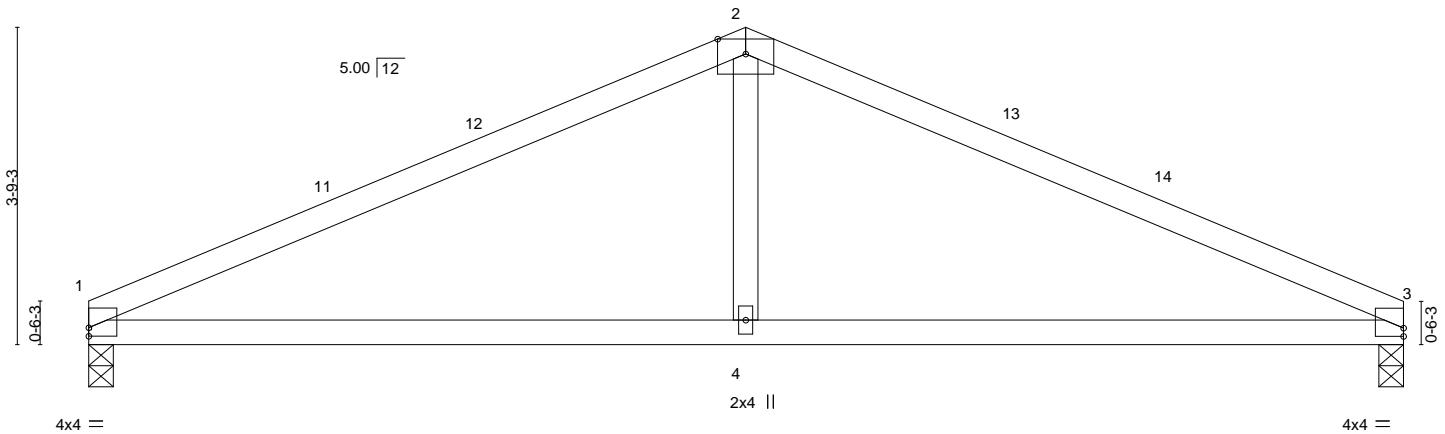


Plate Offsets (X,Y)--	[1:0-0-0,0-1-3], [3:0-0-0,0-1-3]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.68	Vert(LL)	-0.11 4-10	>999	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.52	Vert(CT)	-0.19 4-10	>984	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.08	Horz(CT)	0.02 1	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS						

Weight: 41 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=0-3-8, 3=0-3-8  
 Max Horz 1=-57(LC 13)  
 Max Uplift 1=-118(LC 12), 3=-118(LC 13)  
 Max Grav 1=702(LC 1), 3=702(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-1097/334, 2-3=-1097/334  
 BOT CHORD 1-4=-216/922, 3-4=-216/922  
 WEBS 2-4=0/342

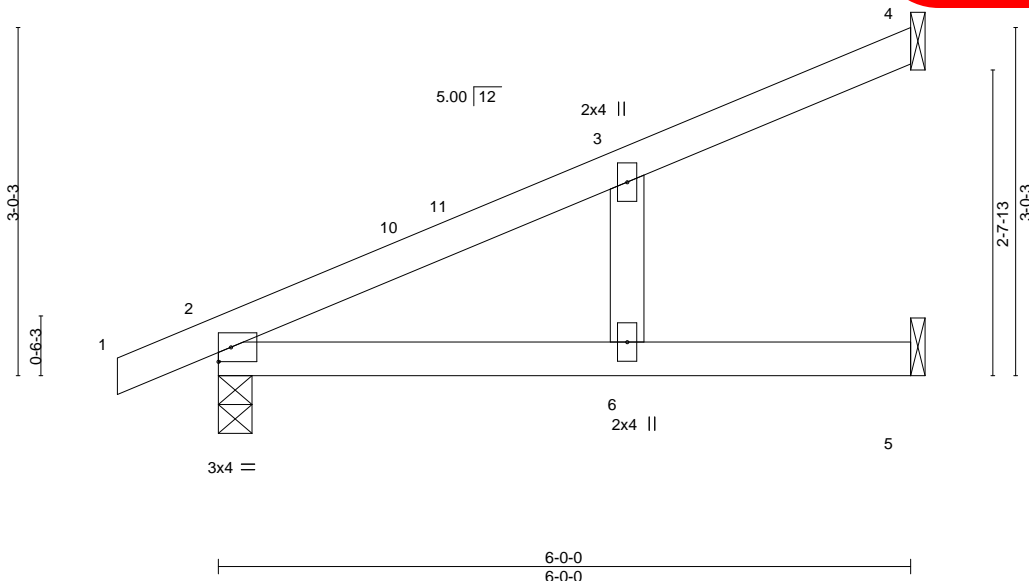
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 7-9-8, Exterior(2R) 7-9-8 to 10-9-8, Interior(1) 10-9-8 to 15-7-2 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021

Job 2770190	Truss J1	Truss Type Jack-Open	Qty 7	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:59 2021 Page 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 0.37	Vert(LL)	0.10 6-9	>692	240	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.44	Vert(CT)	-0.16 6-9	>444	180		
BCLL 0.0	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.02 2	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-AS					Weight: 17 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
 Max Horz 2=114(LC 12)  
 Max Uplift 4=-61(LC 12), 2=-57(LC 12), 5=-23(LC 12)  
 Max Grav 4=152(LC 1), 2=333(LC 1), 5=111(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 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, 5.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

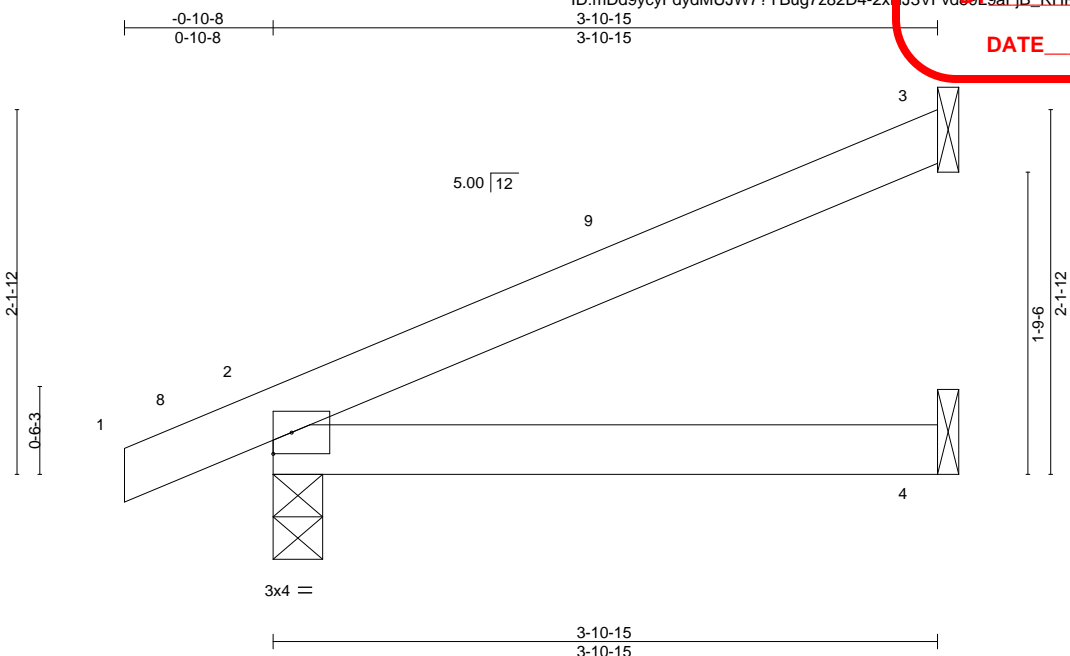


May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J2	Truss Type Jack-Open	Qty 4	Ply 1	Summit/Newh... Lee's Summit, MO
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:05 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.13	Vert(LL) -0.01 4-7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.02 4-7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 2 n/a n/a		
	Code IRC2018/TPI2014			Weight: 11 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=78(LC 12)  
 Max Uplift 3=-57(LC 12), 2=-44(LC 12)  
 Max Grav 3=117(LC 1), 2=241(LC 1), 4=71(LC 3)

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

**NOTES-**

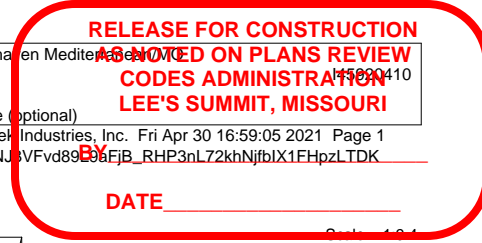
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-10-3 zone; cantilever left and right exposed; end vertical left and right exposed; C-C 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.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



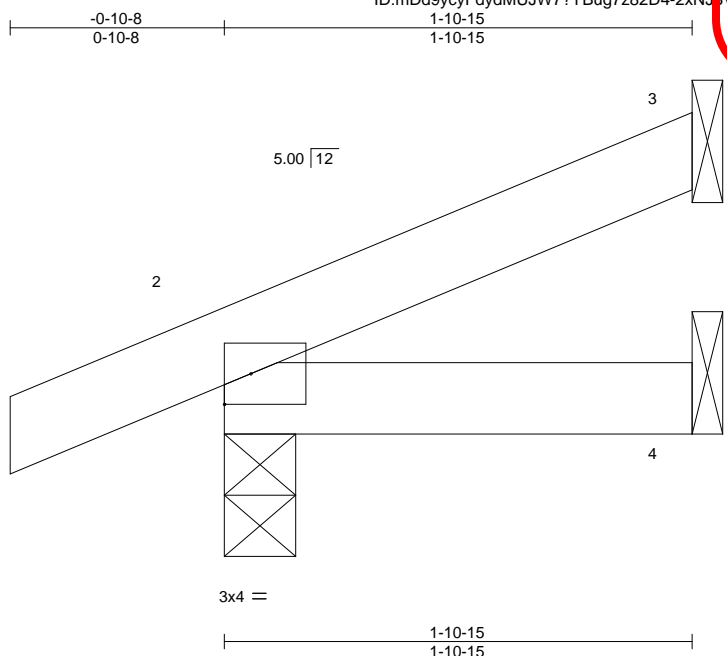
May 3, 2021



Job 2770190	Truss J3	Truss Type Jack-Open	Qty 14	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:05 2021 Page 1



<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 0.05	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) -0.00 7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 3 n/a n/a	Weight: 6 lb	FT = 20%
	Code IRC2018/TPI2014				

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=45(LC 12)  
Max Uplift 3=-27(LC 12), 2=-34(LC 8)  
Max Grav 3=52(LC 1), 2=161(LC 1), 4=33(LC 3)

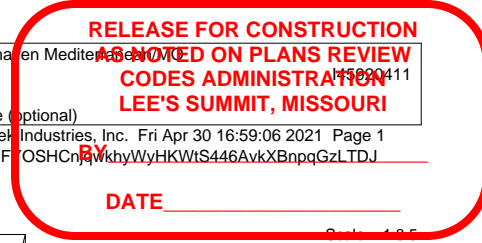
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

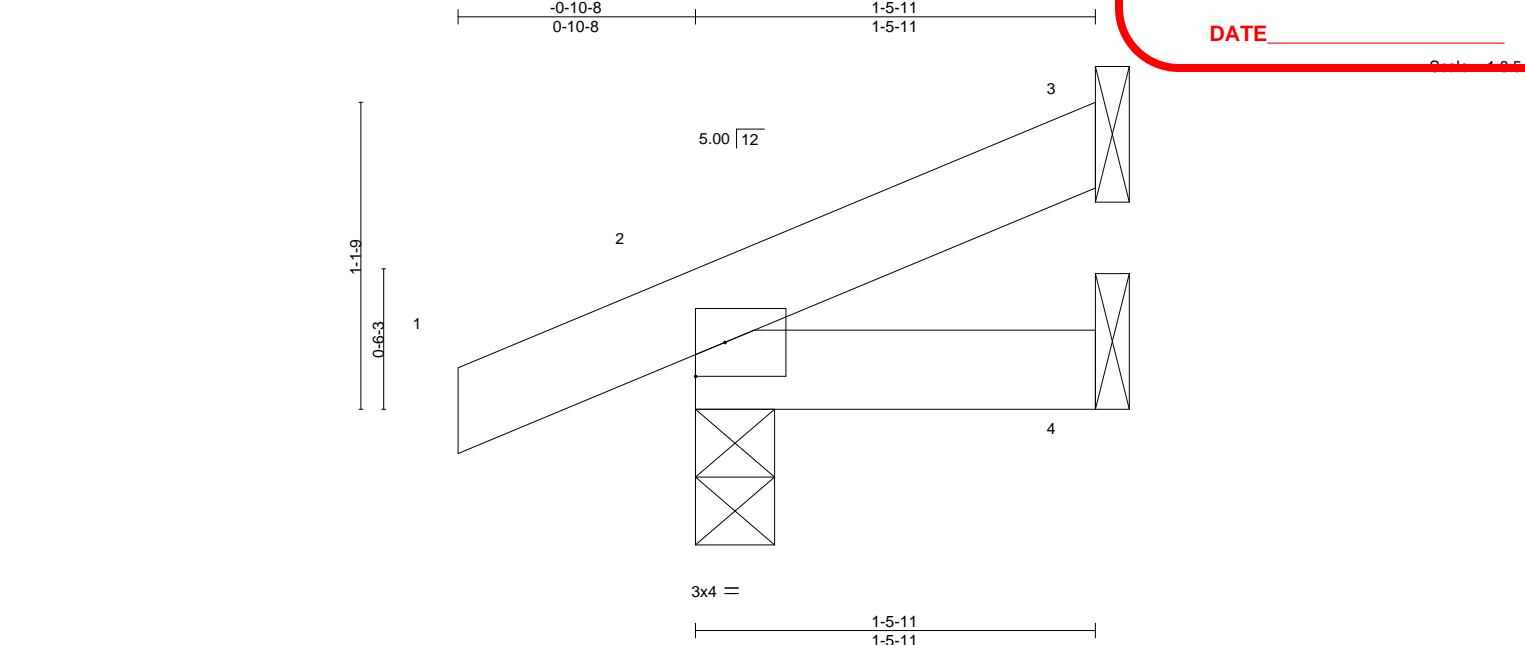


May 3, 2021

Job 2770190	Truss J3A	Truss Type Jack-Open	Qty 4	Ply 1	Summit/Newh...
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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 0.05	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.01	Vert(LL) -0.00 7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 3 n/a n/a	Weight: 5 lb	FT = 20%
	Code IRC2018/TPI2014				

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 1-5-11 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=38(LC 12)  
 Max Uplift 3=-20(LC 12), 2=-35(LC 8)  
 Max Grav 3=36(LC 1), 2=145(LC 1), 4=24(LC 3)

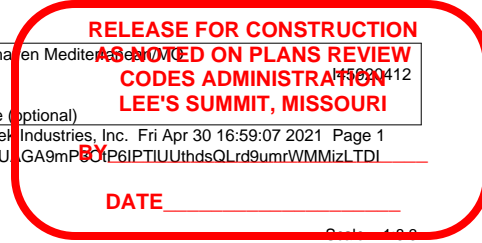
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

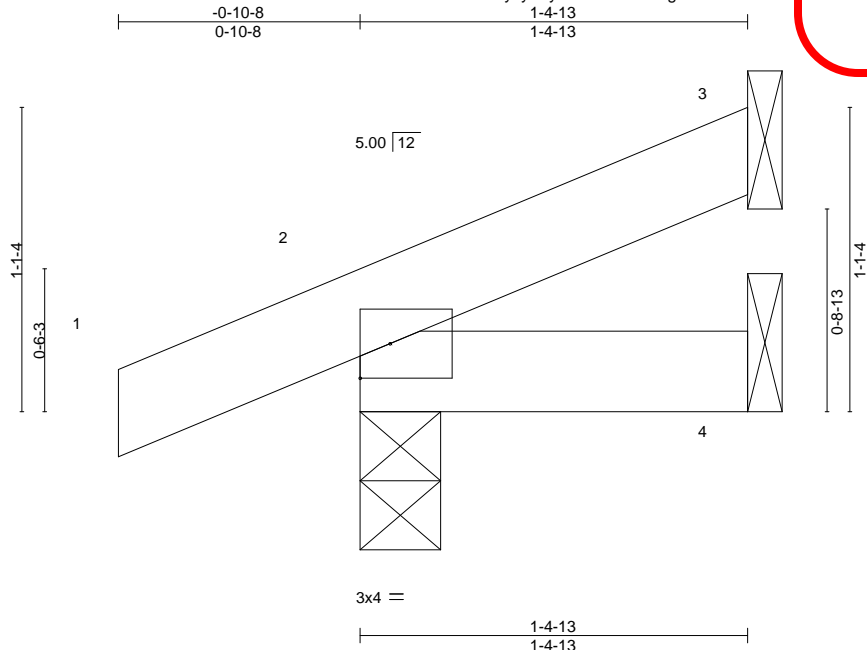


May 3, 2021

Job 2770190	Truss J4	Truss Type Jack-Open	Qty 2	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:07 2021 Page 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 0.05	Vert(LL)	-0.00	7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.01	Vert(CT)	-0.00	7	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP					Weight: 5 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-4-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=36(LC 12)  
Max Uplift 3=-18(LC 12), 2=-35(LC 8)  
Max Grav 3=33(LC 1), 2=143(LC 1), 4=23(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

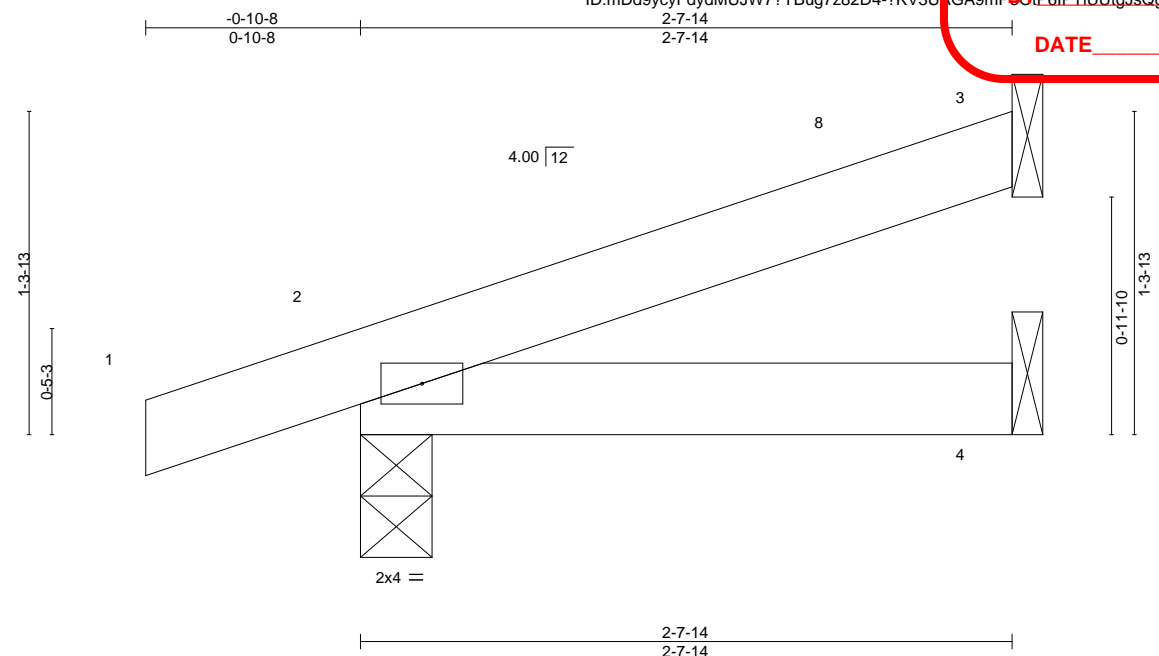


May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J5	Truss Type Jack-Open	Qty 2	Ply 1	Summit/Newh... en Mediter... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:07 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-?KV3U... GA9mP... IP6IPTIUU... JsQgrd9umrWMMizLTDI



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
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 0.06	Vert(LL) -0.00 7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.00 4-7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP	Horz(CT) 0.00 2 n/a n/a		
	Code IRC2018/TPI2014			Weight: 7 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 2-7-14 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=51(LC 8)  
 Max Uplift 3=-32(LC 12), 2=-62(LC 8)  
 Max Grav 3=73(LC 1), 2=188(LC 1), 4=46(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-7-2 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.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

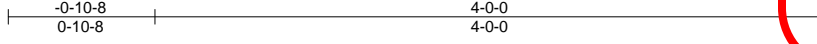


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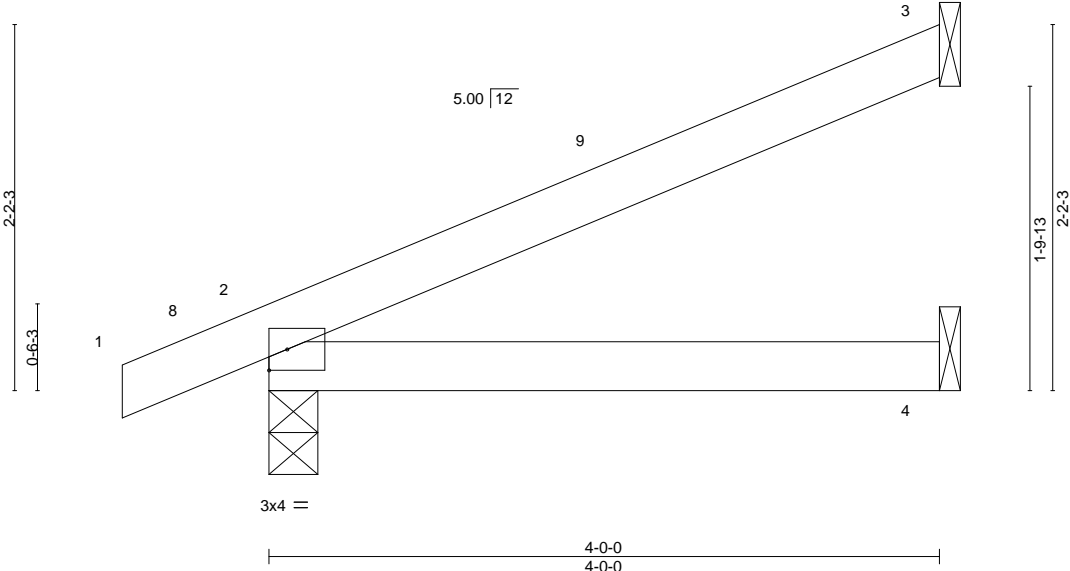
**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J6	Truss Type Jack-Open	Qty 5	Ply 1	Summit/Newh... Lee's Summit, MO 64114
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:08 2021 Page 1  
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DATE \_\_\_\_\_



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.21	Vert(LL)	0.02	4-7	>999	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.14	Vert(CT)	-0.02	4-7	>999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	2	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP						
	Code IRC2018/TPI2014						Weight: 11 lb	FT = 20%

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

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

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=80(LC 12)  
 Max Uplift 3=-59(LC 12), 2=-45(LC 12)  
 Max Grav 3=120(LC 1), 2=245(LC 1), 4=73(LC 3)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-4 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.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

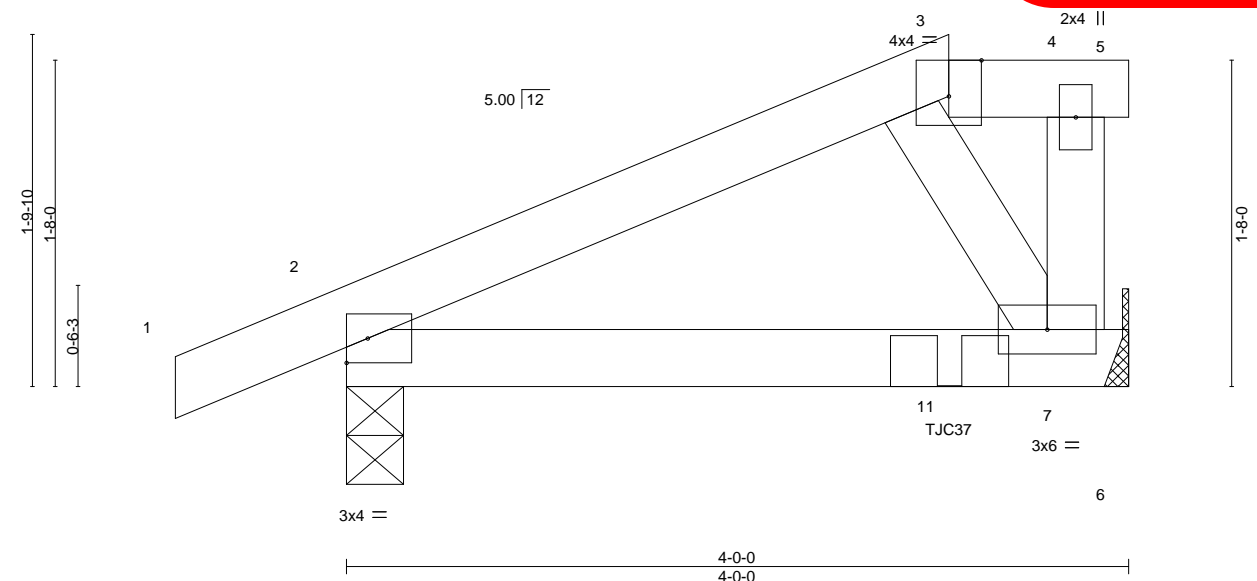
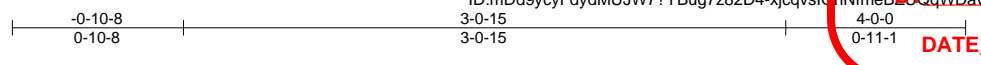


May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J7	Truss Type Jack-Closed Girder	Qty 2	Ply 1	Summit/Newh... Lee's Summit, MO 64115
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 Mitek Industries, Inc. Fri Apr 30 16:59:09 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.28	Vert(LL) -0.01 7-10 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.02	Vert(CT) -0.03 7-10 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MP	Horz(CT) 0.00 2 n/a n/a		
	Code IRC2018/TPI2014			Weight: 13 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 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	

**REACTIONS.** (size) 2=0-3-8, 7=Mechanical  
 Max Horz 2=64(LC 7)  
 Max Uplift 2=64(LC 8), 7=84(LC 5)  
 Max Grav 2=268(LC 1), 7=324(LC 1)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; 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) 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) 7.
- 7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 3-1-0 from the left end to connect truss(es) to front face of bottom chord, skewed 38.7 deg.to the left, sloping 0.0 deg. down.
- 11) Fill all nail holes where hanger is in contact with lumber.
- 12) 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, 4-5=-20, 6-8=-20  
 Concentrated Loads (lb)  
 Vert: 11=-184(F)



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



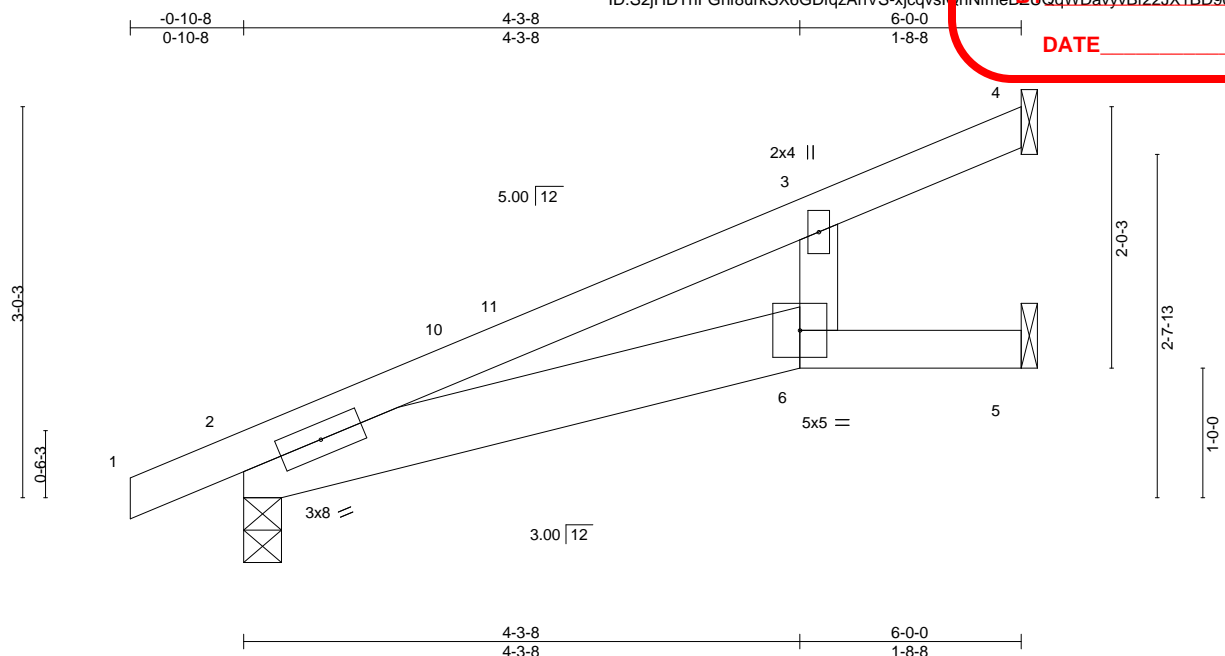


Job 2770190	Truss J9	Truss Type Jack-Open	Qty 11	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

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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 0.56	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) 0.09 6 >793 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.04	Vert(CT) -0.14 6 >523 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.03 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 20 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SPF No.2  
BOT CHORD 2x4 SPF No.2 \*Except\*  
              2-6: 2x6 SPF No.2  
WEBS 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
Max Horz 2=114(LC 12)  
Max Uplift 4=90(LC 12), 2=-58(LC 12)  
Max Grav 4=246(LC 1), 2=333(LC 1), 5=33(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4.
  - 6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Job 2770190	Truss J10	Truss Type Jack-Open	Qty 4	Ply 1	Summit/Newh... en Medite... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:58:59 2021 Page 1  
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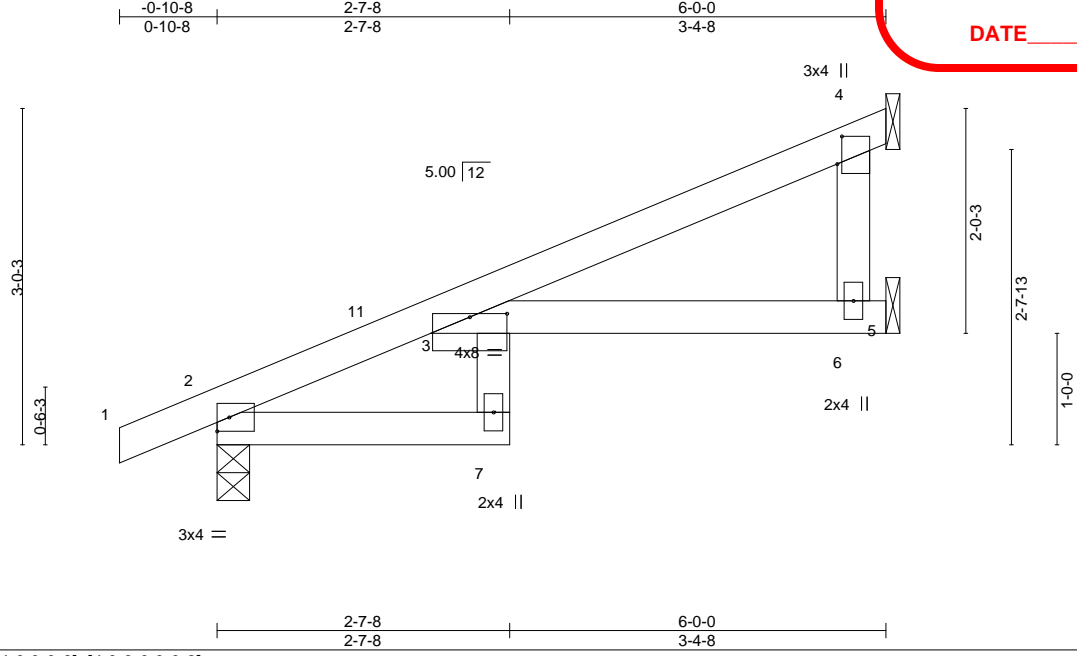


Plate Offsets (X,Y)--	[3:0-4-0,0-0-6], [4:0-3-0,0-0-8]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.66	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.20	Vert(LL) 0.18 7 >383 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.27 7 >258 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.13 6 n/a n/a		
	Code IRC2018/TPI2014			Weight: 19 lb	FT = 20%

**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.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 2=0-3-8, 6=Mechanical, 4=Mechanical  
 Max Horz 2=110(LC 12)  
 Max Uplift 2=-55(LC 12), 4=-94(LC 12)  
 Max Grav 2=326(LC 1), 6=82(LC 3), 4=219(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-2-9, Interior(1) 2-2-9 to 5-8-8 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.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 8) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.



May 3, 2021



Job 2770190	Truss J11	Truss Type Jack-Open	Qty 5	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:00 2021 Page 1  
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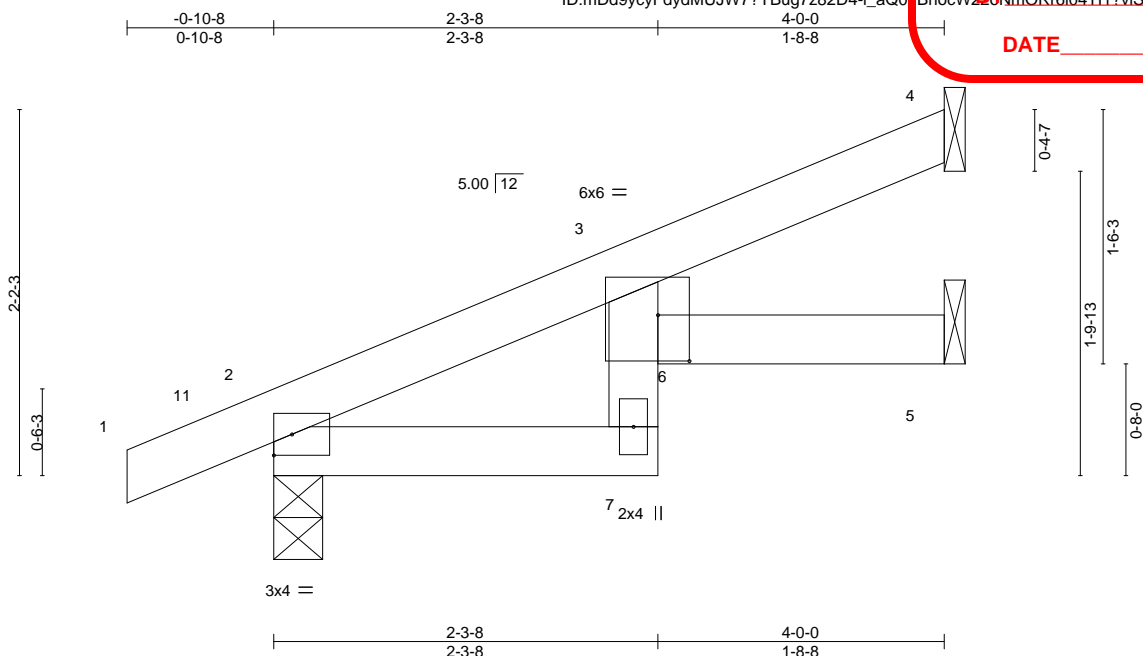


Plate Offsets (X,Y)-- [3:0-2-4,0-3-5]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.12	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.19	Vert(LL) -0.01 6 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.02 6 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.01 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 12 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
 Max Horz 2=80(LC 12)  
 Max Uplift 4=-41(LC 12), 2=-45(LC 12), 5=-15(LC 12)  
 Max Grav 4=97(LC 1), 2=245(LC 1), 5=74(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-1, Interior(1) 2-1-1 to 3-11-4 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, 5.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J12	Truss Type Jack-Open	Qty 2	Ply 1	Summit/Newh... Lee's Summit, MO 64119
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:01 2021 Page 1  
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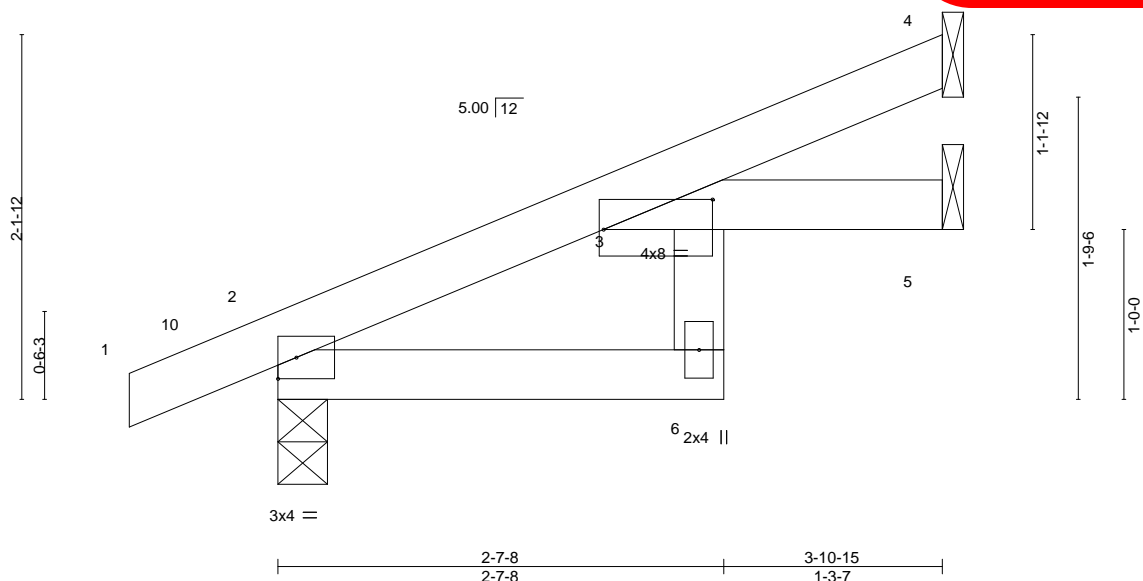
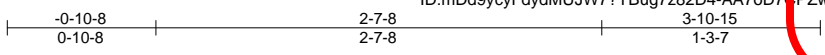


Plate Offsets (X,Y)--	[3:0-7-11,0-2-2]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.30	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.17	Vert(LL) 0.03 6 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.04 6 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-MR	Horz(CT) 0.02 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 12 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 4=Mechanical, 2=0-3-8, 5=Mechanical  
 Max Horz 2=78(LC 12)  
 Max Uplift 4=-39(LC 12), 2=-43(LC 12), 5=-14(LC 12)  
 Max Grav 4=98(LC 1), 2=243(LC 1), 5=72(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-2-9, Interior(1) 2-2-9 to 3-10-3 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, 5.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Job 2770190	Truss J13	Truss Type Jack-Open	Qty 2	Ply 1	Summit/Newh... en Medite... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:02 2021 Page 1

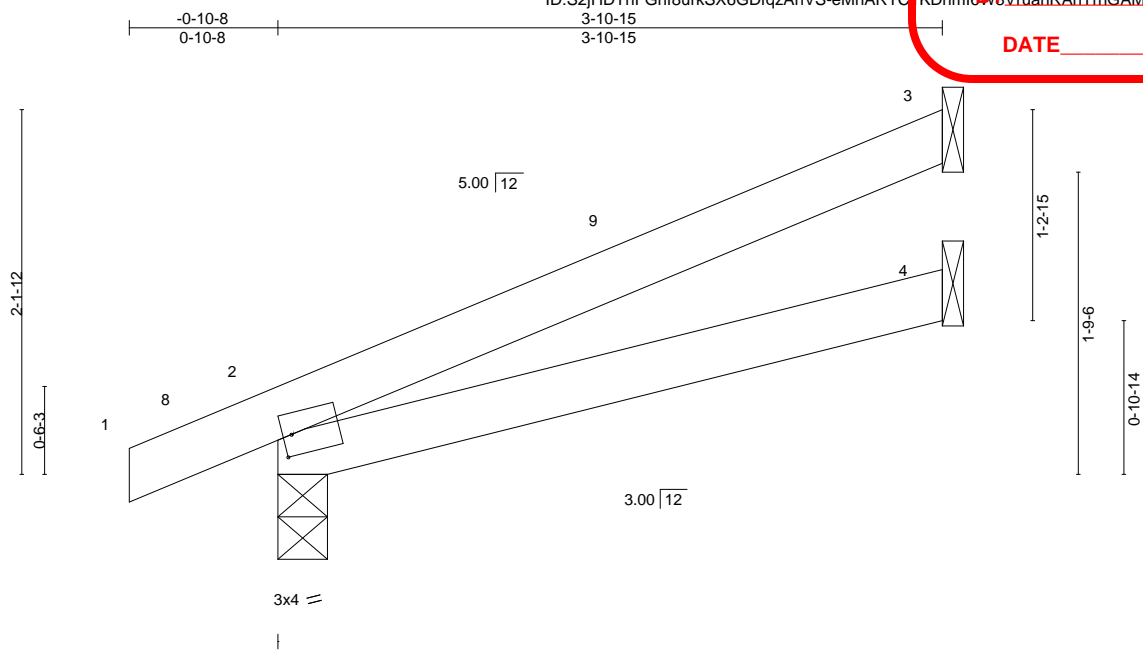


Plate Offsets (X,Y)-- [2:0-0-10-0-1-8]

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 0.21	Vert(LL)	-0.01	4-7	>999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	-0.02	4-7	>999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.01	2	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-MP						
								Weight: 11 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
Max Horz 2=78(LC 12)  
Max Uplift 3=-59(LC 12), 2=-43(LC 12)  
Max Grav 3=118(LC 1), 2=241(LC 1), 4=71(LC 3)

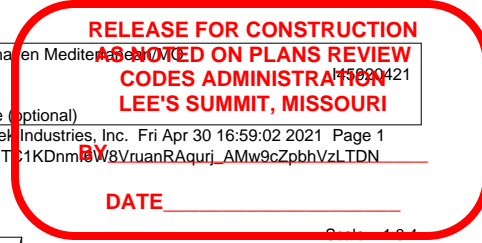
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-10-3 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 3, 2021

Job 2770190	Truss J14	Truss Type Jack-Open	Qty 2	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:02 2021 Page 1  
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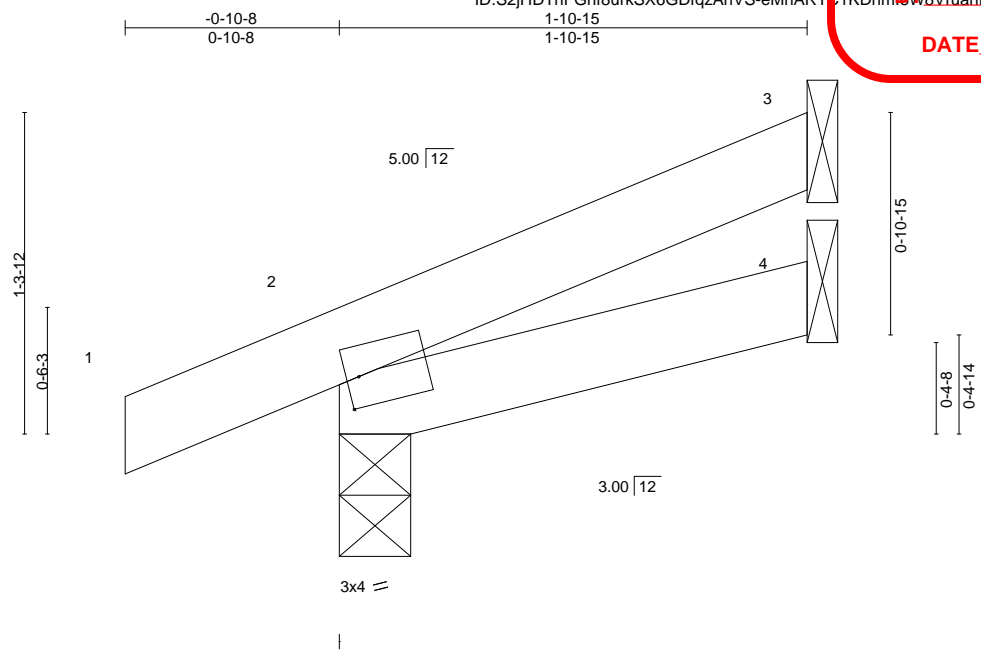


Plate Offsets (X,Y)-- [2:0-0-10,0-1-8]

<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 0.05	Vert(LL) -0.00 7 >999 240	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.02	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 IRC2018/TPI2014	Matrix-MP		Weight: 6 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=45(LC 12)  
 Max Uplift 3=28(LC 12), 2=33(LC 8)  
 Max Grav 3=52(LC 1), 2=161(LC 1), 4=33(LC 3)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



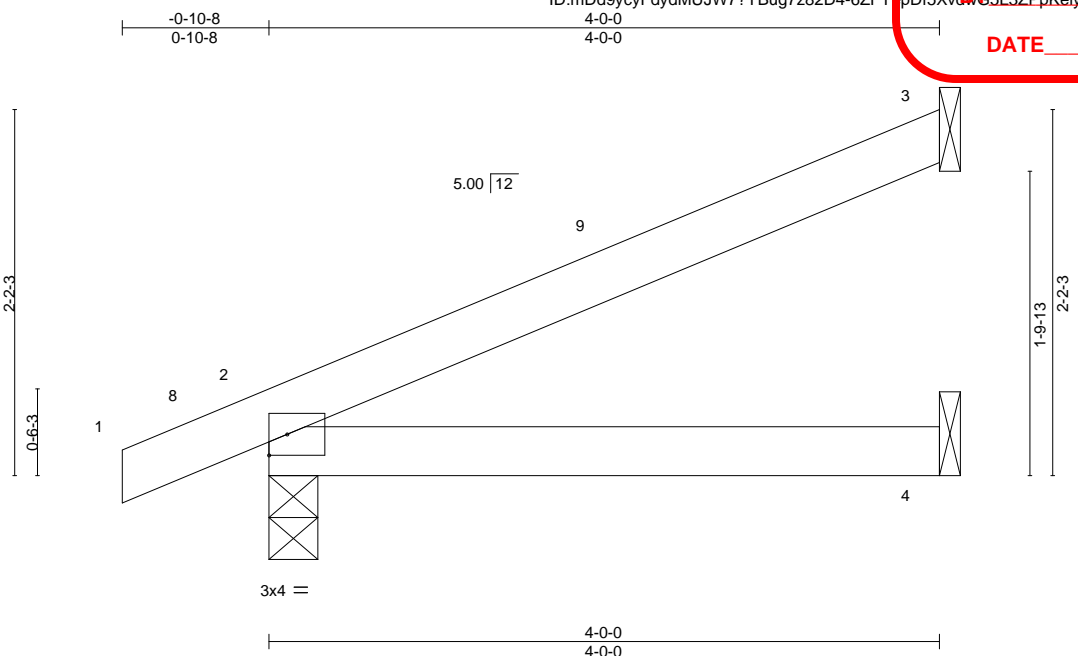
May 3, 2021





Job 2770190	Truss J15	Truss Type Jack-Open	Qty 4	Ply 1	Summit/Newh... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:03 2021 Page 1  
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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 0.20	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.13	Vert(LL) -0.01 4-7 >999 240		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.02 4-7 >999 180		
BCDL 10.0	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.00 2 n/a n/a	Weight: 11 lb	FT = 20%
	Code IRC2018/TPI2014				

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=80(LC 12)  
 Max Uplift 3=-59(LC 12), 2=-45(LC 12)  
 Max Grav 3=121(LC 1), 2=245(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-4 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.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



May 3, 2021

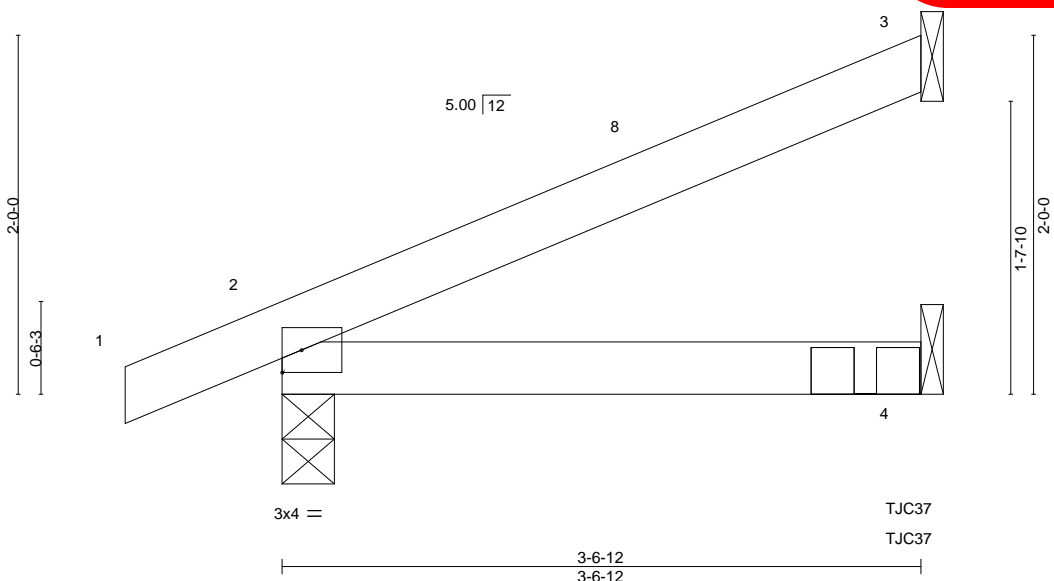
**RELEASE FOR CONSTRUCTION**  
**NOTE ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss J16	Truss Type Jack-Open	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64080-423
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 Mitek Industries, Inc. Fri Apr 30 16:59:04 2021 Page 1

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DATE \_\_\_\_\_



<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 0.16	Vert(LL)	-0.01 4-7	>999	240	MT20	197/144
BCLL 10.0	Lumber DOL	1.15	BC 0.10	Vert(CT)	-0.01 4-7	>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 IRC2018/TPI2014		Matrix-MP					Weight: 10 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 3=Mechanical, 2=0-3-8, 4=Mechanical  
 Max Horz 2=72(LC 12)  
 Max Uplift 3=-52(LC 12), 2=-42(LC 12), 4=-115(LC 12)  
 Max Grav 3=105(LC 1), 2=226(LC 1), 4=424(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-6-0 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 except (jt=lb) 4=115.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 7) Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 3-6-0 from the left end to connect truss(es) to front face of bottom chord, skewed 45.0 deg.to the left, sloping 0.0 deg. down.
  - 8) Use Simpson Strong-Tie TJC37 (4 nail 90-150) or equivalent at 3-6-0 from the left end to connect truss(es) to back face of bottom chord, skewed 45.0 deg.to the right, sloping 0.0 deg. down.
  - 9) Fill all nail holes where hanger is in contact with lumber.
  - 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  
 Uniform Loads (plf)  
 Vert: 1-3=-70, 4-5=-20  
 Concentrated Loads (lb)  
 Vert: 4=-380(F=-190, B=-190)



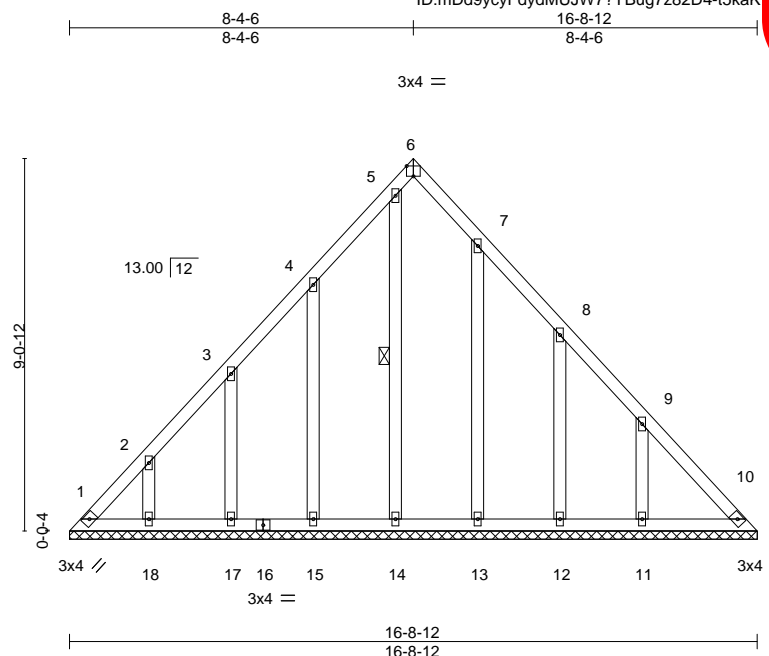
May 3, 2021

Job 2770190	Truss L1	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:11 2021 Page 1



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 0.10	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.13	Horz(CT)	0.01	10	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 84 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SPF No.2	WEBS 1 Row at midpt 5-14

**REACTIONS.** All bearings 16-8-12.  
 (lb) - Max Horz 1=233(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 10, 14, 13 except 1=107(LC 10), 15=160(LC 12), 17=133(LC 12), 18=137(LC 12), 12=138(LC 13), 11=176(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 10, 14, 15, 17, 18, 13, 12 except 1=259(LC 12), 11=268(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-370/253, 9-10=-312/235  
 BOT CHORD 1-18=-185/254, 17-18=-185/254, 15-17=-185/254, 14-15=-185/254, 13-14=-185/254, 12-13=-185/254, 11-12=-185/254, 10-11=-185/254

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 8-4-6, Exterior(2R) 8-4-6 to 11-4-6, Interior(1) 11-4-6 to 16-4-12 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
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 10, 14, 15, 17, 18, 13, 12, and 11. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



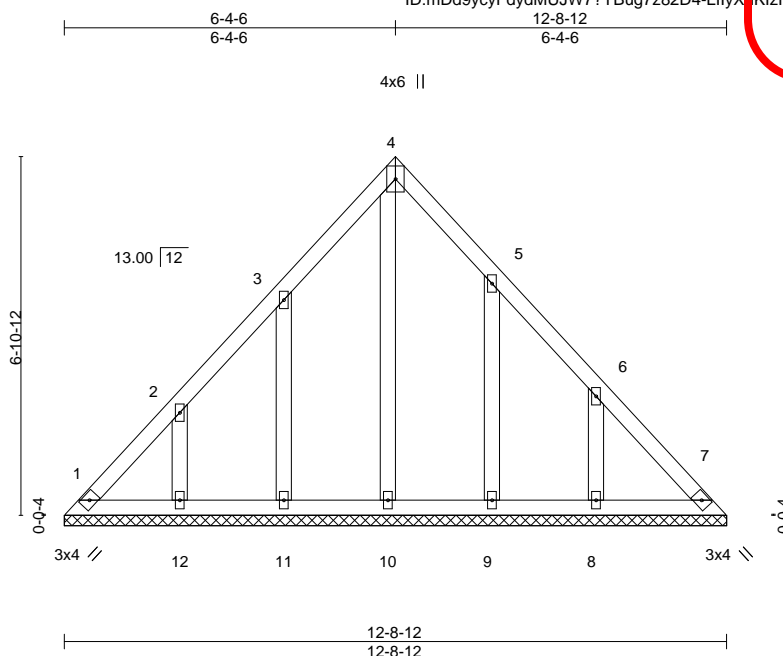
May 3, 2021

Job 2770190	Truss L2	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:12 2021 Page 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 0.07	Vert(LL)	n/a	-	n/a	MT20	197/144
BCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.09	Horz(CT)	0.00	7	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-S					Weight: 56 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SPF No.2	

**REACTIONS.** All bearings 12-8-12.  
 (lb) - Max Horz 1=-175(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 11=-147(LC 12), 12=-147(LC 12), 9=-125(LC 13), 8=-166(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 11, 12, 9, 8

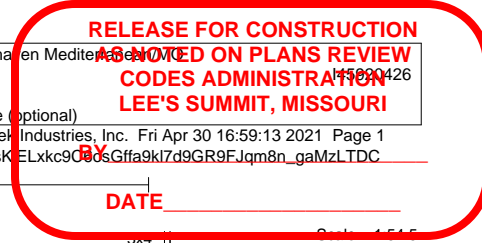
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 6-4-6, Exterior(2R) 6-4-6 to 9-4-6, Interior(1) 9-4-6 to 12-4-12 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
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 7, 10, 11, 12, 9, and 8. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 3, 2021

Job 2770190	Truss L3	Truss Type GABLE	Qty 1	Ply 1	Summit/Newhauen Meditec Industries, Inc. (optional)
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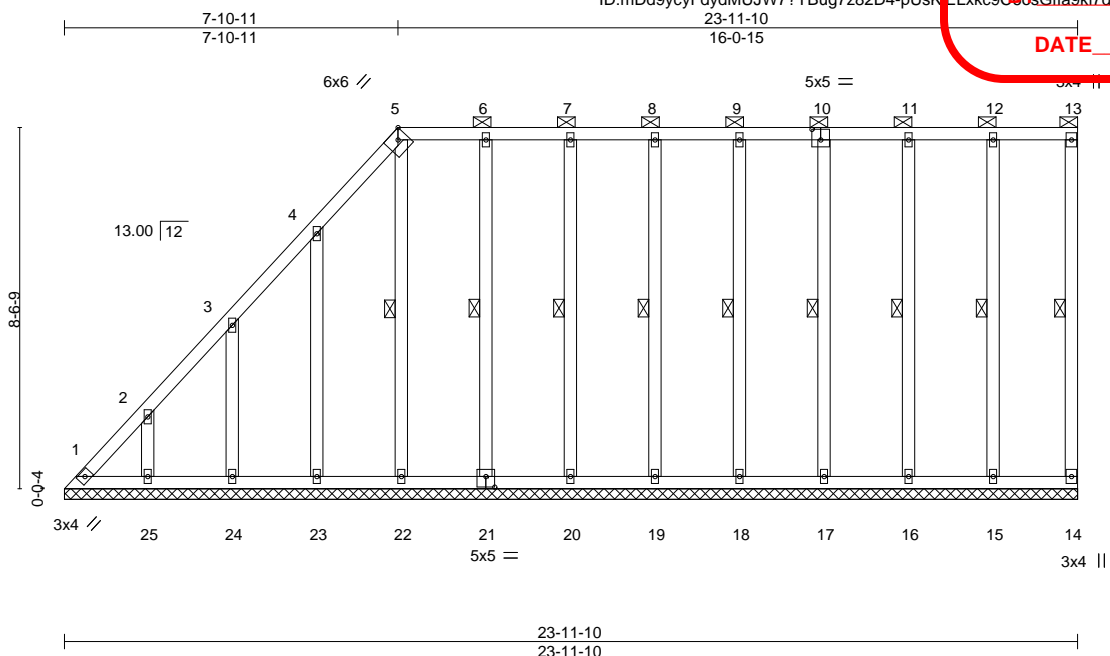


Plate Offsets (X,Y)--	[5:0-2-9,Edge], [10:0-2-8,0-3-0], [21:0-2-8,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 25.0	Plate Grip DOL 1.15	TC 0.37	Vert(LL) n/a - n/a 999	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.18	Vert(CT) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.12	Horz(CT) -0.00 14 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-S		Weight: 153 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	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.): 5-13.
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 13-14, 12-15, 11-16, 10-17, 9-18, 8-19, 7-20, 6-21, 5-22
OTHERS 2x4 SPF No.2	

**REACTIONS.** All bearings 23-11-10.  
 (lb) - Max Horz 1=329(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 14, 15, 16, 17, 18, 19, 20, 21 except 1=-134(LC 10), 22=-115(LC 9), 23=-142(LC 12), 24=-137(LC 12), 25=-138(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 except 1=261(LC 9)

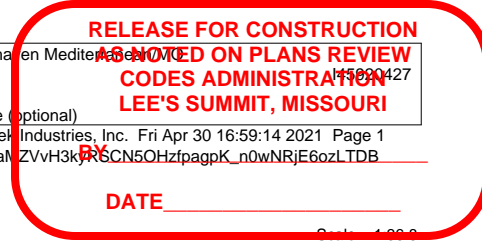
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-501/492, 2-3=-397/395, 3-4=-288/297

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 7-10-11, Exterior(2R) 7-10-11 to 11-11-10, Interior(1) 11-11-10 to 23-9-14 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) 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25. This connection is for uplift only and does not consider lateral forces.
  - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

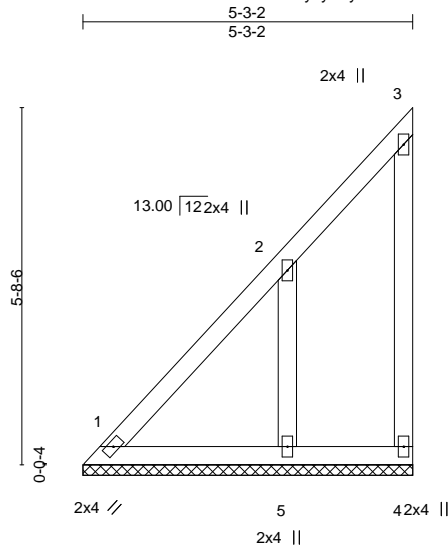


May 3, 2021

Job 2770190	Truss L4	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:14 2021 Page 1



<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 0.26	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.06	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	Weight: 23 lb	FT = 20%
	Code IRC2018/TPI2014				

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-3-2 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 1=5-3-2, 4=5-3-2, 5=5-3-2  
 Max Horz 1=206(LC 9)  
 Max Uplift 1=-47(LC 8), 4=-72(LC 11), 5=-210(LC 12)  
 Max Grav 1=178(LC 20), 4=74(LC 8), 5=318(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-349/360  
 WEBS 2-5=-320/243

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-3-2, Interior(1) 3-3-2 to 5-1-6 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 4, and 5. This connection is for uplift only and does not consider lateral forces.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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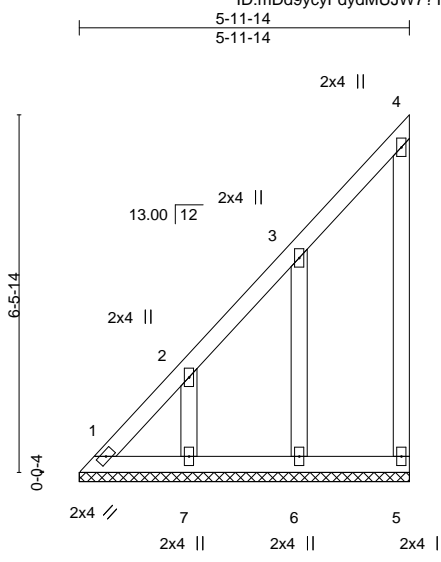


Job 2770190	Truss L5	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:14 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.36	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.06	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 5 n/a n/a		
	Code IRC2018/TPI2014			Weight: 29 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-11-14 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** All bearings 5-11-14.  
 (lb) - Max Horz 1=237(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 6=-145(LC 12), 7=-138(LC 12)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 6, 7

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-442/442, 2-3=-314/320

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 5-10-2 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 6, and 7. This connection is for uplift only and does not consider lateral forces.
  - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

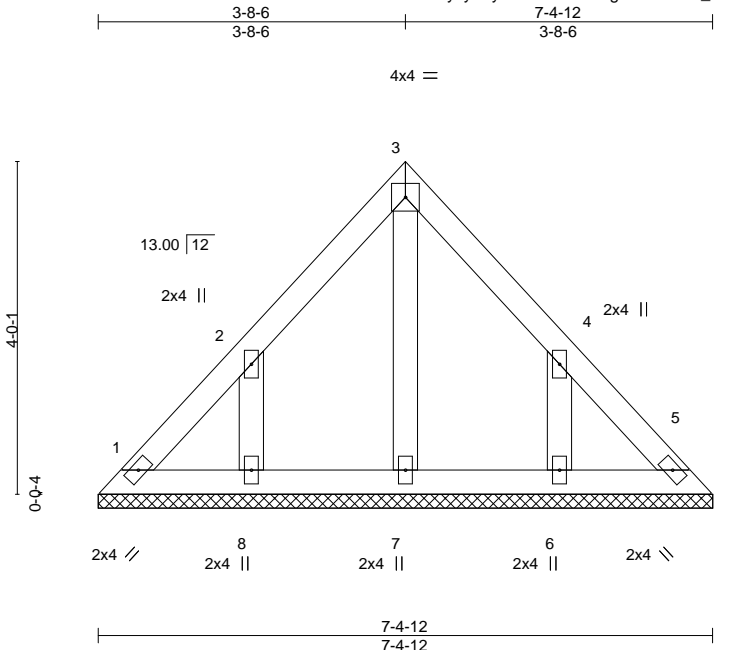


May 3, 2021

Job 2770190	Truss L6	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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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 0.05	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	5	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P					Weight: 27 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SPF No.2	

**REACTIONS.** All bearings 7-4-12.  
 (lb) - Max Horz 1=97(LC 8)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=144(LC 12), 6=144(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 8, 6

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 3-8-6, Exterior(2R) 3-8-6 to 6-8-6, Interior(1) 6-8-6 to 7-0-12 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 8, and 6. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



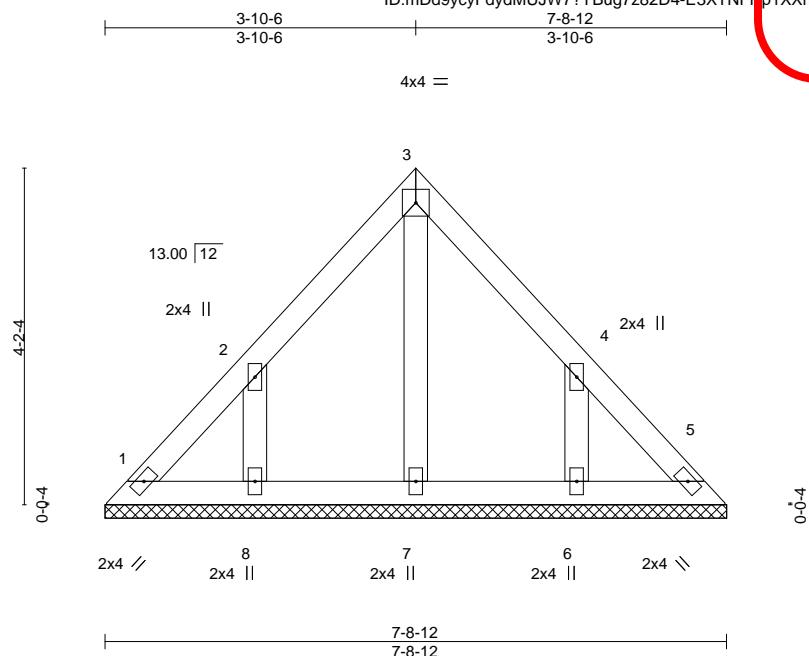
May 3, 2021

Job 2770190	Truss L7	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:16 2021 Page 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 0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.03	Horz(CT)	0.00	5	n/a	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P						Weight: 28 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SPF No.2	

**REACTIONS.** All bearings 7-8-12.  
 (lb) - Max Horz 1=102(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=153(LC 12), 6=153(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 8, 6

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-0 to 3-4-0, Interior(1) 3-4-0 to 3-10-6, Exterior(2R) 3-10-6 to 6-10-6, Interior(1) 6-10-6 to 7-4-12 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 8, and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 3, 2021

Job 2770190	Truss L8	Truss Type Lay-In Gable	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

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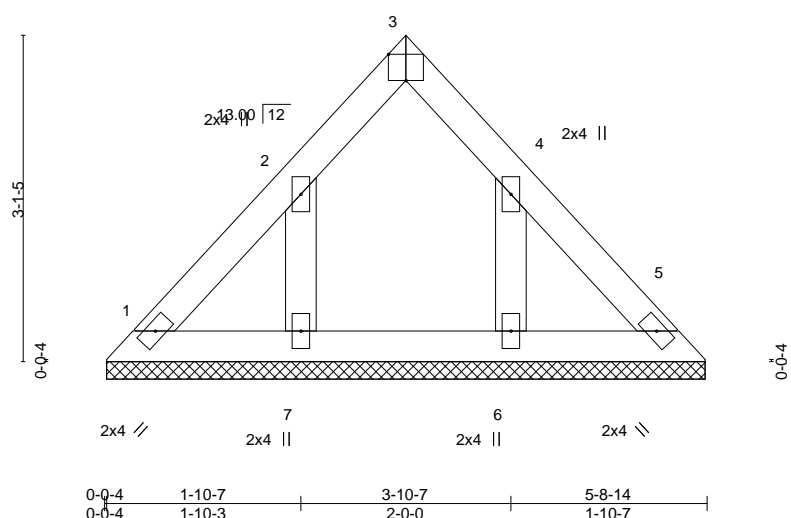
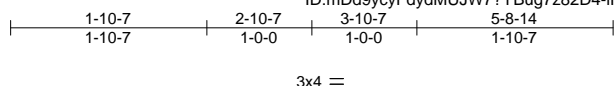


Plate Offsets (X,Y)--	[3:Edge,0-3-0]						
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 25.0	Plate Grip DOL	1.15	TC 0.04	Vert(LL)	n/a	-	n/a 999
TCDL 10.0	Lumber DOL	1.15	BC 0.02	Vert(CT)	n/a	-	n/a 999
BCLL 0.0	Rep Stress Incr	YES	WB 0.02	Horz(CT)	0.00	5	n/a n/a
BCDL 10.0	Code IRC2018/TPI2014		Matrix-P				
							<b>PLATES</b> MT20
							<b>GRIP</b> 197/144
							Weight: 19 lb FT = 20%

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 5-8-14 oc purlins.
BOT CHORD	2x4 SPF No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SPF No.2		

**REACTIONS.** All bearings 5-8-6.  
 (lb) - Max Horz 1=73(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) except 7=-103(LC 12), 6=-102(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7, 6

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



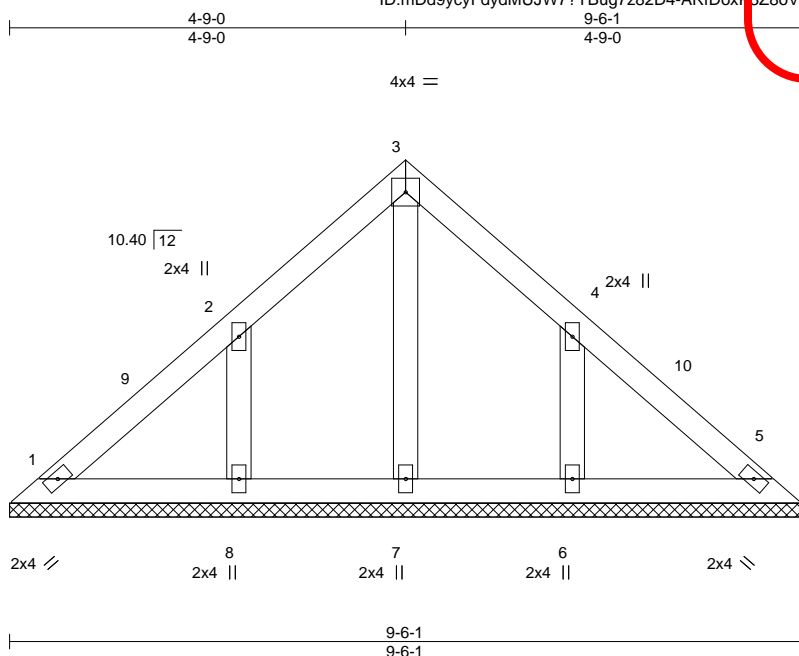
May 3, 2021

Job 2770190	Truss L9	Truss Type GABLE	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**AS NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:18 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.04	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-S	Horz(CT) 0.00 5 n/a n/a	Weight: 32 lb	FT = 20%
	Code IRC2018/TPI2014				

**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.

**REACTIONS.** All bearings 9-6-1.  
(lb) - Max Horz 1=99(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=135(LC 12), 6=135(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=256(LC 19), 6=256(LC 20)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-11 to 3-4-11, Interior(1) 3-4-11 to 4-9-0, Exterior(2R) 4-9-0 to 7-9-0, Interior(1) 7-9-0 to 9-1-5 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 8, and 6. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



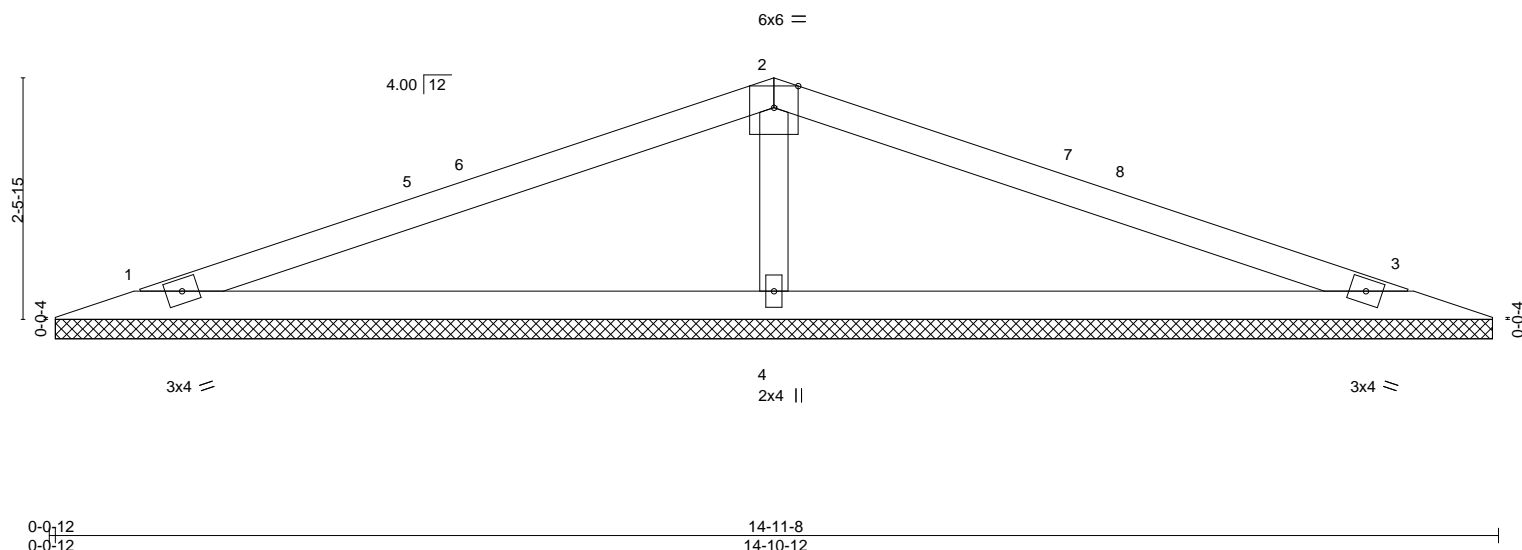
May 3, 2021

Job 2770190	Truss V1	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:19 2021 Page 1

ID:mDd9ycyFdydMUJW7?YBug7z82D4-eeDc3HqKSwMjJP?whZ\_0NbfhRf12WjR?n?zLTD6



<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 0.62	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.35	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.07	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 3 n/a n/a	Weight: 35 lb	FT = 20%
	Code IRC2018/TPI2014				

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 1=14-10-0, 3=14-10-0, 4=14-10-0  
 Max Horz 1=39(LC 12)  
 Max Uplift 1=64(LC 8), 3=69(LC 13), 4=92(LC 8)  
 Max Grav 1=262(LC 25), 3=262(LC 26), 4=672(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-476/242

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-11-5 to 3-11-5, Interior(1) 3-11-5 to 7-5-12, Exterior(2R) 7-5-12 to 10-5-12, Interior(1) 10-5-12 to 14-0-3 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.
- One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



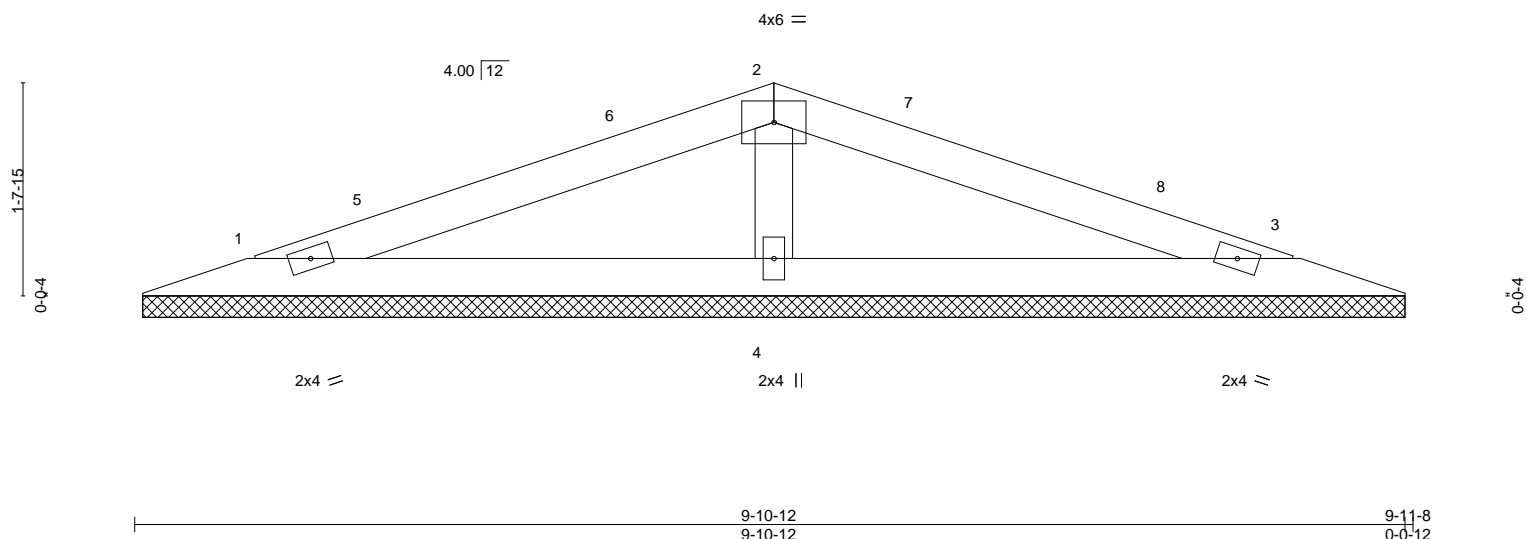
May 3, 2021



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss V2	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITEK Industries, Inc. Fri Apr 30 16:59:23 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-XPS6rTCgQnJL3EmmV8sXNzlrBbsWERLPCwnzLTD2  
 4-11-12 4-11-12 9-11-8 4-11-12  
 DATE \_\_\_\_\_



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
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 0.13	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-S	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 22 lb	FT = 20%

**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.

**REACTIONS.** (size) 1=9-10-0, 3=9-10-0, 4=9-10-0  
 Max Horz 1=24(LC 17)  
 Max Uplift 1=40(LC 8), 3=42(LC 13), 4=57(LC 8)  
 Max Grav 1=162(LC 25), 3=162(LC 26), 4=415(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-4=-294/224

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-11-5 to 3-11-5, Interior(1) 3-11-5 to 4-11-12, Exterior(2R) 4-11-12 to 7-11-12, Interior(1) 7-11-12 to 9-0-3 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.
  - One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

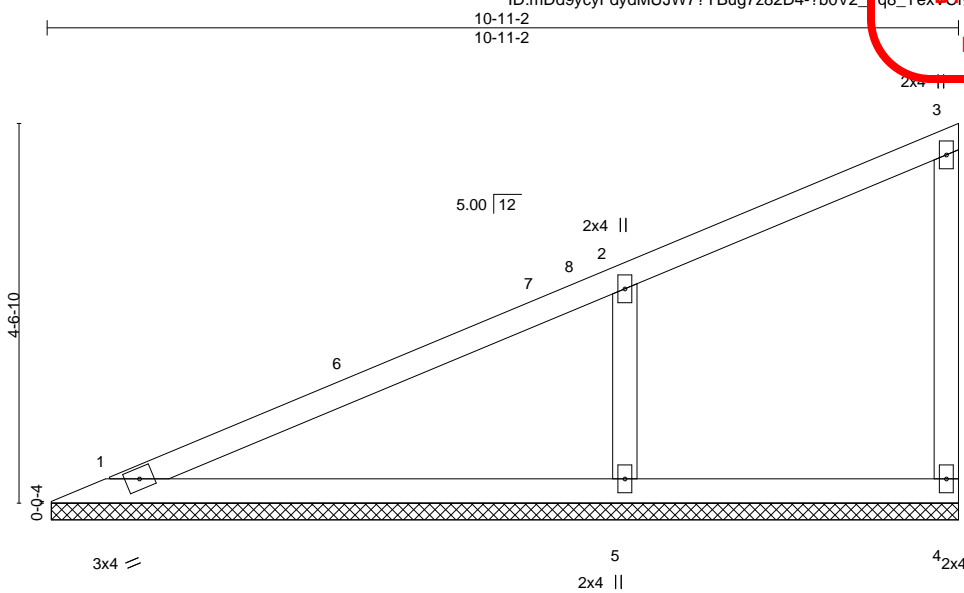


May 3, 2021

Job 2770190	Truss V3	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Lee's Summit, Missouri
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:24 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.48	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.26	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.07	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) -0.00 4 n/a n/a		
	Code IRC2018/TPI2014			Weight: 32 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 1=10-10-8, 4=10-10-8, 5=10-10-8  
 Max Horz 1=183(LC 9)  
 Max Uplift 1=-21(LC 12), 4=-26(LC 9), 5=-137(LC 12)  
 Max Grav 1=225(LC 1), 4=89(LC 1), 5=588(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-5=-442/268

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 10-9-6 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 5. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

Job 2770190	Truss V4	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 Mitek Industries, Inc. Fri Apr 16 16:59:25 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-ToatC...KUSvlg...enZMBozDHcip6Xe3mtXveuJ?fzLTD0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.26	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.14	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 IRC2018/TPI2014			Weight: 25 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	
OTHERS 2x4 SPF No.2	

**REACTIONS.** (size) 1=8-10-8, 4=8-10-8, 5=8-10-8  
 Max Horz 1=147(LC 9)  
 Max Uplift 1=-6(LC 12), 4=-28(LC 9), 5=-119(LC 12)  
 Max Grav 1=144(LC 1), 4=126(LC 1), 5=452(LC 1)

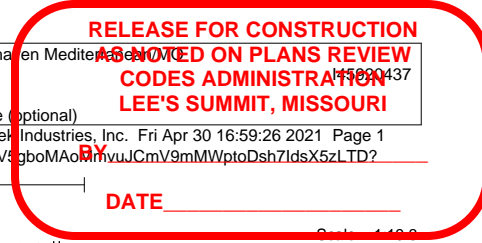
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-5=-351/252

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 8-9-6 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 5. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

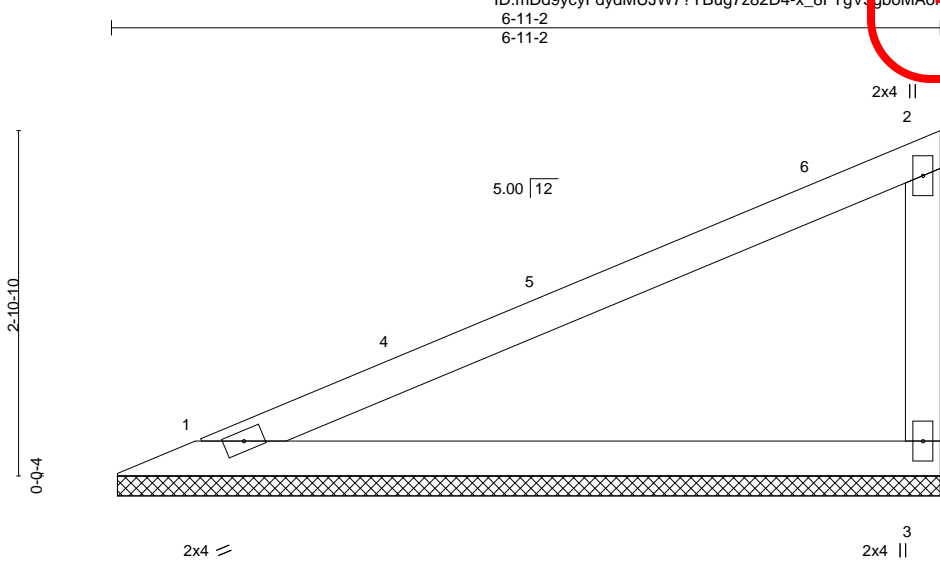


May 3, 2021

Job 2770190	Truss V5	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:26 2021 Page 1



<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 0.72	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.39	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 18 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=6-10-8, 3=6-10-8  
 Max Horz 1=110(LC 9)  
 Max Uplift 1=49(LC 12), 3=65(LC 12)  
 Max Grav 1=271(LC 1), 3=271(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 6-9-6 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Job 2770190	Truss V6	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITek Industries, Inc. Fri Apr 30 16:59:26 2021 Page 1

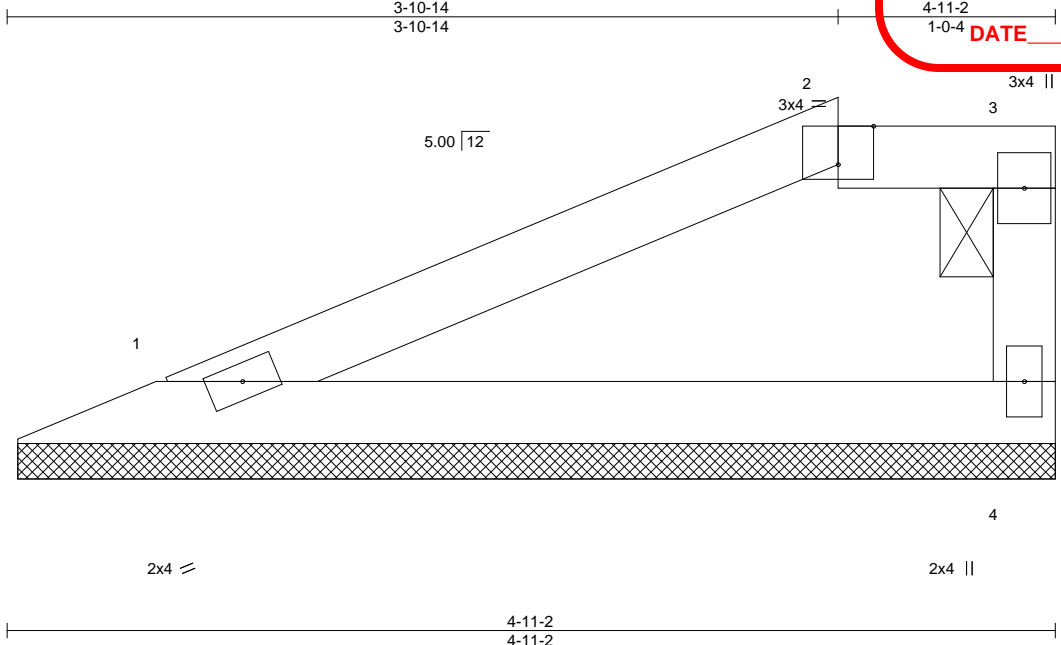


Plate Offsets (X,Y)--	[2:0-2:0,Edge]
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LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	TC 0.16	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.13	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	4	n/a		
BCDL 10.0	Code IRC2018/TPI2014		Matrix-R					Weight: 12 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=4-10-8, 4=4-10-8  
 Max Horz 1=52(LC 9)  
 Max Uplift 1=-35(LC 12), 4=-32(LC 9)  
 Max Grav 1=181(LC 1), 4=181(LC 1)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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.
  - One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE 0-10-8

Job 2770190	Truss V7	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64089
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:27 2021 Page 1  
 ID:Mdd9ycyFdydMUJW7?YBug7z82D4-PAid...  
 Job Reference (optional)

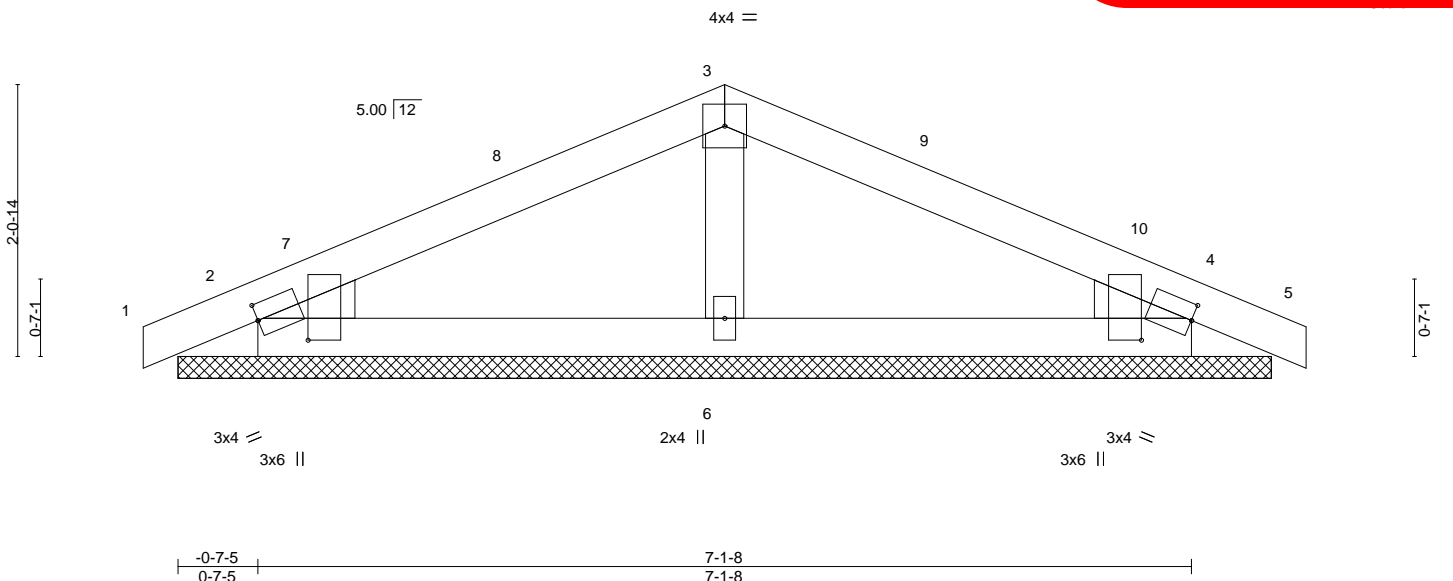


Plate Offsets (X,Y)-- [2:0-0-0,0-1-8], [2:0-1-13,0-4-9], [4:0-0-0,0-1-8], [4:0-1-13,0-4-9]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) 0.01 5 n/r 120		
BCLL 0.0	Lumber DOL 1.15	WB 0.03	Vert(CT) 0.02 5 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
	Code IRC2018/TPI2014			Weight: 23 lb	FT = 20%

**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.

**REACTIONS.** (size) 2=8-4-2, 4=8-4-2, 6=8-4-2  
 Max Horz 2=-33(LC 13)  
 Max Uplift 2=-64(LC 12), 4=-71(LC 13), 6=-19(LC 12)  
 Max Grav 2=230(LC 1), 4=230(LC 1), 6=303(LC 1)

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

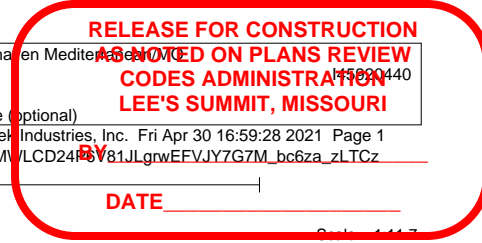
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-6-12, Exterior(2R) 3-6-12 to 6-6-12, Interior(1) 6-6-12 to 8-0-0 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 4, and 6. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



May 3, 2021



Job 2770190	Truss V8	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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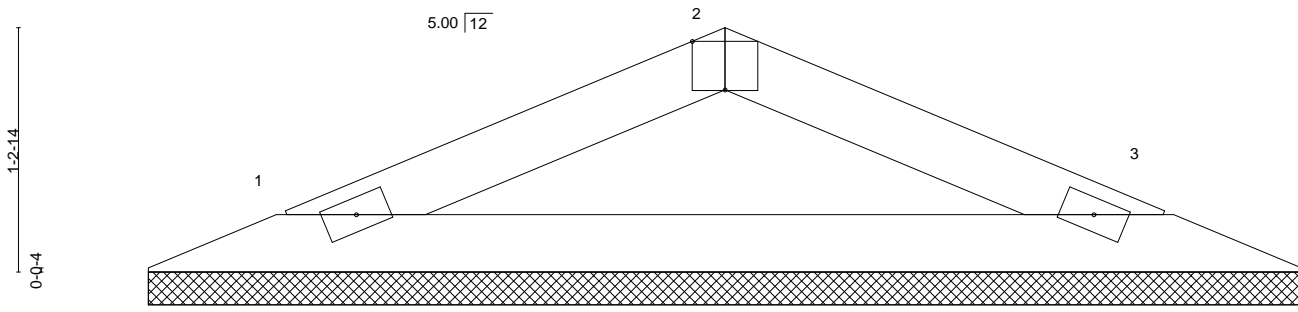


Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:28 2021 Page 1

ID:mDd9ycyFdydMUJW7?YBug7z82D4-tNG?uMW/LCD24P8V81JLgnwEEVJY7G7M\_bc6za\_zLTCz



3x4 =



2x4 =

2x4 =

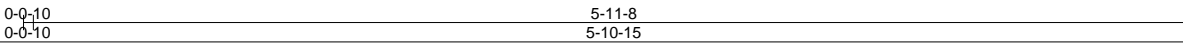


Plate Offsets (X,Y)-- [2:0-2-0,Edge]										
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>	
TCLL 25.0	Plate Grip DOL	1.15	TC 0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC 0.21	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 12 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=5-10-5, 3=5-10-5  
Max Horz 1=17(LC 12)  
Max Uplift 1=34(LC 12), 3=34(LC 13)  
Max Grav 1=200(LC 1), 3=200(LC 1)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



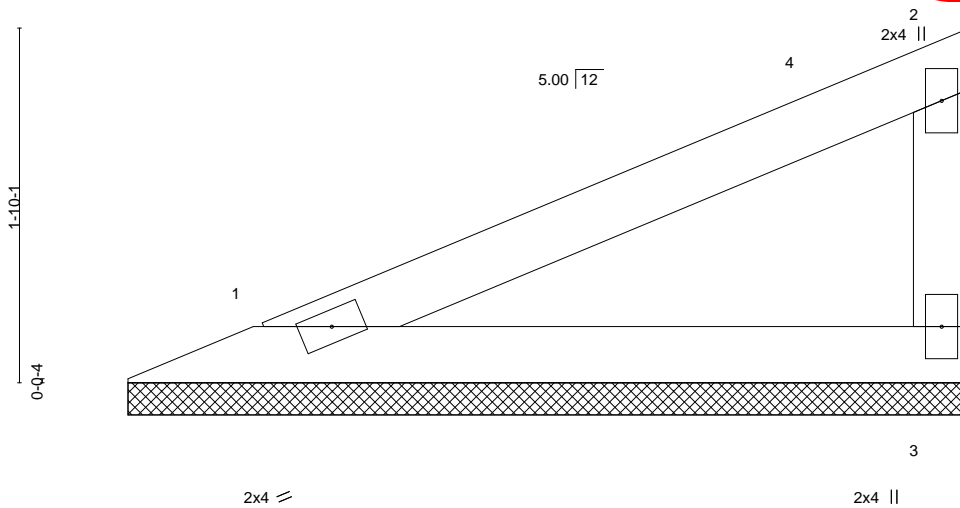
May 3, 2021

Job 2770190	Truss V9	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Lee's Summit, Missouri
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:28 2021 Page 1

ID:mDd9ycyFdydMUJW7?YBug7z82D4-tNG?uMwLcD24P8V81JLgrwEDdJazG7M\_bc6za\_zLTCz



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
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 0.12	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 11 lb	FT = 20%

**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 4-5-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-4-6, 3=4-4-6  
 Max Horz 1=64(LC 9)  
 Max Uplift 1=-29(LC 12), 3=-42(LC 12)  
 Max Grav 1=158(LC 1), 3=158(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 4-3-4 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

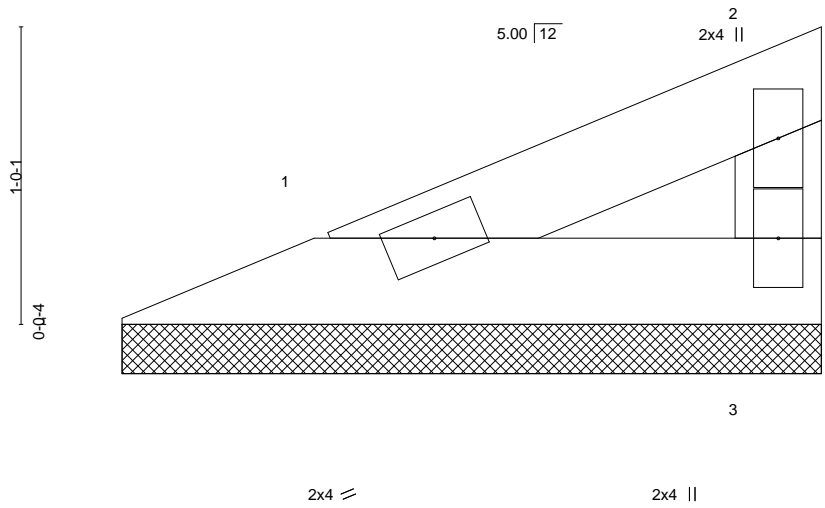


May 3, 2021

Job 2770190	Truss V10	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:19 2021 Page 1  
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 2-5-0  
 2-5-0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 5 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-5-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=2-4-6, 3=2-4-6  
 Max Horz 1=28(LC 9)  
 Max Uplift 1=13(LC 12), 3=18(LC 12)  
 Max Grav 1=68(LC 1), 3=68(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

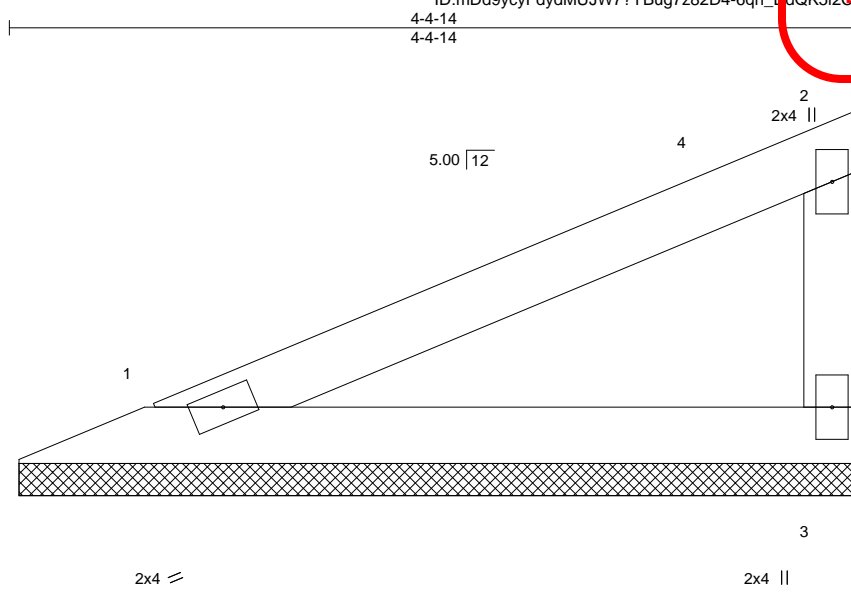


May 3, 2021

Job 2770190	Truss V11	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**  
 DATE \_\_\_\_\_

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:20 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
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 0.12	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 11 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 4-4-14 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=4-4-4, 3=4-4-4  
 Max Horz 1=64(LC 9)  
 Max Uplift 1=-29(LC 12), 3=-42(LC 12)  
 Max Grav 1=158(LC 1), 3=158(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 4-3-2 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

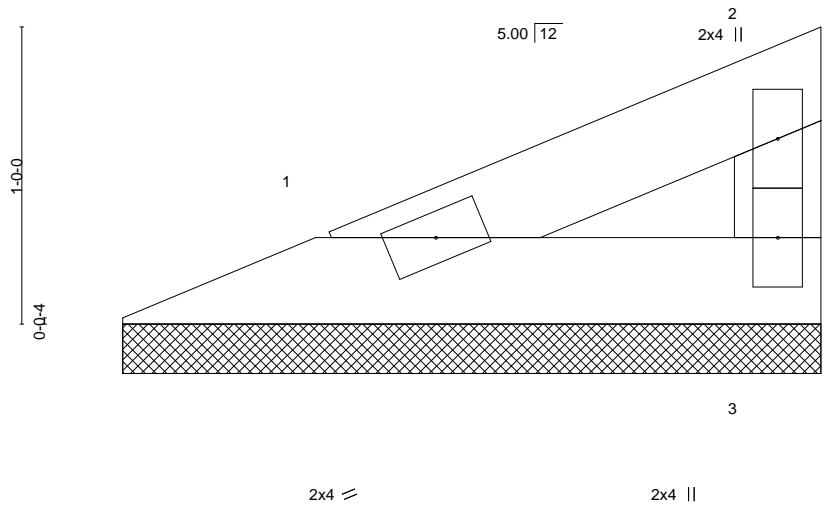


May 3, 2021

Job 2770190	Truss V12	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:21 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-a0LMQ Rys3A34To7Lj13RS4LVCW7ydy\_1w5suzLTD4  
 2-4-14 2-4-14



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.04	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.02	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 5 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-4-14 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=2-4-4, 3=2-4-4  
 Max Horz 1=28(LC 9)  
 Max Uplift 1=13(LC 12), 3=18(LC 12)  
 Max Grav 1=68(LC 1), 3=68(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



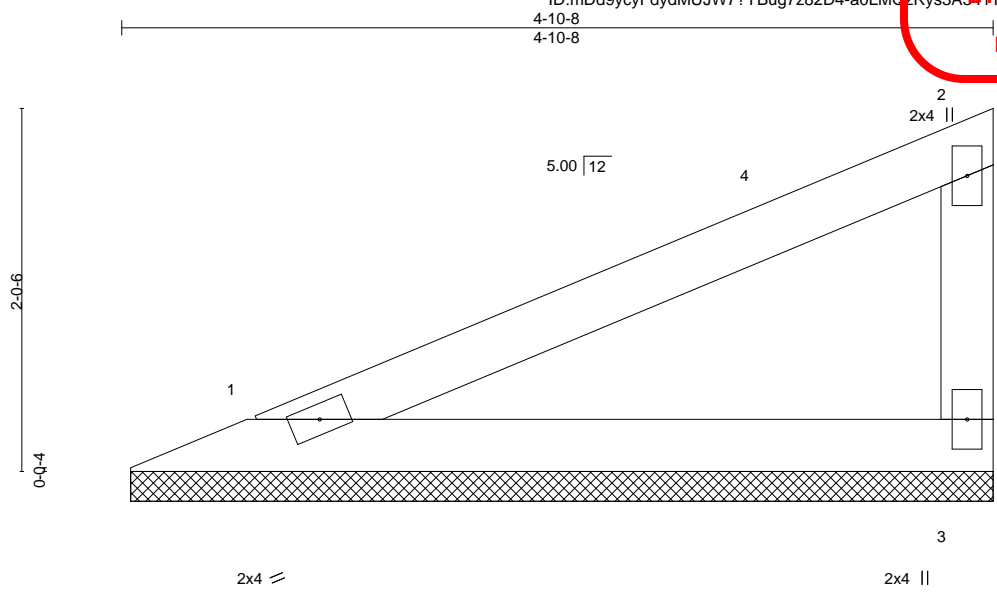
May 3, 2021

**RELEASE FOR CONSTRUCTION**  
**NOTED ON PLANS REVIEW**  
**CODES ADMINISTRATION**  
**LEE'S SUMMIT, MISSOURI**

DATE \_\_\_\_\_

Job 2770190	Truss V13	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... en Meditec... Job Reference (optional)
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:21 2021 Page 1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.29	in (loc) l/defl L/d	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
	Code IRC2018/TPI2014			Weight: 12 lb	FT = 20%

<b>LUMBER-</b> TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 WEBS 2x4 SPF No.2	<b>BRACING-</b> TOP CHORD Structural wood sheathing directly applied or 4-10-8 oc purlins, except end verticals. BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
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**REACTIONS.** (size) 1=4-9-14, 3=4-9-14  
 Max Horz 1=73(LC 9)  
 Max Uplift 1=33(LC 12), 3=48(LC 12)  
 Max Grav 1=179(LC 1), 3=179(LC 1)

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

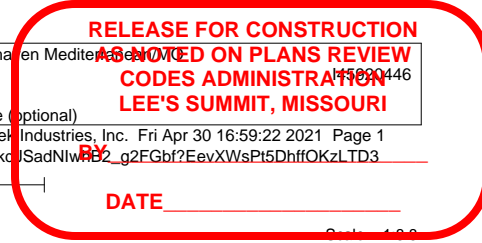
- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 4-8-12 zone; cantilever left and right exposed; end vertical left and right exposed; 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



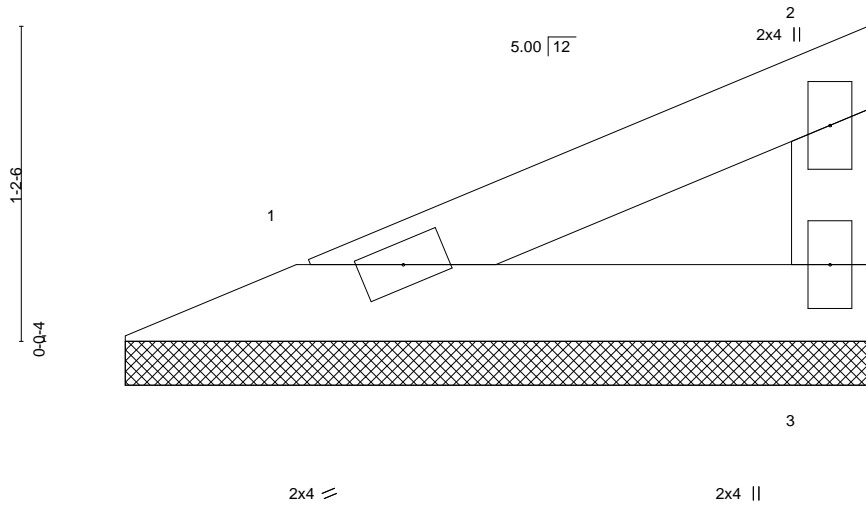
May 3, 2021



Job 2770190	Truss V14	Truss Type Valley	Qty 1	Ply 1	Summit/Newh... Lee's Summit, MO 64086
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MITe... Industries, Inc. Fri Apr 30 16:59:22 2021 Page 1  
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 2-10-8 2-10-8



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	2-0-0	TC 0.06	Vert(LL)	n/a	-	n/a	MT20	197/144
TCDL 10.0	Plate Grip DOL 1.15	BC 0.03	Vert(CT)	n/a	-	n/a		
BCLL 0.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 7 lb	FT = 20%
	Code IRC2018/TPI2014							

LUMBER-	BRACING-
TOP CHORD 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-10-8 oc purlins, except end verticals.
BOT CHORD 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SPF No.2	

**REACTIONS.** (size) 1=2-9-14, 3=2-9-14  
 Max Horz 1=36(LC 9)  
 Max Uplift 1=-16(LC 12), 3=-24(LC 12)  
 Max Grav 1=89(LC 1), 3=89(LC 1)

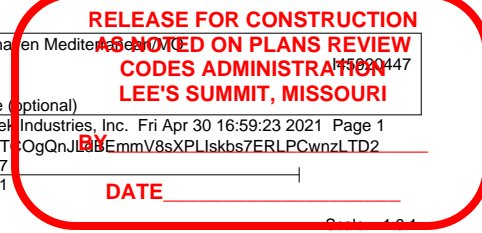
**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
  - 5) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 3. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

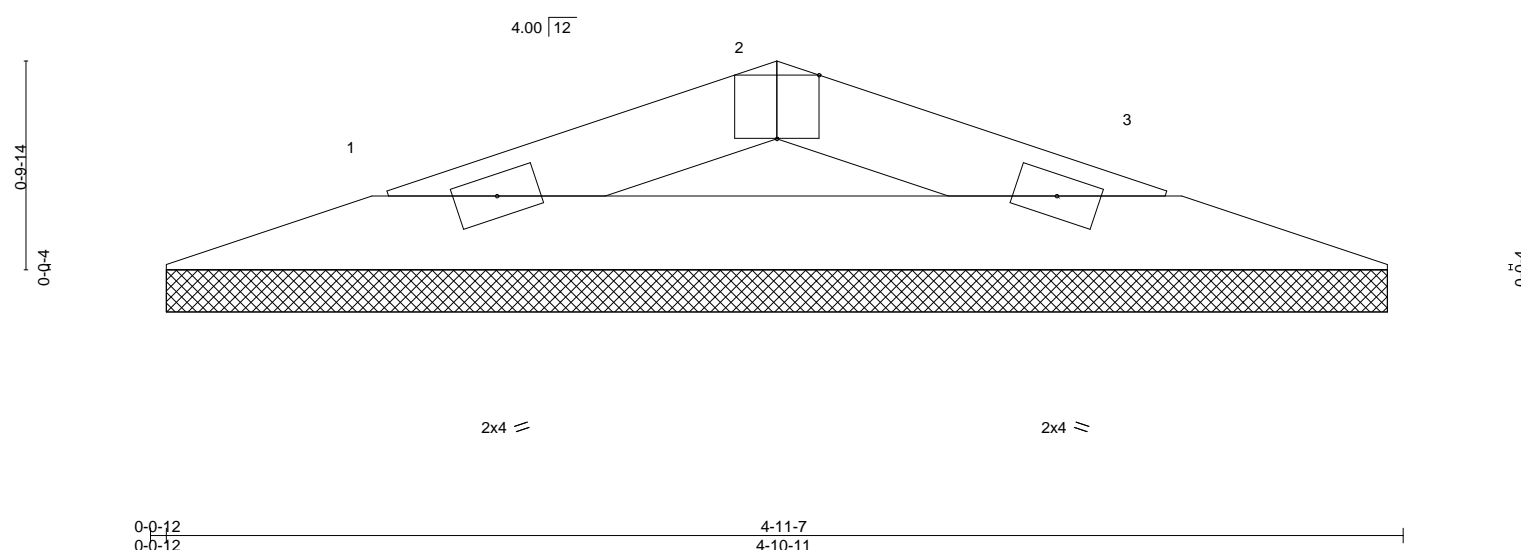


May 3, 2021

Job 2770190	Truss V15	Truss Type Valley	Qty 1	Ply 1	Summit/Newh...
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Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Apr 20 2021 MiTek Industries, Inc. Fri Apr 30 16:59:23 2021 Page 1  
 ID:mDd9ycyFdydMUJW7?YBug7z82D4-XPS6rT...OgQnJLbEmmV8sXPLIskbs7ERLPCwnzLTD2  
 Job Reference (optional) 4-11-7 2-5-11



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0	Plate Grip DOL 2-0-0	TC 0.07	Vert(LL) n/a - n/a 999	MT20	197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.10	Vert(CT) n/a - n/a 999		
BCLL 0.0	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014	Matrix-P		Weight: 9 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-11-7 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-9-15, 3=4-9-15  
 Max Horz 1=9(LC 16)  
 Max Uplift 1=-26(LC 8), 3=-26(LC 9)  
 Max Grav 1=138(LC 1), 3=138(LC 1)

**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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 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) One H3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
  - 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

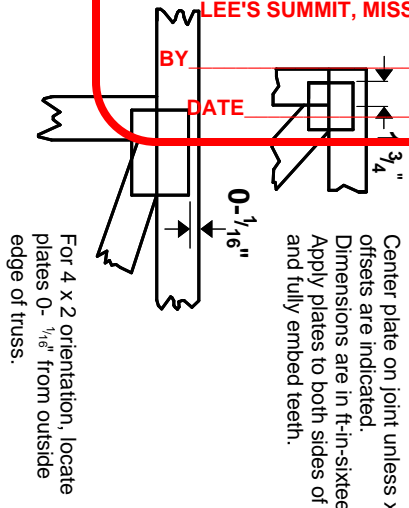


May 3, 2021

# Symbols

RELEASE FOR CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
CODES ADMINISTRATION  
LEE'S SUMMIT, MISSOURI

## 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

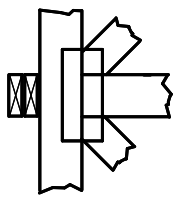
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

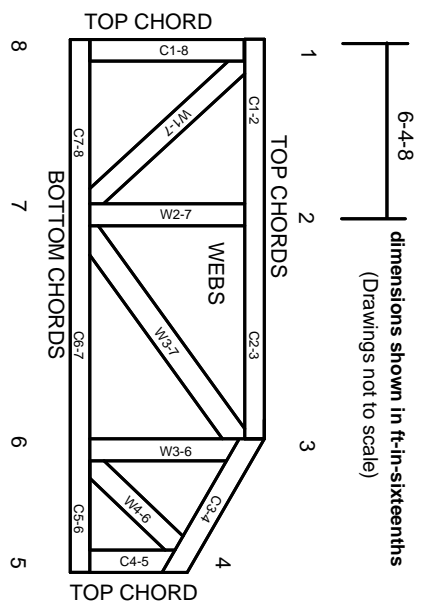


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

- ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.
- BCSI:

# Numbering System



**JOINTS ARE GENERALLY NUMBERED/LETTERED 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 T or I 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.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020