MiTek®

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Re: MSA2406
1404 NE ERNEST WAY, LEE'S SUMMIT

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Quality Truss LLC.

Pages or sheets covered by this seal: I65166543 thru I65166577

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: Engineering 001193

April 26,2024

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.

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166543
MSA2406	CJ2	Jack-Open	4	1	Job Reference (optional)	

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:05:07 Page: 1
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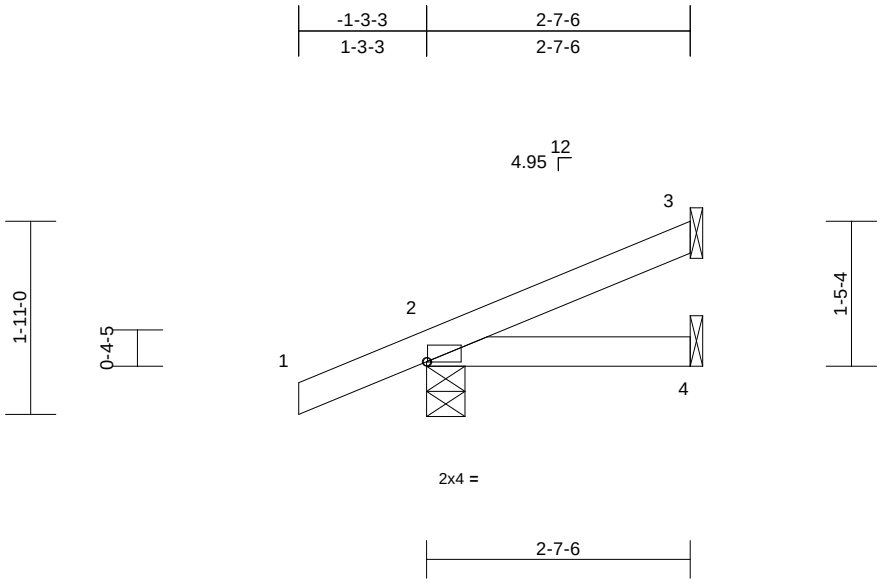

Scale = 1:22.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.00	4-7	>999	360		
BCDL	10.0										Weight: 10 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-9, 3= Mechanical, 4= Mechanical
Max Horiz 2=40 (LC 12)
Max Uplift 2=-18 (LC 8), 3=-15 (LC 12)
Max Grav 2=319 (LC 19), 3=93 (LC 19), 4=43 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/50, 2-3=-41/48
BOT CHORD 2-4=-53/18

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 3 and 18 lb uplift at joint 2.
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.

LOAD CASE(S) Standard

April 26,2024

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Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1	Hip Girder	1	2	Job Reference (optional) I65166544

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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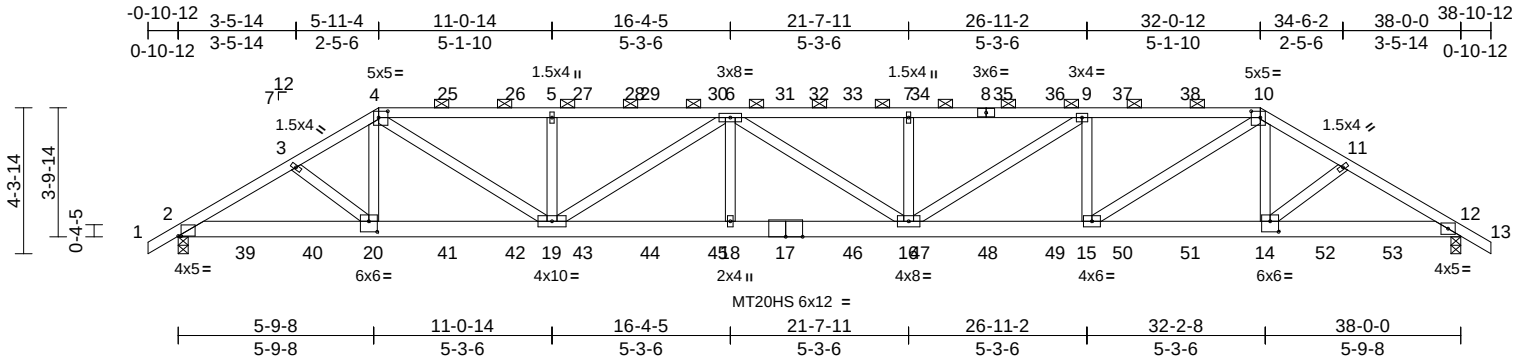

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Plate Offsets (X, Y): [2:0-1-0,0-0-1], [4:0-3-4,0-2-4], [10:0-3-4,0-2-4], [14:0-3-0,0-3-12], [20:0-3-0,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.52	16-18	>876	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.75	16-18	>609	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.60	Horz(CT)	0.14	12	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.16	16-18	>999	360		
BCDL	10.0										Weight: 461 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-8,8-10:2x4 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-13 oc purlins, except 2-0-0 oc purlins (4-2-1 max.): 4-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=69 (LC 11)
Max Uplift 2=-180 (LC 12), 12=-180 (LC 13)
Max Grav 2=4631 (LC 36), 12=4630 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-8416/321, 3-4=-8378/321, 4-5=-11256/415, 5-6=-11256/415, 6-7=-13407/487, 7-9=-13407/487, 9-10=-11295/417, 10-11=-8368/319, 11-12=-8408/320, 12-13=0/56
BOT CHORD 2-20=-272/7248, 19-20=-270/7225, 18-19=-496/13479, 16-18=-496/13479, 15-16=-378/11295, 14-15=-206/7216, 12-14=-224/7242
WEBS 3-20=-274/72, 4-20=0/948, 4-19=-216/4855, 5-19=-1078/188, 6-19=-2654/126, 6-18=0/426, 6-16=-135/58, 7-16=-1062/181, 9-16=-117/2521, 9-15=-2476/253, 10-15=-221/4913, 10-14=0/923, 11-14=-279/71

NOTES
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) All bearings are assumed to be SP 2400F 2.0E .
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 180 lb uplift at joint 2 and 180 lb uplift at joint 12.
13) 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.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1	Hip Girder	1	**2**	Job Reference (optional) I65166544

15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 251 lb down and 55 lb up at 5-11-4, 251 lb down and 54 lb up at 8-0-0, 251 lb down and 54 lb up at 10-0-0, 251 lb down and 54 lb up at 12-0-0, 251 lb down and 54 lb up at 14-0-0, 251 lb down and 54 lb up at 16-0-0, 251 lb down and 54 lb up at 18-0-0, 251 lb down and 54 lb up at 20-0-0, 251 lb down and 54 lb up at 22-0-0, 251 lb down and 54 lb up at 24-0-0, 251 lb down and 54 lb up at 26-0-0, 251 lb down and 54 lb up at 28-0-0, and 251 lb down and 54 lb up at 30-0-0, and 251 lb down and 55 lb up at 32-0-12 on top chord, and 374 lb down and 21 lb up at 2-0-0, 274 lb down and 16 lb up at 4-0-0, 82 lb down at 6-0-0, 82 lb down at 8-0-0, 82 lb down at 10-0-0, 82 lb down at 12-0-0, 82 lb down at 14-0-0, 82 lb down at 16-0-0, 82 lb down at 18-0-0, 82 lb down at 20-0-0, 82 lb down at 22-0-0, 82 lb down at 24-0-0, 82 lb down at 26-0-0, 82 lb down at 28-0-0, 82 lb down at 30-0-0, 82 lb down at 32-0-0, and 274 lb down and 16 lb up at 34-0-0, and 374 lb down and 21 lb up at 36-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-70, 4-10=-70, 10-13=-70, 2-12=-20
   Concentrated Loads (lb)
   Vert: 8=-216 (B), 17=-82 (B), 20=-82 (B), 4=-216 (B), 10=-216 (B), 14=-82 (B), 25=-216 (B), 26=-216 (B), 27=-216 (B), 29=-216 (B), 30=-216 (B), 31=-216 (B), 33=-216 (B), 34=-216 (B), 36=-216 (B), 37=-216 (B), 38=-216 (B), 39=-374 (B), 40=-274 (B), 41=-82 (B), 42=-82 (B), 43=-82 (B), 44=-82 (B), 45=-82 (B), 46=-82 (B), 47=-82 (B), 48=-82 (B), 49=-82 (B), 50=-82 (B), 51=-82 (B), 52=-274 (B), 53=-374 (B)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/27/2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1A	Hip Girder	1	2	Job Reference (optional) I65166545

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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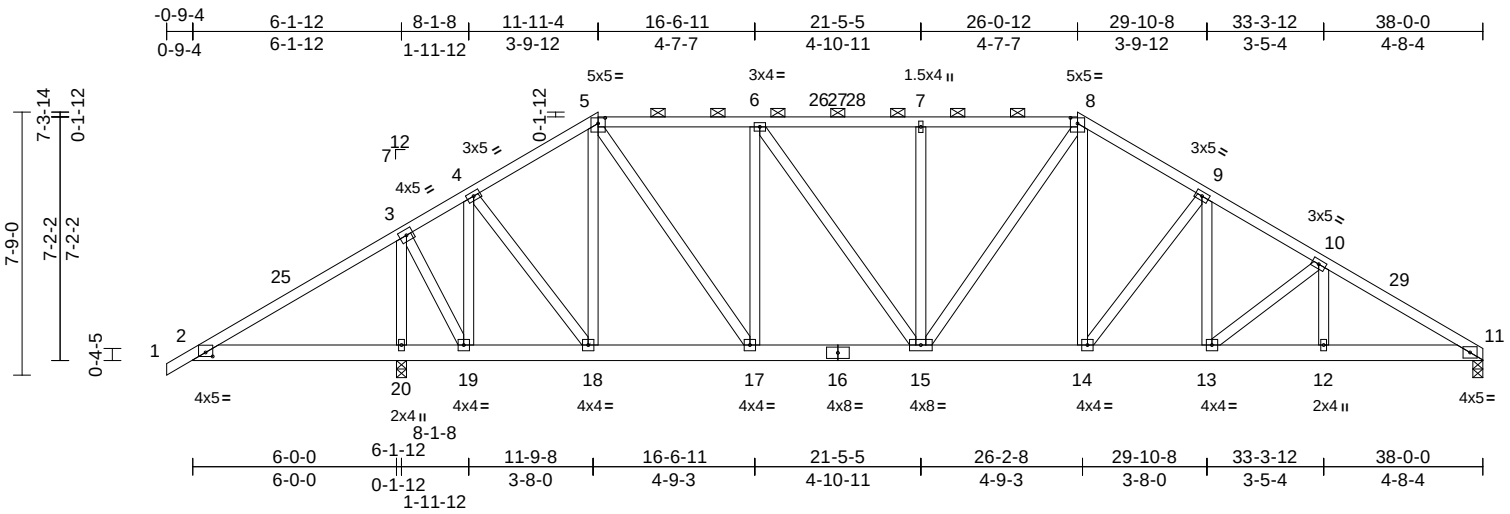

Scale = 1:67.9

Plate Offsets (X, Y): [2:0-2-8,0-1-7], [5:0-2-8,0-2-0], [8:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.07	15	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.10	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.32	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.03	14-15	>999	360		
BCDL	10.0										Weight: 551 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 11=1476/0-3-8, 20=3492/0-3-8
Max Horiz 20=124 (LC 11)
Max Uplift 11=-224 (LC 13), 20=-90 (LC 12)
Max Grav 11=1779 (LC 37), 20=4001 (LC 37)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=0/481, 2-25=0/2521, 3-25=0/2671, 3-4=-309/1364, 4-5=-1730/965, 5-6=-2159/704, 6-26=-2305/575, 26-27=-2305/575, 27-28=-2305/575, 7-28=-2305/575, 7-8=-2308/576, 8-9=-2283/500, 9-10=-2525/478, 10-29=-2952/456, 11-29=-3078/444
BOT CHORD 2-20=-2232/0, 19-20=-2232/0, 18-19=-1174/224, 17-18=-826/1514, 16-17=-660/2156, 15-16=-660/2156, 14-15=-270/1975, 13-14=-303/2109, 12-13=-342/2558, 11-12=-342/2558
WEBS 5-18=-1338/0, 6-17=-897/0, 5-17=0/1189, 7-15=-628/82, 8-14=0/676, 8-15=-357/591, 9-13=0/407, 9-14=-719/54, 10-13=-597/50, 6-15=0/683, 3-20=-3554/21, 4-19=-2495/0, 3-19=0/2592, 4-18=-5/2080

NOTES

1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 224 lb uplift at joint 11 and 90 lb uplift at joint 20.
11) 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.
12) Load case(s) 1, 2 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1094 lb down and 699 lb up at 11-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-8=-70, 8-11=-70, 2-11=-20
Concentrated Loads (lb)
Vert: 1=-400, 18=-1094 (F)
2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)

April 26,2024

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1A	Hip Girder	1	**2**	Job Reference (optional) I65166545

Vert: 1-5=-70, 5-8=-70, 8-11=-70, 2-11=-20
Concentrated Loads (lb)
Vert: 1=-900, 18=110 (F)

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1B	Roof Special Girder	1	2	Job Reference (optional) I65166546

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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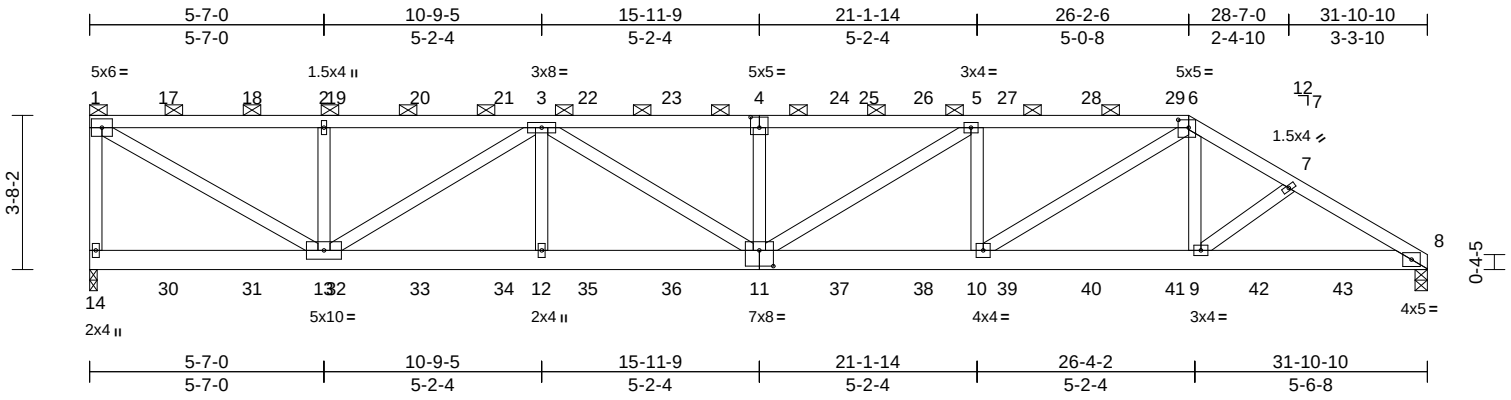

Scale = 1:54.9

Plate Offsets (X, Y): [4:0-2-8,0-3-0], [6:0-3-0,0-2-4], [11:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.35	10-11	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.50	10-11	>757	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.08	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.11	10-11	>999	360		
BCDL	10.0										Weight: 392 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-9 oc purlins, except 2-0-0 oc purlins (2-11-1 max.): 1-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 14=0-2-2
Max Horiz 14=-90 (LC 13)
Max Uplift 8=-151 (LC 8), 14=-161 (LC 8)
Max Grav 8=3749 (LC 32), 14=3977 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5677/232, 2-3=-5677/232, 3-5=-9777/408, 5-6=-8762/373, 6-7=-6730/295, 7-8=-6759/279
BOT CHORD 13-14=-32/90, 12-13=-337/8809, 10-12=-337/8809, 9-10=-218/5808, 8-9=-218/5820
WEBS 2-13=-1182/200, 1-13=-271/6640, 3-12=0/394, 3-13=-3712/158, 4-11=-1019/173, 5-10=-1694/212, 6-9=0/952, 6-10=-147/3531, 7-9=-260/80, 5-11=-61/1202, 3-11=-51/1147, 1-14=-3829/200

NOTES
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP 2400F 2.0E .
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 8 and 161 lb uplift at joint 14.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 238 lb down and 52 lb up at 1-10-10, 238 lb down and 52 lb up at 3-10-10, 238 lb down and 52 lb up at 5-10-10, 238 lb down and 52 lb up at 7-10-10, 238 lb down and 52 lb up at 9-10-10, 238 lb down and 52 lb up at 11-10-10, 238 lb down and 52 lb up at 13-10-10, 238 lb down and 52 lb up at 15-10-10, 238 lb down and 52 lb up at 17-10-10, 238 lb down and 52 lb up at 19-10-10, 238 lb down and 52 lb up at 21-10-10, and 238 lb down and 52 lb up at 23-10-10, and 227 lb down and 53 lb up at 25-10-10 on top chord, and 78 lb down at 1-10-10, 78 lb down at 3-10-10, 78 lb down at 5-10-10, 78 lb down at 7-10-10, 78 lb down at 9-10-10, 78 lb down at 11-10-10, 78 lb down at 13-10-10, 78 lb down at 15-10-10, 78 lb down at 17-10-10, 78 lb down at 19-10-10, 78 lb down at 21-10-10, 78 lb down at 23-10-10, 78 lb down at 25-10-10, and 346 lb down and 45 lb up at 27-10-10, and 346 lb down and 45 lb up at 29-10-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

April 26,2024

Continued on page 2

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1B	Roof Special Girder	1	**2**	Job Reference (optional)

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-6=-70, 6-8=-70, 8-14=-20
   Concentrated Loads (lb)
   Vert: 4=-203 (F), 11=-78 (F), 17=-203 (F), 18=-203 (F), 19=-203 (F), 20=-203 (F), 21=-203 (F), 22=-203 (F), 23=-203 (F), 24=-203 (F), 26=-203 (F), 27=-203 (F), 28=-203 (F), 29=-203 (F), 30=-78 (F), 31=-78 (F), 32=-78 (F), 33=-78 (F), 34=-78 (F), 35=-78 (F), 36=-78 (F), 37=-78 (F), 38=-78 (F), 39=-78 (F), 40=-78 (F), 41=-78 (F), 42=-346 (F), 43=-346 (F)

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1C	Diagonal Hip Girder	1	2	Job Reference (optional) I65166547

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 E Nov 16 2023 Print: 8.730 E Nov 16 2023 MiTek Industries, Inc. Fri Apr 26 10:38:40 Page: 1
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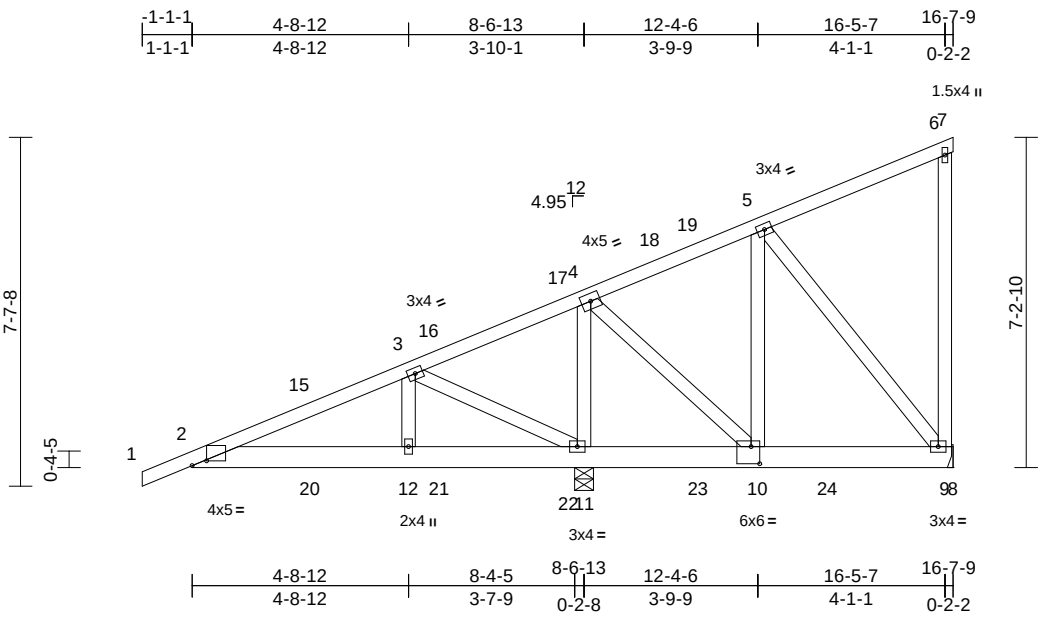

Scale = 1:50.4

Plate Offsets (X, Y): [2:0-3-13,0-1-4], [10:0-2-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.02	9-10	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.03	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.52	Horz(CT)	-0.01	9	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.01	9-10	>999	360		
BCDL	10.0										Weight: 226 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 8-9.

REACTIONS (lb/size) 9=930/ Mechanical, 11=5393/0-4-15
Max Horiz 11=168 (LC 12)
Max Uplift 9=-682 (LC 14)
Max Grav 9=1076 (LC 19), 11=5484 (LC 19)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=0/372, 2-15=0/3699, 3-15=0/3789, 3-16=0/3865, 16-17=0/3970, 4-17=0/3979, 4-18=-461/513, 18-19=-403/535, 5-19=-353/583
BOT CHORD 2-20=-3459/0, 12-20=-3459/0, 12-21=-3459/0, 21-22=-3459/0, 11-22=-3459/0, 11-23=-3627/0, 10-23=-3627/0, 10-24=-520/373, 9-24=-520/373
WEBS 3-11=-570/275, 4-11=-4468/0, 4-10=0/4262, 5-10=-1109/407, 5-9=-594/828

NOTES
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-3-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 682 lb uplift at joint 9.
10) 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.
11) Load case(s) 1, 2 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 45 lb down and 29 lb up at 2-6-15, 45 lb down and 29 lb up at 2-6-15, 148 lb down and 47 lb up at 5-4-14, 148 lb down and 47 lb up at 5-4-14, 77 lb down and 36 lb up at 8-2-13, 67 lb down and 33 lb up at 8-2-13, and 26 lb down and 15 lb up at 11-0-12, and 900 lb down at -1-1-1 on top chord, and 40 lb down at 2-6-15, 40 lb down at 2-6-15, 73 lb down at 5-4-14, 73 lb down at 5-4-14, 289 lb down and 26 lb up at 8-2-13, 57 lb up at 11-0-12, 1996 lb down and 57 lb up at 11-3-12, and 128 lb up at 13-10-11, and 1789 lb down and 52 lb up at 14-1-11 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-70, 2-8=-20
Concentrated Loads (lb)

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

April 26,2024

Continued on page 2

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR1C	Diagonal Hip Girder	1	**2**	Job Reference (optional) I65166547

Vert: 1=-400 (F), 16=-197 (F=-99, B=-99), 17=-44 (F=-27, B=-17), 20=-60 (F=-30, B=-30), 21=-133 (F=-67, B=-67), 22=-289 (B), 23=-1956 (F=-1996, B=40), 24=-1670 (F=-1789, B=119)

2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70, 6-7=-20, 2-8=-20
Concentrated Loads (lb)
Vert: 1=-900 (F), 16=-57 (F=-29, B=-29), 20=-37 (F=-18, B=-18), 21=-90 (F=-45, B=-45), 22=-198 (B), 23=-1264 (F=-1304, B=40), 24=-1095 (F=-1214, B=119)

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR2	Hip Girder	1	2	Job Reference (optional) I65166548

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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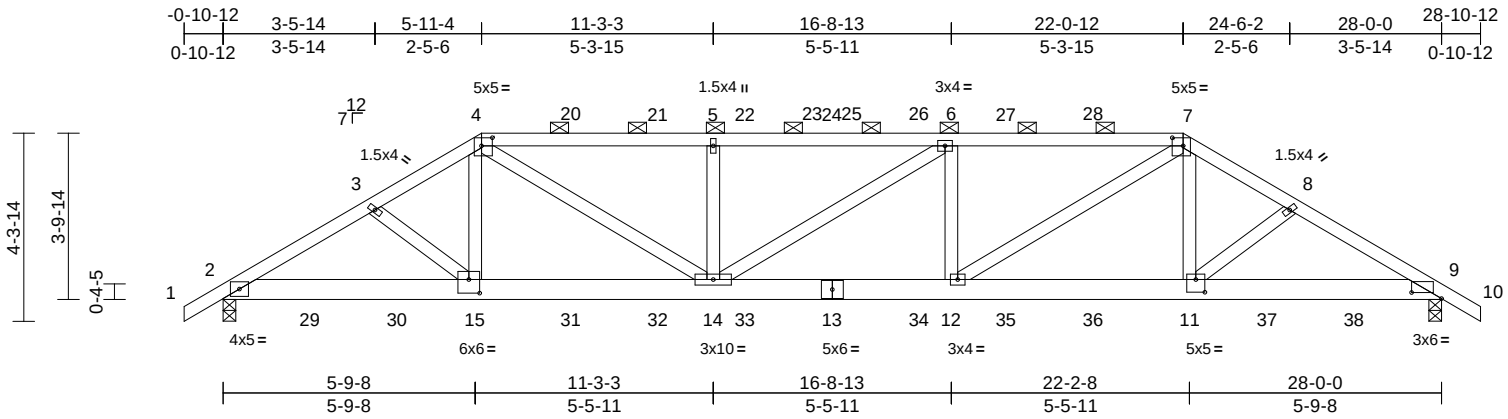

Scale = 1:52.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.22	12-14	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.32	12-14	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.31	Horz(CT)	0.06	9	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.07	12-14	>999	360		
BCDL	10.0										Weight: 333 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-1 oc purlins, except 2-0-0 oc purlins (3-9-8 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=69 (LC 11)
Max Uplift 2=-132 (LC 12), 9=-132 (LC 13)
Max Grav 2=3508 (LC 37), 9=3508 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-5782/224, 3-4=-5735/226, 4-5=-7060/261, 5-6=-7060/261, 6-7=-7098/263, 7-8=-5726/224, 8-9=-5780/223, 9-10=0/56
BOT CHORD 2-15=-189/4970, 14-15=-174/4952, 12-14=-220/7098, 11-12=-112/4943, 9-11=-141/4965
WEBS 3-15=-274/70, 4-15=0/934, 4-14=-126/2510, 5-14=-1124/193, 6-14=-116/46, 6-12=-1112/205, 7-12=-130/2567, 7-11=0/910, 8-11=-280/69

NOTES
1) 2-ply truss to be connected together with 10d (0.148"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) All bearings are assumed to be SP 2400F 2.0E .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 2 and 132 lb uplift at joint 9.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 251 lb down and 55 lb up at 5-11-4, 251 lb down and 54 lb up at 8-0-0, 251 lb down and 54 lb up at 10-0-0, 251 lb down and 54 lb up at 12-0-0, 251 lb down and 53 lb up at 14-0-0, 251 lb down and 54 lb up at 16-0-0, 251 lb down and 54 lb up at 18-0-0, and 251 lb down and 54 lb up at 20-0-0, and 251 lb down and 55 lb up at 22-0-12 on top chord, and 374 lb down and 21 lb up at 2-0-0, 274 lb down and 16 lb up at 4-0-0, 82 lb down at 6-0-0, 82 lb down at 8-0-0, 82 lb down at 10-0-0, 82 lb down at 12-0-0, 82 lb down at 14-0-0, 82 lb down at 16-0-0, 82 lb down at 18-0-0, 82 lb down at 20-0-0, 82 lb down at 22-0-0, and 274 lb down and 16 lb up at 24-0-0, and 374 lb down and 21 lb up at 26-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-7=-70, 7-10=-70, 2-9=-20

April 26,2024

Continued on page 2

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	GR2	Hip Girder	1	**2**	Job Reference (optional)

Concentrated Loads (lb)
Vert: 7=-216 (B), 13=-82 (B), 15=-82 (B), 4=-216 (B), 11=-82 (B), 20=-216 (B), 21=-216 (B), 22=-216 (B), 24=-216 (B), 26=-216 (B), 27=-216 (B), 28=-216 (B), 29=-374 (B), 30=-274 (B), 31=-82 (B), 32=-82 (B), 33=-82 (B), 34=-82 (B), 35=-82 (B), 36=-82 (B), 37=-274 (B), 38=-374 (B)

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1A	Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I65166549
06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:11 Page: 1
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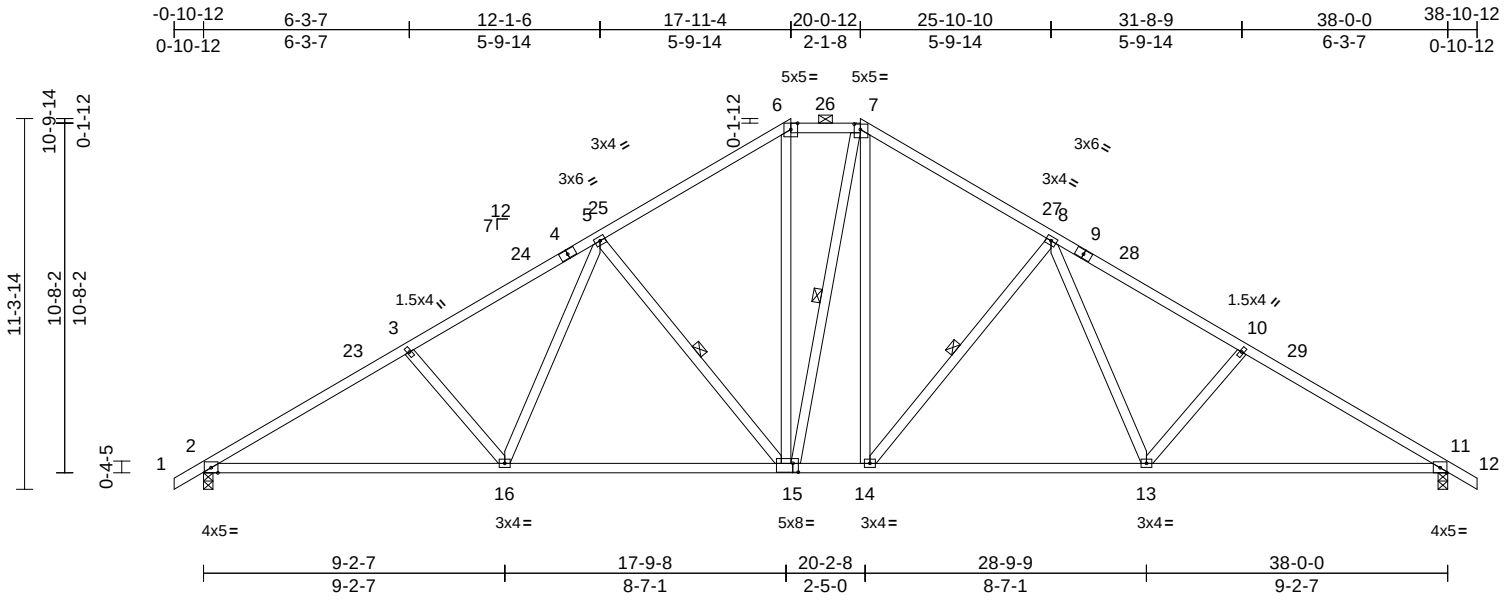

Scale = 1:70.4

Plate Offsets (X, Y): [7:0-2-4,0-2-0], [15:0-2-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.28	13-14	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.47	13-14	>963	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.17	11	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.08	16-19	>999	360		
BCDL	10.0										Weight: 232 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (2-10-2 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-15, 7-15, 8-14

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=188 (LC 11)
Max Grav 2=2424 (LC 37), 11=2424 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-4213/0, 3-5=-3887/16, 5-6=-2801/47, 6-7=-2273/65, 7-8=-2818/46, 8-10=-3887/16, 10-11=-4213/0, 11-12=0/32
BOT CHORD 2-16=-47/3567, 14-16=0/2946, 13-14=0/2947, 11-13=0/3567
WEBS 3-16=-569/122, 5-16=0/684, 5-15=-1064/118, 6-15=-17/911, 7-15=-294/334, 7-14=-31/920, 8-14=-1068/118, 8-13=0/685, 10-13=-567/122

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.1 .
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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1AA	Hip	1	1	Job Reference (optional) I65166550

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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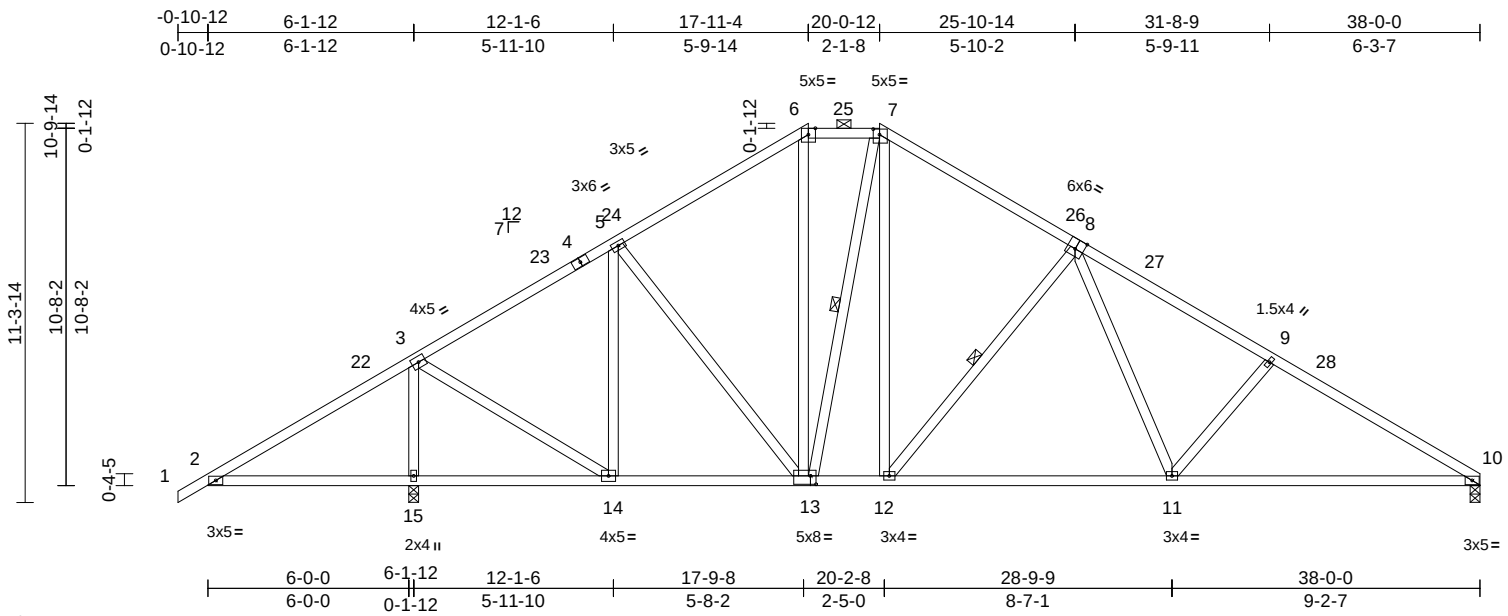

Scale = 1:68.8

Plate Offsets (X, Y): [7:0-2-4,0-2-0], [8:0-3-0,Edge], [13:0-2-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.17	11-12	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.33	11-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.08	10	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.07	11-21	>999	360		
BCDL	10.0										Weight: 238 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-9-3 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.
WEBS 1 Row at midpt 7-13, 8-12

REACTIONS (size) 10=0-3-8, 15=0-3-8
Max Horiz 15=185 (LC 9)
Max Uplift 10=-2 (LC 13)
Max Grav 10=1892 (LC 37), 15=2892 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-43/692, 3-5=-1635/44, 5-6=-1768/90, 6-7=-1373/88, 7-9=-2977/81, 9-10=-3282/37
BOT CHORD 2-15=-481/81, 14-15=-496/120, 12-14=0/1466, 11-12=0/2165, 10-11=-7/2785
WEBS 3-14=0/2011, 5-14=-945/31, 5-13=-44/291, 6-13=-40/447, 7-13=-584/53, 7-12=-12/941, 8-12=-1083/118, 8-11=0/692, 9-11=-571/121, 3-15=-2720/56

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 10.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1B	Hip	1	1	Job Reference (optional) I65166551

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:12 Page: 1
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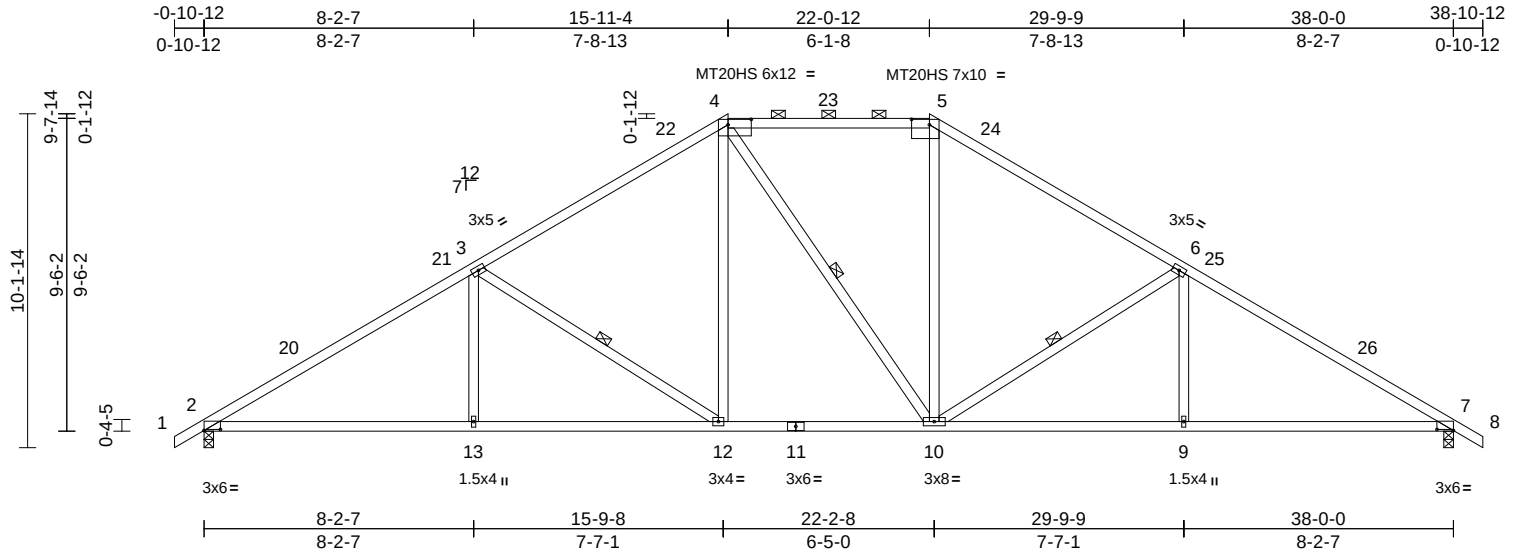

Scale = 1:70.1

Plate Offsets (X, Y): [2:0-6-0,0-0-6], [4:0-8-8,0-2-0], [5:0-6-8,0-2-0], [7:0-6-0,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.21	13-16	>999	240	MT20HS	187/143
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.36	13-16	>999	180	MT20	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.16	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.09	13-16	>999	360		
BCDL	10.0										Weight: 206 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 4-5:2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-3 oc purlins, except 2-0-0 oc purlins (2-4-8 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-12, 4-10, 6-10

REACTIONS (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=-168 (LC 10)
Max Grav 2=2354 (LC 37), 7=2354 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-3959/0, 3-4=-2884/33, 4-5=-2259/66, 5-6=-2885/33, 6-7=-3959/0, 7-8=0/32
BOT CHORD 2-13=-39/3294, 12-13=-13/3294, 10-12=0/2258, 9-10=0/3293, 7-9=0/3293
WEBS 3-13=0/342, 3-12=-1213/113, 4-12=0/779, 4-10=-291/293, 5-10=0/779, 6-10=-1211/114, 6-9=0/341

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.1 .
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1BB	Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I65166552
06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:12 Page: 1
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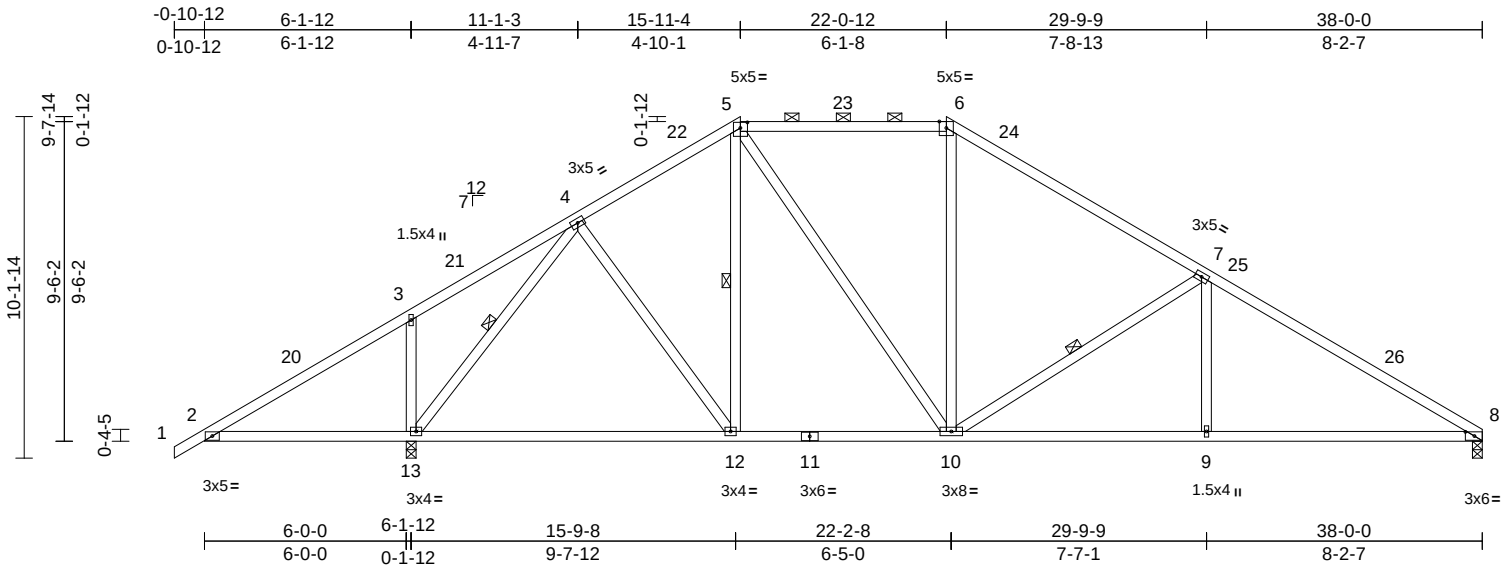

Scale = 1:68.5

Plate Offsets (X, Y): [5:0-2-8,0-2-0], [8:0-3-3,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.18	9-16	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.35	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.08	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MSH		Wind(LL)	0.08	9-16	>999	360		
BCDL	10.0										Weight: 213 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 1-5:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-8:2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-13.
WEBS 1 Row at midpt 5-12, 7-10, 4-13

REACTIONS (size) 8=0-3-8, 13=0-3-8
Max Horiz 13=165 (LC 11)
Max Uplift 8=-6 (LC 13)
Max Grav 8=1836 (LC 37), 13=2808 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-56/772, 3-4=0/731, 4-5=-1496/61, 5-6=-1477/96, 6-7=-1982/71, 7-8=-3079/35
BOT CHORD 2-13=-507/95, 12-13=-16/929, 10-12=0/1162, 9-10=0/2537, 8-9=-13/2537
WEBS 5-12=-244/97, 5-10=-62/565, 6-10=0/322, 7-10=-1251/118, 7-9=0/349, 3-13=-692/138, 4-12=0/506, 4-13=-2374/0

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 13 SP No.2 , Joint 8 SP No.1 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 8.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/27/2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1C	Hip	1	1	I65166553 Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:05:12 Page: 1

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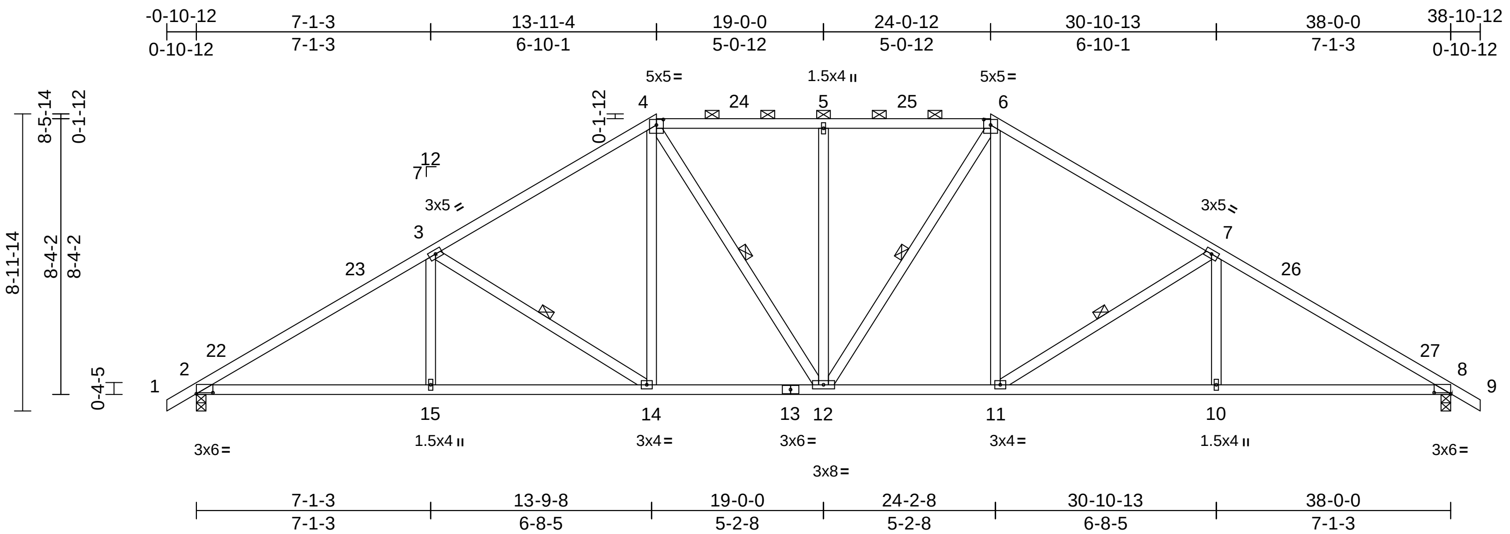

Scale = 1:69.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.18	11-12	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.29	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.15	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MSH		Wind(LL)	0.06	12-14	>999	360		
BCDL	10.0										Weight: 219 lb	FT = 0%

LUMBER

TOP CHORD 2x4 SP 2400F 2.0E *Except* 4-6:2x4 SP No.2

BOT CHORD 2x4 SP No.1

WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins, except 2-0-0 oc purlins (3-2-2 max.): 4-6.

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

WEBS 1 Row at midpt 3-14, 4-12, 6-12, 7-11

REACTIONS (size) 2=0-3-8, 8=0-3-8

Max Horiz 2=148 (LC 11)

Max Uplift 2=-1 (LC 12), 8=-1 (LC 13)

Max Grav 2=2284 (LC 37), 8=2284 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/32, 2-3=-3805/0, 3-4=-2803/31, 4-5=-2297/20, 5-6=-2297/20, 6-7=-2803/31, 7-8=-3805/0, 8-9=0/32

BOT CHORD 2-15=-30/3150, 14-15=-14/3150, 12-14=0/2211, 11-12=0/2211, 10-11=0/3150, 8-10=0/3150

WEBS 3-15=0/293, 3-14=-1093/103, 4-14=0/690, 4-12=-89/498, 5-12=-754/89, 6-12=-89/498, 6-11=0/690, 7-11=-1093/104, 7-10=0/293

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.1 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 2 and 1 lb uplift at joint 8.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1CC	Hip	1	1	Job Reference (optional) I65166554

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:12 Page: 1
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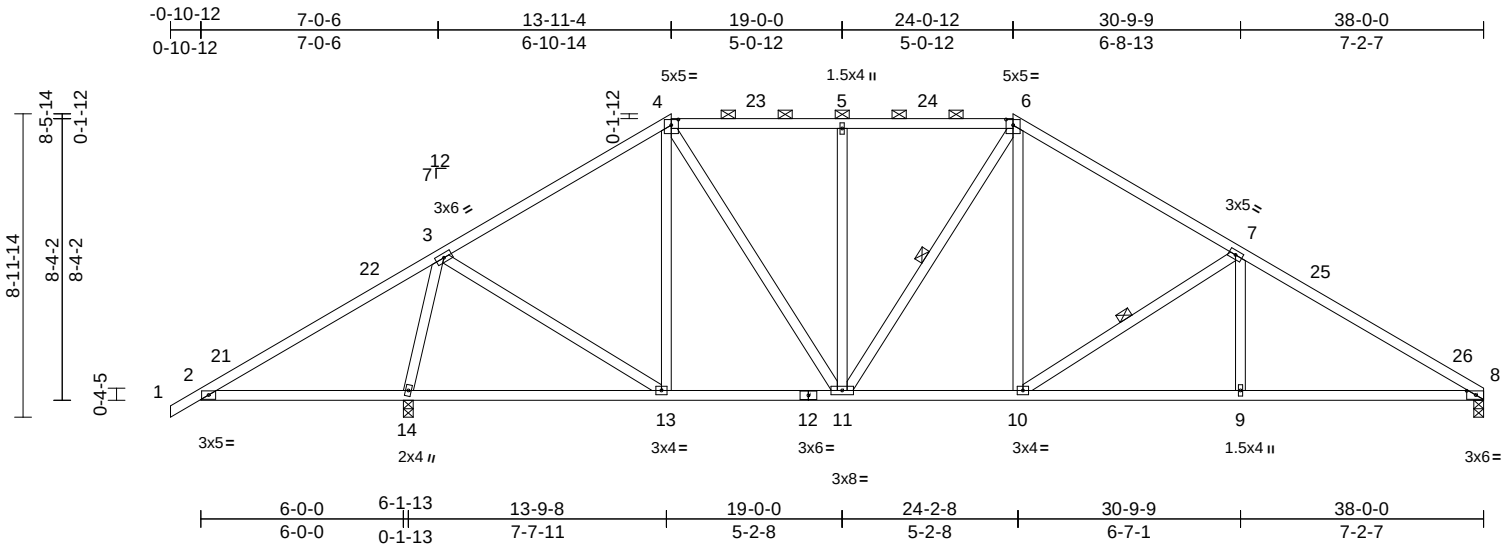

Scale = 1:68.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.17	9-17	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.26	9-17	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MSH		Wind(LL)	0.06	9-17	>999	360		
BCDL	10.0										Weight: 218 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 4-6:2x4 SP No.2, 6-8:2x4 SP No.1
BOT CHORD 2x4 SP No.2 *Except* 12-8:2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-11-13 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 5-2-13 oc bracing.
WEBS 1 Row at midpt 6-11, 7-10

REACTIONS (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=145 (LC 11)
Max Uplift 8=-10 (LC 13), 14=-1 (LC 12)
Max Grav 8=1782 (LC 37), 14=2722 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-52/1010, 3-4=-1286/41, 4-5=-1503/66, 5-6=-1503/67, 6-7=-1934/70, 7-8=-2948/40
BOT CHORD 2-14=-659/94, 13-14=-155/145, 11-13=0/1056, 10-11=0/1458, 9-10=0/2406, 8-9=-9/2406
WEBS 4-13=-498/52, 4-11=-39/835, 5-11=-745/91, 6-11=-365/150, 6-10=0/703, 7-10=-1113/104, 7-9=0/301, 3-13=0/1161, 3-14=-2565/80

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 14 SP No.2 , Joint 8 SP No.1 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 8 and 1 lb uplift at joint 14.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1D	Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I65166555
06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:12 Page: 1
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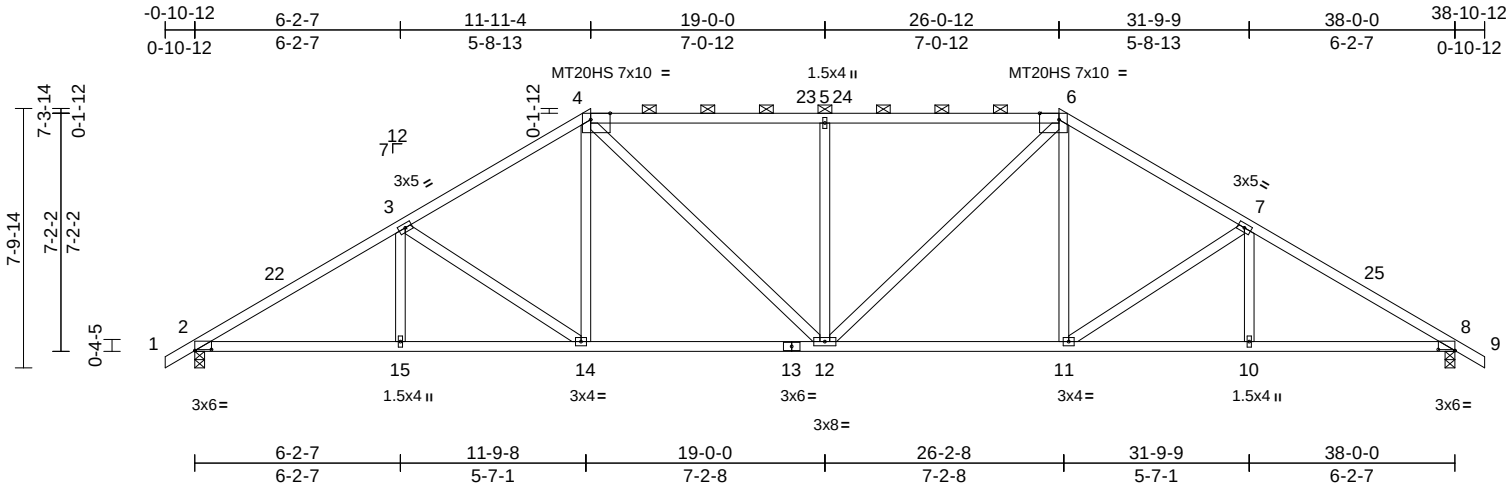

Scale = 1:69.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.19	12	>999	240	MT20HS	187/143
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.34	11-12	>999	180	MT20	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.14	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.07	12-14	>999	360		
BCDL	10.0										Weight: 209 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (4-1-5 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-128 (LC 10)
Max Uplift 2=-3 (LC 12), 8=-3 (LC 13)
Max Grav 2=2206 (LC 37), 8=2206 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-3528/2, 3-4=-2741/29, 4-5=-2941/0, 5-6=-2941/0, 6-7=-2741/29, 7-8=-3528/2, 8-9=0/56
BOT CHORD 2-15=-22/2911, 14-15=-10/2911, 12-14=0/2349, 11-12=0/2349, 10-11=0/2911, 8-10=0/2911
WEBS 3-15=0/236, 3-14=-865/81, 4-14=0/593, 4-12=-86/825, 5-12=-1008/121, 6-12=-86/825, 6-11=0/593, 7-11=-865/81, 7-10=0/236

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.1 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 2 and 3 lb uplift at joint 8.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/27/2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1DD	Half Hip	1	1	I65166556 Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:13 Page: 1
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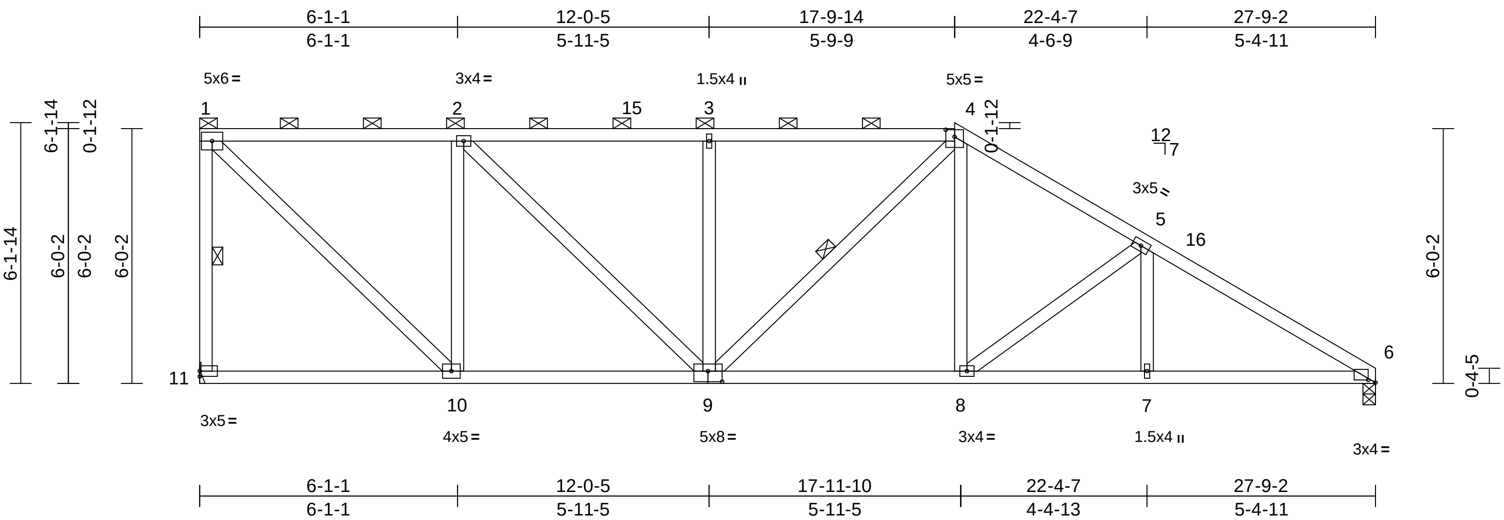

Scale = 1:54.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.12	9	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.20	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.06	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.04	9	>999	360		
BCDL	10.0										Weight: 164 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-7 max.): 1-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 1-11, 4-9

REACTIONS (size) 6=0-3-8, 11= Mechanical
Max Horiz 11=-149 (LC 10)
Max Uplift 11=-35 (LC 8)
Max Grav 6=1477 (LC 33), 11=1818 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-1748/62, 1-2=-1521/11, 2-3=-2081/7, 3-4=-2088/8, 4-5=-2024/0, 5-6=-2392/0
BOT CHORD 10-11=-67/119, 8-10=-24/1739, 7-8=0/1952, 6-7=0/1952
WEBS 4-9=-181/487, 4-8=0/521, 5-8=-728/77, 2-10=-1306/109, 1-10=-39/2037, 2-9=-12/779, 3-9=-762/95, 5-7=0/195

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearings are assumed to be: , Joint 6 SP No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 11.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1E	Hip	1	1	I65166557 Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:13 Page: 1

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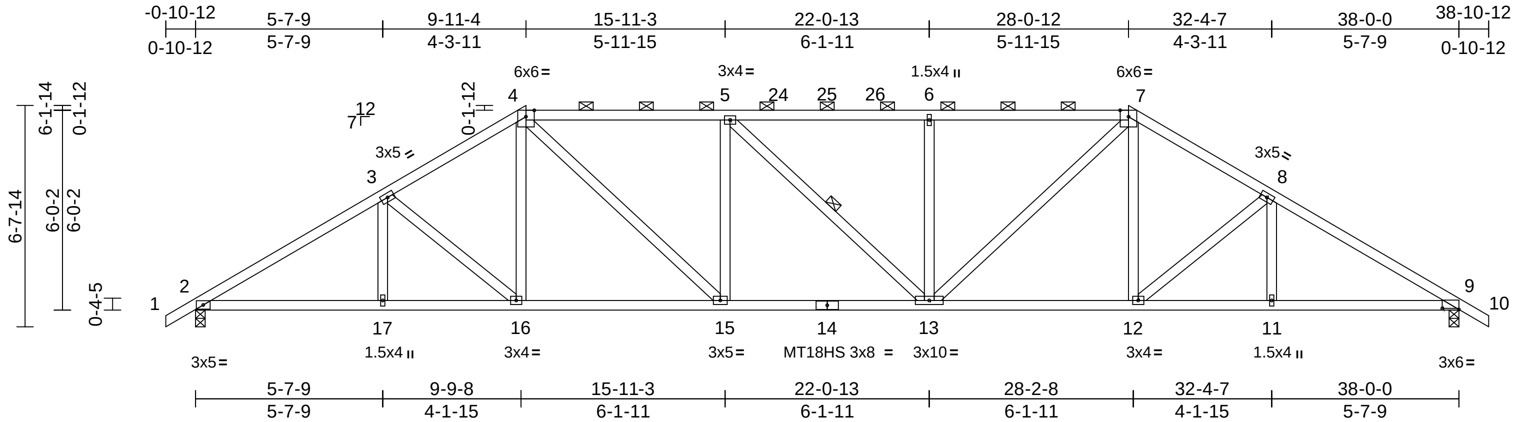

Scale = 1:69.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.30	13-15	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.48	13-15	>956	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.18	9	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.09	13-15	>999	360		
BCDL	10.0										Weight: 213 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-7:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=-108 (LC 10)
Max Uplift 2=-6 (LC 12), 9=-6 (LC 13)
Max Grav 2=2030 (LC 37), 9=2030 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-3358/5, 3-4=-3175/29, 4-5=-3716/0, 5-6=-3711/0, 6-7=-3715/0, 7-8=-3175/29, 8-9=-3358/5, 9-10=0/56
BOT CHORD 2-17=-16/2857, 16-17=-4/2857, 15-16=0/2747, 13-15=0/3712, 12-13=0/2747, 11-12=0/2857, 9-11=0/2857
WEBS 3-16=-683/67, 4-16=0/522, 4-15=-72/1340, 7-13=-72/1339, 7-12=0/522, 8-12=-683/67, 5-15=-805/126, 5-13=-138/138, 6-13=-805/97, 3-17=0/188, 8-11=0/188

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 2 and 6 lb uplift at joint 9.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166558
MSA2406	H1EE	Half Hip	1	1	Job Reference (optional)	

06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:13 Page: 1
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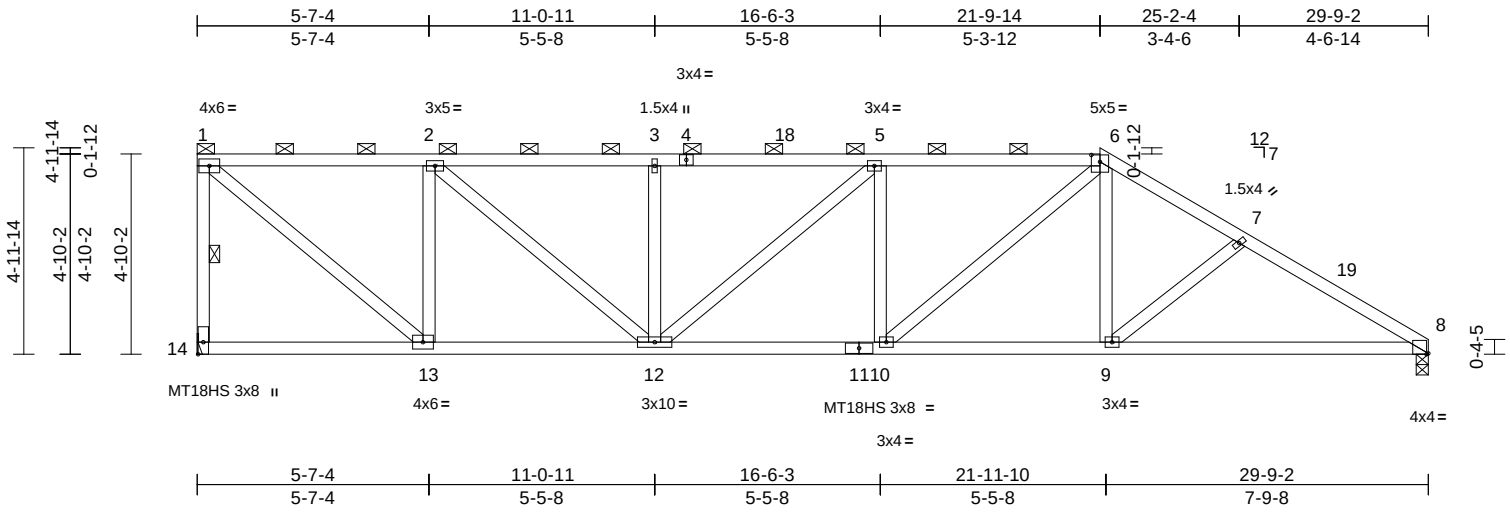

Scale = 1:55.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.22	10-12	>999	240	MT18HS	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.33	10-12	>999	180	MT20	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.06	10-12	>999	360		
BCDL	10.0										Weight: 168 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-2-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-8 max.): 1-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 1-14

REACTIONS (size) 8=0-3-8, 14= Mechanical
Max Horiz 14=-119 (LC 10)
Max Uplift 14=-40 (LC 8)
Max Grav 8=1513 (LC 32), 14=2024 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-1958/66, 1-2=-2035/33, 2-3=-3051/34, 3-5=-3051/34, 5-6=-3147/37, 6-7=-2630/0, 7-8=-2707/0
BOT CHORD 13-14=-50/105, 12-13=-43/2035, 10-12=0/3144, 9-10=0/2287, 8-9=0/2314
WEBS 2-13=-1551/106, 1-13=-51/2568, 2-12=-24/1323, 3-12=-657/80, 5-12=-248/12, 6-10=-88/1134, 6-9=0/451, 5-10=-645/116, 7-9=-472/85

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: , Joint 8 SP No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 14.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H1F	Hip	1	1	Job Reference (optional) I65166559

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:13 Page: 1
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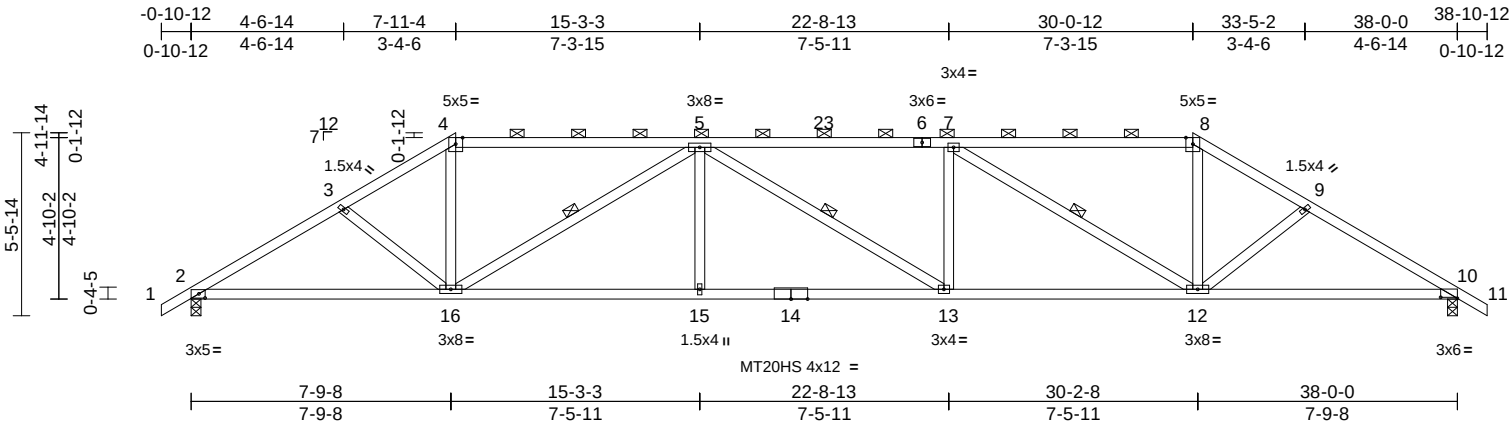

Scale = 1:69.2

Plate Offsets (X, Y): [2:0-2-3,0-1-8], [10:0-6-0,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.44	13-15	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.68	13-15	>671	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.22	10	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MSH		Wind(LL)	0.12	13-15	>999	360		
BCDL	10.0										Weight: 195 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6,6-8:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-2 oc purlins, except 2-0-0 oc purlins (2-10-9 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-16, 5-13, 7-12

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=88 (LC 11)
Max Uplift 2=-7 (LC 12), 10=-7 (LC 13)
Max Grav 2=2050 (LC 36), 10=2050 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-3697/21, 3-4=-3632/13, 4-5=-3129/31, 5-7=-4988/6, 7-8=-3129/31, 8-9=-3632/13, 9-10=-3697/22, 10-11=0/56
BOT CHORD 2-16=-14/3155, 15-16=-13/4987, 13-15=-13/4987, 12-13=0/4988, 10-12=0/3155
WEBS 4-16=0/1285, 5-16=-2179/94, 5-15=0/294, 5-13=-162/165, 7-13=0/295, 7-12=-2182/93, 8-12=0/1286, 3-16=-440/78, 9-12=-441/78

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.1 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 2 and 7 lb uplift at joint 10.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H2	Hip	1	1	Job Reference (optional) I65166560

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:13 Page: 1
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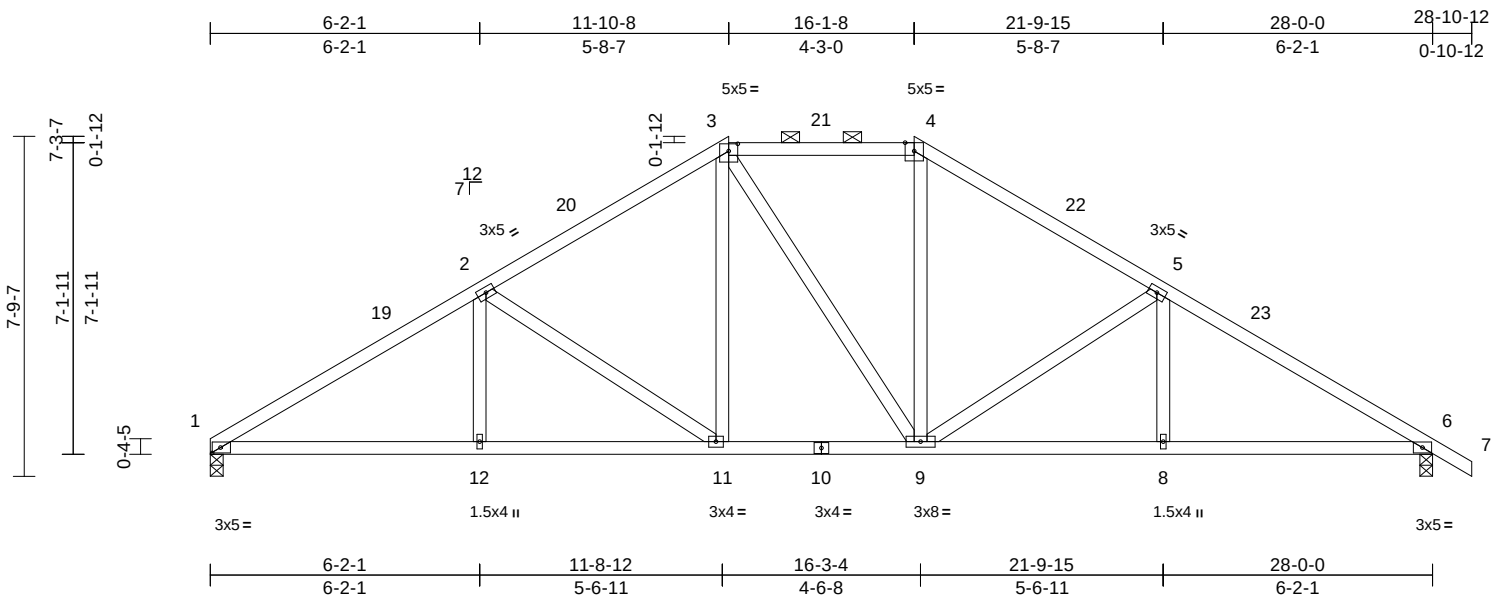

Scale = 1:52.8

Plate Offsets (X, Y): [1:0-2-5,0-1-8], [3:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.13	9-11	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.20	12-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.09	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.04	12-15	>999	360		
BCDL	10.0										Weight: 151 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-11-1 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 6=0-3-8
Max Horiz 1=-124 (LC 8)
Max Uplift 6=-1 (LC 13)
Max Grav 1=1814 (LC 37), 6=1927 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3003/0, 2-3=-2152/26, 3-4=-1689/50, 4-5=-2152/25, 5-6=-2992/0, 6-7=0/56
BOT CHORD 1-12=-31/2463, 11-12=-8/2463, 9-11=0/1688, 8-9=0/2451, 6-8=0/2451
WEBS 2-12=0/256, 2-11=-912/84, 3-11=0/586, 3-9=-219/222, 4-9=0/583, 5-9=-896/83, 5-8=0/254

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.1 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 6.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H2A	Hip	1	1	I65166561
					Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:13 Page: 1
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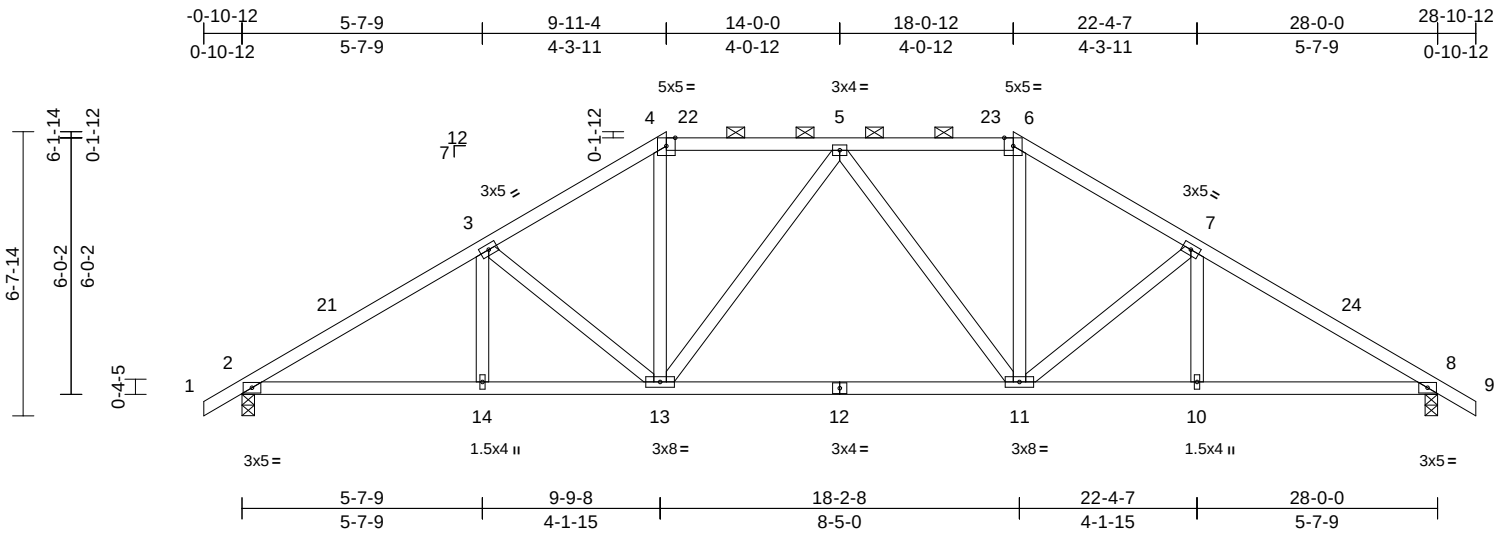

Scale = 1:54

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.14	11-13	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.32	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.04	11-13	>999	360		
BCDL	10.0										Weight: 152 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-11 oc purlins, except 2-0-0 oc purlins (4-4-14 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-108 (LC 10)
Max Uplift 2=-4 (LC 12), 8=-4 (LC 13)
Max Grav 2=1755 (LC 37), 8=1755 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-2674/4, 3-4=-2043/18, 4-5=-1632/36, 5-6=-1632/36, 6-7=-2043/18, 7-8=-2674/5, 8-9=0/56
BOT CHORD 2-14=-15/2185, 13-14=-3/2185, 11-13=0/1706, 10-11=0/2185, 8-10=0/2185
WEBS 3-13=-688/80, 4-13=0/629, 5-13=-360/94, 5-11=-360/94, 6-11=0/629, 7-11=-688/80, 3-14=0/160, 7-10=0/160

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 2 and 4 lb uplift at joint 8.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	H2B	Hip	1	1	Job Reference (optional) I65166562

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:14 Page: 1
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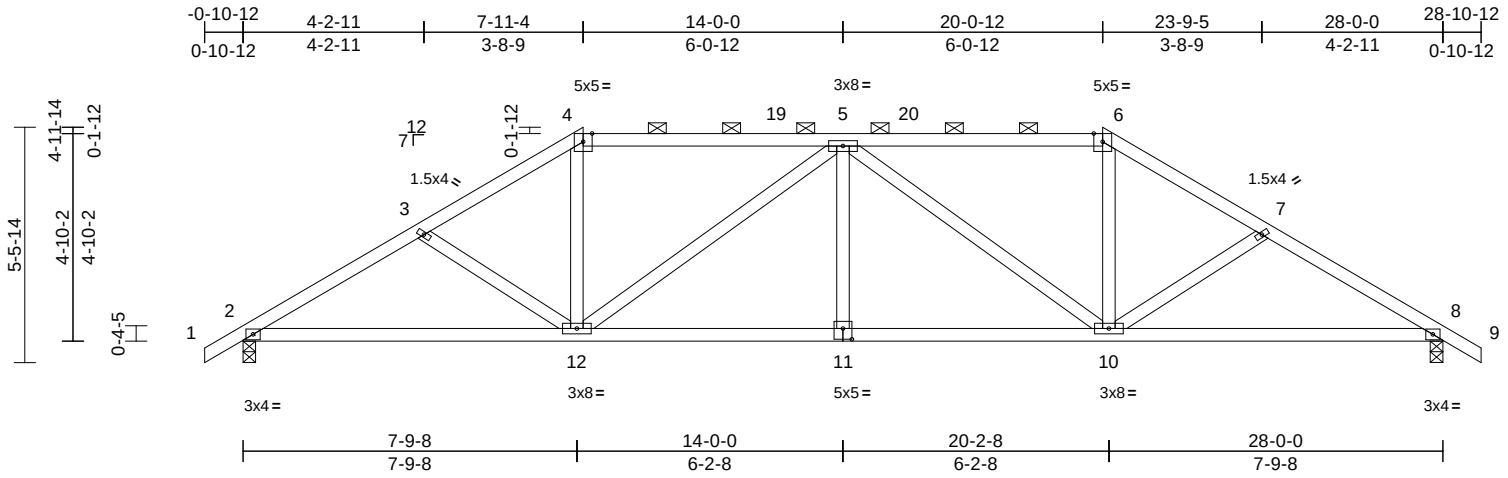

Scale = 1:53.8

Plate Offsets (X, Y): [11:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.15	11	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.24	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.10	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MSH		Wind(LL)	0.05	11	>999	360		
BCDL	10.0										Weight: 144 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except 2-0-0 oc purlins (3-5-13 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=88 (LC 11)
Max Uplift 2=-6 (LC 12), 8=-6 (LC 13)
Max Grav 2=1579 (LC 37), 8=1579 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-2379/23, 3-4=-2220/9, 4-5=-1898/30, 5-6=-1898/30, 6-7=-2220/10, 7-8=-2379/23, 8-9=0/56
BOT CHORD 2-12=-19/1998, 10-12=0/2581, 8-10=0/1998
WEBS 4-12=0/690, 5-12=-851/78, 5-11=0/221, 5-10=-851/77, 6-10=0/690, 3-12=-488/80, 7-10=-488/81

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 2 and 6 lb uplift at joint 8.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J1	Jack-Open	8	1	Job Reference (optional) I65166563

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:14 Page: 1
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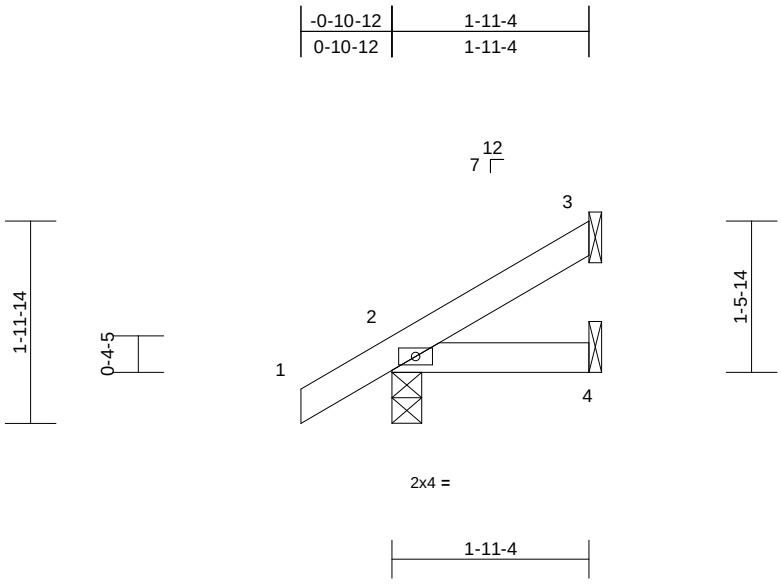

Scale = 1:22.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	4-7	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.00	4-7	>999	360		
BCDL	10.0										Weight: 8 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=42 (LC 12)
Max Uplift 2=-7 (LC 12), 3=-15 (LC 12)
Max Grav 2=233 (LC 19), 3=71 (LC 19), 4=33 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-40/28
BOT CHORD 2-4=-22/6

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 2 and 15 lb uplift at joint 3.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166564
MSA2406	J1A	Jack-Closed	2	1	Job Reference (optional)	

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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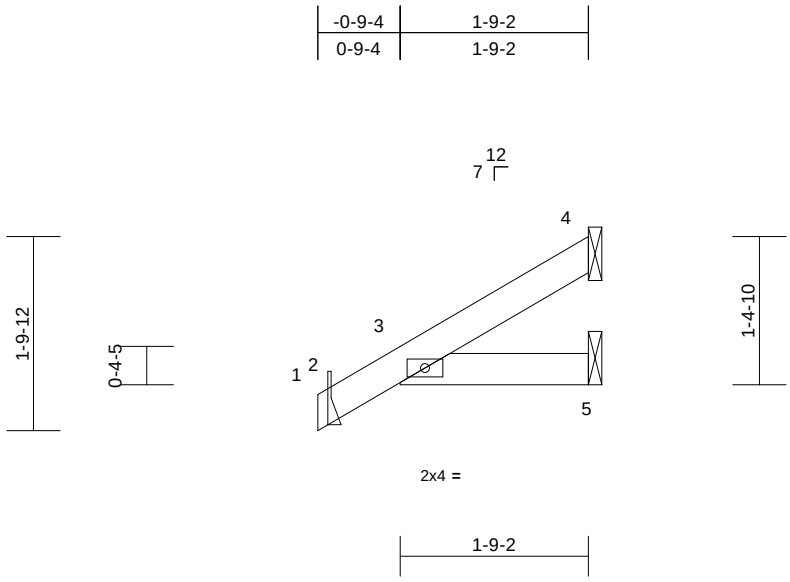

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	0.00	8	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.00	8	>999	360		
BCDL	10.0										Weight: 7 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-9-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2= Mechanical, 4= Mechanical, 5= Mechanical
Max Horiz 2=39 (LC 12)
Max Uplift 4=-15 (LC 12)
Max Grav 2=168 (LC 19), 4=90 (LC 19), 5=57 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/8, 2-3=-73/0, 3-4=-117/39
BOT CHORD 3-5=-9/110

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 4.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166565
MSA2406	J3	Jack-Closed	2	1	Job Reference (optional)	

06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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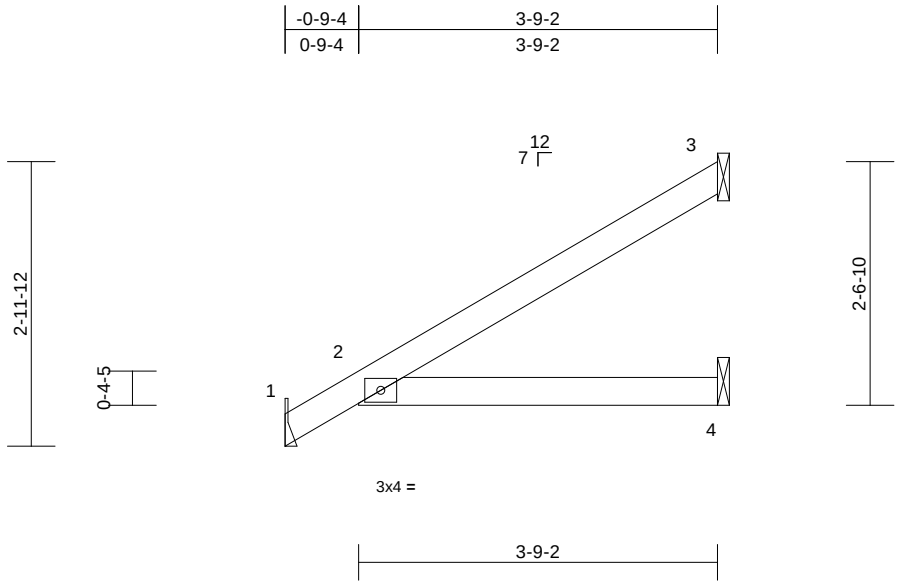

Scale = 1:24.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.05	4-7	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.08	4-7	>701	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.02	4-7	>999	360		
BCDL	10.0										Weight: 14 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 3= Mechanical, 4= Mechanical
Max Horiz 1=69 (LC 12)
Max Uplift 3=-34 (LC 12)
Max Grav 1=301 (LC 19), 3=198 (LC 19), 4=95 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-147/0, 2-3=-281/81
BOT CHORD 2-4=-29/303

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 3.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J5	Jack-Open	23	1	I65166566
					Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:14 Page: 1
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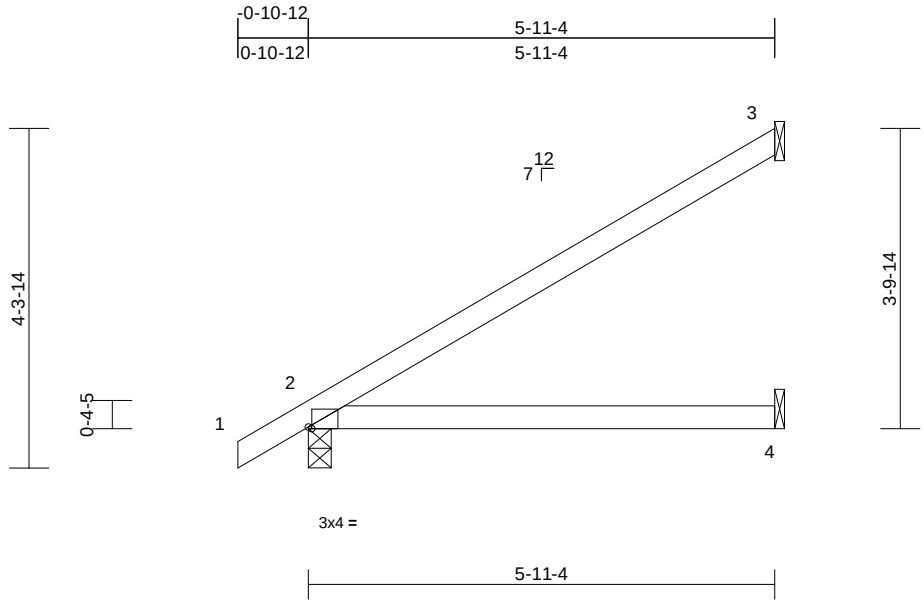

Scale = 1:29.3

Plate Offsets (X, Y): [2:0-0-9,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.12	4-7	>565	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.20	4-7	>358	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.05	4-7	>999	360		
BCDL	10.0										Weight: 21 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=104 (LC 12)
Max Uplift 3=-54 (LC 12)
Max Grav 2=441 (LC 19), 3=286 (LC 19), 4=110 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-167/113
BOT CHORD 2-4=-25/104

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 3.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/27/2024

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J5A	Half Hip	4	1	Job Reference (optional) I65166567

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:14 Page: 1
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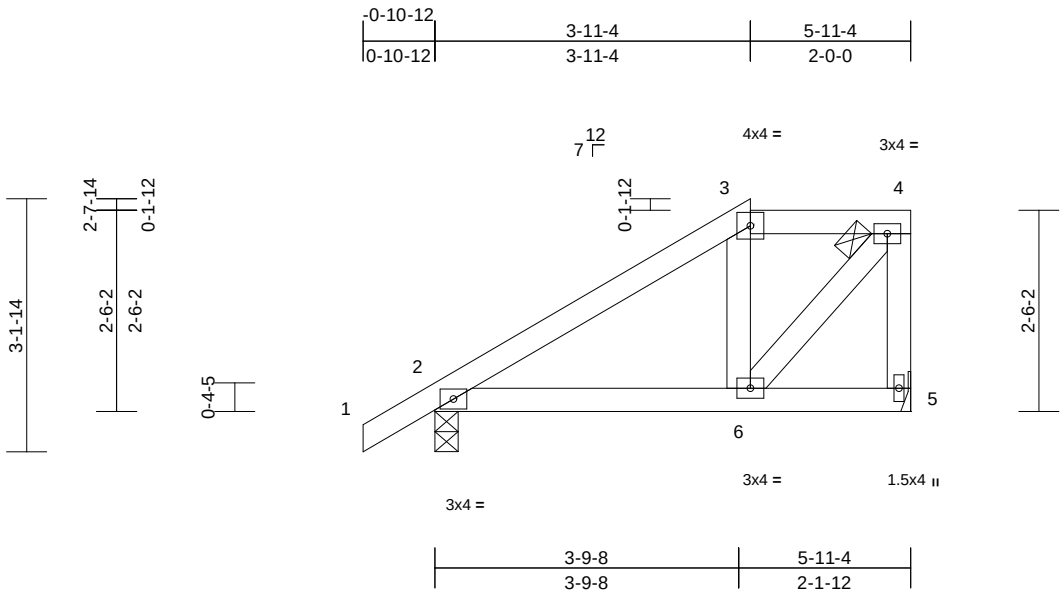

Scale = 1:28.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.02	6-9	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.03	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.01	6-9	>999	360		
BCDL	10.0										Weight: 30 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical
Max Horiz 2=63 (LC 11)
Max Uplift 2=-10 (LC 12), 5=-4 (LC 9)
Max Grav 2=507 (LC 34), 5=294 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-359/0, 3-4=-219/17, 4-5=-289/11
BOT CHORD 2-6=-11/212, 5-6=-21/16
WEBS 3-6=-100/33, 4-6=-3/327

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 2 SP No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 5 and 10 lb uplift at joint 2.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166568
MSA2406	J5B	Half Hip Girder	4	1	Job Reference (optional)	

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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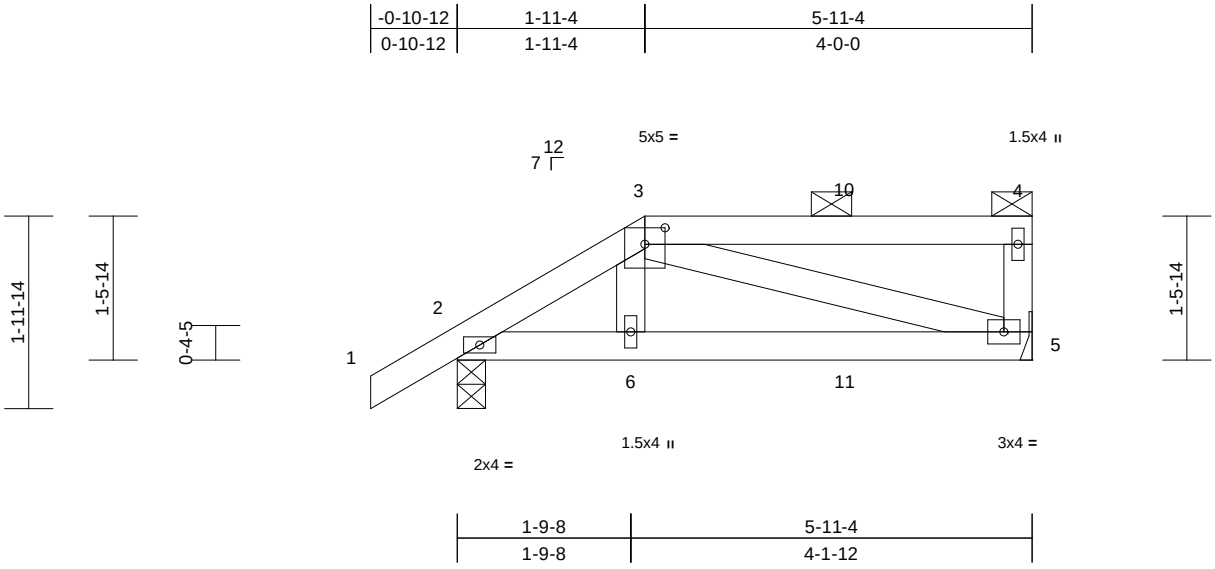

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Plate Offsets (X, Y): [3:0-2-8,0-2-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.02	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.00	5-6	>999	360		
BCDL	10.0										Weight: 28 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical
Max Horiz 2=37 (LC 11)
Max Uplift 2=-16 (LC 12), 5=-9 (LC 9)
Max Grav 2=447 (LC 34), 5=394 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/56, 2-3=-469/0, 3-4=-11/9, 4-5=-237/29
BOT CHORD 2-6=-5/389, 5-6=-5/378
WEBS 3-6=0/161, 3-5=-396/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearings are assumed to be: Joint 2 SP No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2 and 9 lb uplift at joint 5.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 94 lb down and 49 lb up at 1-11-4, and 52 lb down and 21 lb up at 4-0-0 on top chord, and 18 lb down and 14 lb up at 1-11-4, and 10 lb down and 6 lb up at 4-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
13) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 5-7=-20
Concentrated Loads (lb)
Vert: 6=-17 (F), 3=-5 (F), 10=-5 (F), 11=-8 (F)

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J5C	Jack-Open	13	1	I65166569
					Job Reference (optional)

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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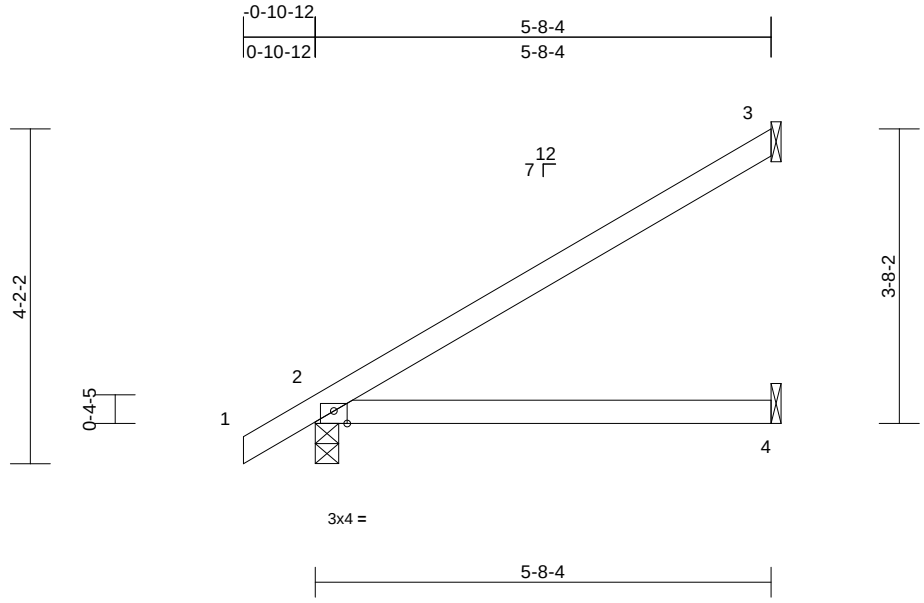

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.11	4-7	>642	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.17	4-7	>408	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.04	4-7	>999	360		
BCDL	10.0										Weight: 20 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=100 (LC 12)
Max Uplift 3=-52 (LC 12)
Max Grav 2=425 (LC 19), 3=273 (LC 19), 4=105 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-159/108
BOT CHORD 2-4=-23/97

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 3.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J5D	Jack-Closed	2	1	Job Reference (optional)

I65166570

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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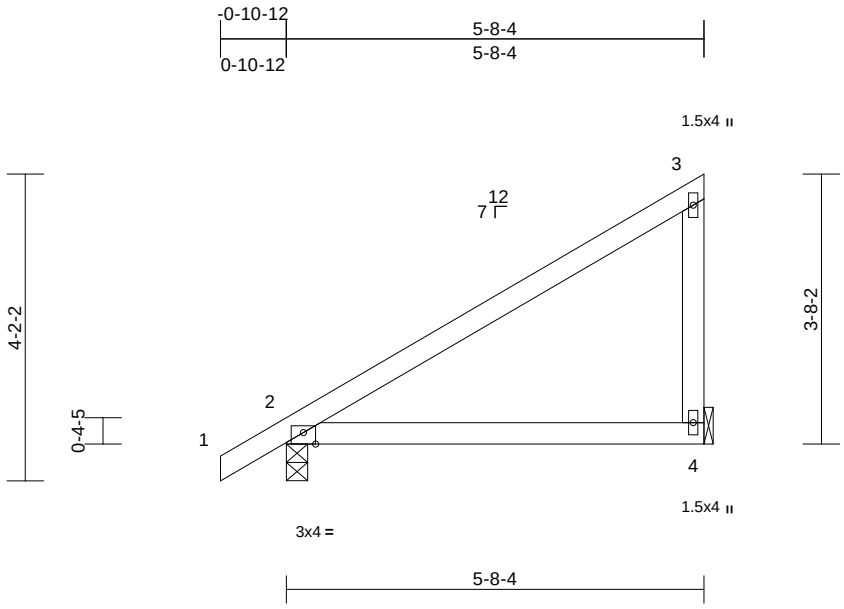

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.10	4-7	>663	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.16	4-7	>424	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.04	4-7	>999	360		
BCDL	10.0										Weight: 25 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

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

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=99 (LC 12)
Max Uplift 4=-33 (LC 12)
Max Grav 2=439 (LC 19), 4=366 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-156/107
BOT CHORD 2-4=-23/99
WEBS 3-4=-269/51

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 4.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J5E	Jack-Closed	1	1	Job Reference (optional) I65166571

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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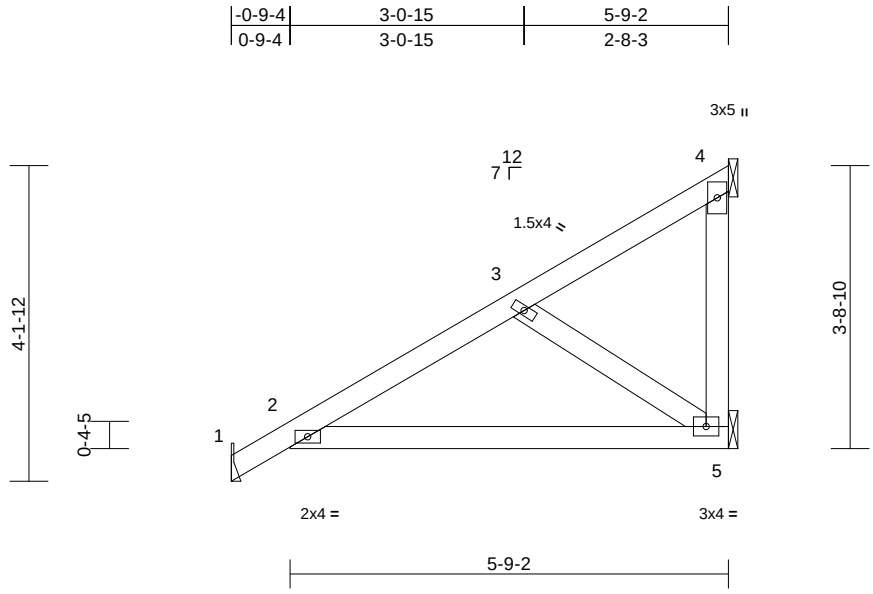

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.05	5-8	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.10	5-8	>777	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.03	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.02	5-8	>999	360		
BCDL	10.0										Weight: 29 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=296/ Mechanical, 4=54/ Mechanical, 5=233/ Mechanical
Max Horiz 1=99 (LC 12)
Max Uplift 4=-27 (LC 12), 5=-10 (LC 12)
Max Grav 1=388 (LC 19), 4=95 (LC 19), 5=326 (LC 19)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-540/0
BOT CHORD 2-5=-52/463
WEBS 3-5=-480/62

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 10 lb uplift at joint 5.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166572
MSA2406	J5F	Jack-Closed	1	1	Job Reference (optional)	

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

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06/27/2024

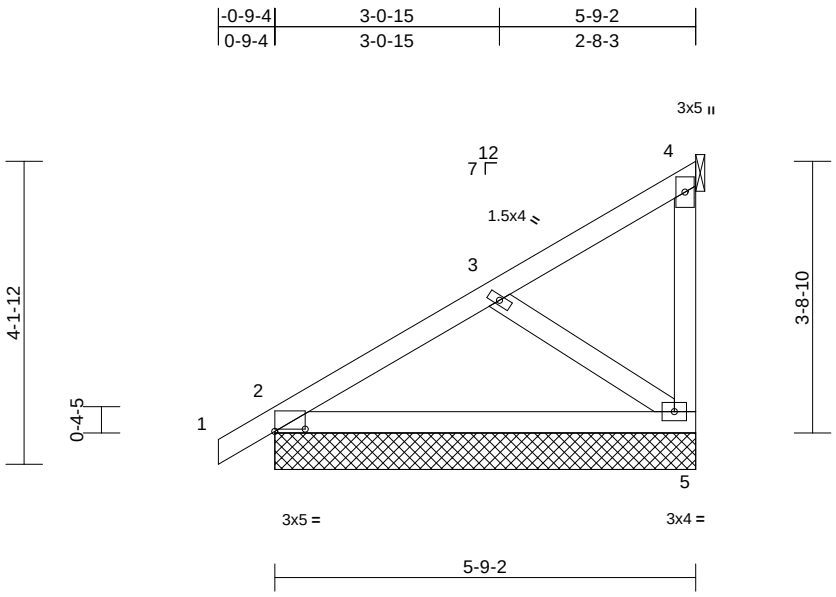

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Plate Offsets (X, Y): [2:0-5-0,0-0-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.03	5-8	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.05	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.00	5-8	>999	360		
BCDL	10.0										Weight: 29 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-9-2, 4= Mechanical, 5=5-9-2, 6=5-9-2
Max Horiz 2=99 (LC 12), 6=99 (LC 12)
Max Uplift 4=-21 (LC 12), 5=-33 (LC 12)
Max Grav 2=708 (LC 2), 4=120 (LC 19), 5=231 (LC 19), 6=708 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/204, 2-3=-388/230, 3-4=-93/45
BOT CHORD 2-5=-273/287
WEBS 4-5=0/0, 3-5=-343/96

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: , Joint 2 SP No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 4 and 33 lb uplift at joint 5.
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) Load case(s) 1, 2 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
11) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 350 lb down at -0-9-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
13) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 5-6=-20
Concentrated Loads (lb)
Vert: 1=-150 (F)
2) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 5-6=-20
Concentrated Loads (lb)
Vert: 1=-350 (F)

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	J7	Jack-Closed	1	1	I65166573 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/27/2024

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:15 Page: 1

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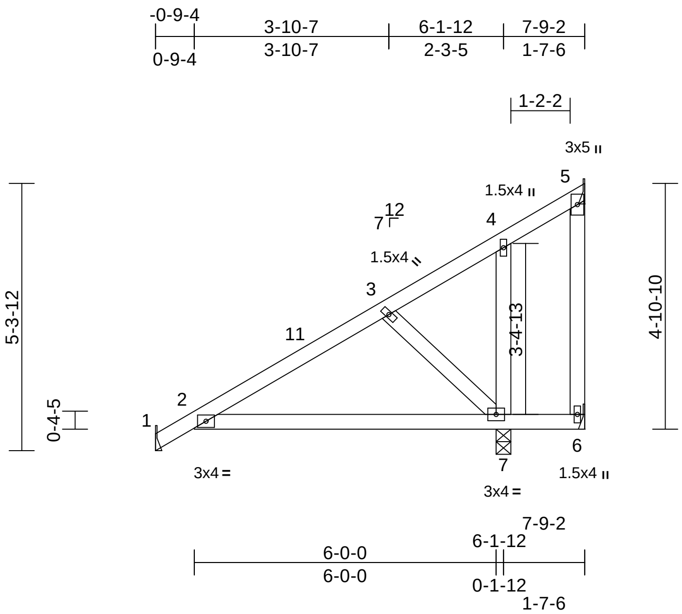

Scale = 1:45.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.05	7-10	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.10	7-10	>830	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MP		Wind(LL)	0.03	7-10	>999	360		
BCDL	10.0										Weight: 42 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP 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= Mechanical, 5= Mechanical, 6= Mechanical, 7=0-3-8
Max Horiz 1=124 (LC 12)
Max Uplift 5=-7 (LC 14), 6=-72 (LC 19), 7=-28 (LC 12)
Max Grav 1=345 (LC 19), 5=58 (LC 19), 6=-7 (LC 12), 7=668 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-170/0, 2-3=-442/0, 3-4=-92/45, 4-5=-55/21
BOT CHORD 2-7=-61/404, 6-7=0/0
WEBS 5-6=0/0, 3-7=-396/67, 4-7=-198/37

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 7 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 5, 72 lb uplift at joint 6 and 28 lb uplift at joint 7.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT	I65166574
MSA2406	J9	Jack-Closed	1	1	Job Reference (optional)	

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:15 Page: 1
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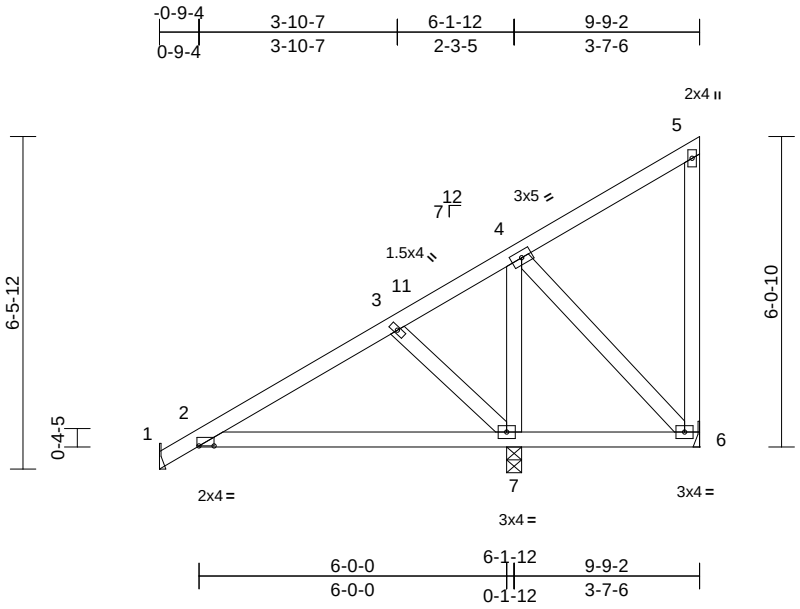

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Plate Offsets (X, Y): [2:0-3-9,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.03	7-10	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.08	7-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.02	7-10	>999	360		
BCDL	10.0										Weight: 57 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

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

REACTIONS (size) 1= Mechanical, 6= Mechanical, 7=0-3-8
Max Horiz 1=154 (LC 9)
Max Uplift 6=-157 (LC 1), 7=-27 (LC 12)
Max Grav 1=174 (LC 19), 6=5 (LC 12), 7=1083 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-187/85, 2-3=-178/214, 3-4=-61/354, 4-5=-119/81, 5-6=-178/23
BOT CHORD 2-7=-110/151, 6-7=-260/23
WEBS 3-7=-271/64, 4-7=-758/35, 4-6=0/384

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: , Joint 7 SP No.2 .
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 7 and 157 lb uplift at joint 6.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	T1	Common	2	1	Job Reference (optional) I65166575

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:15 Page: 1
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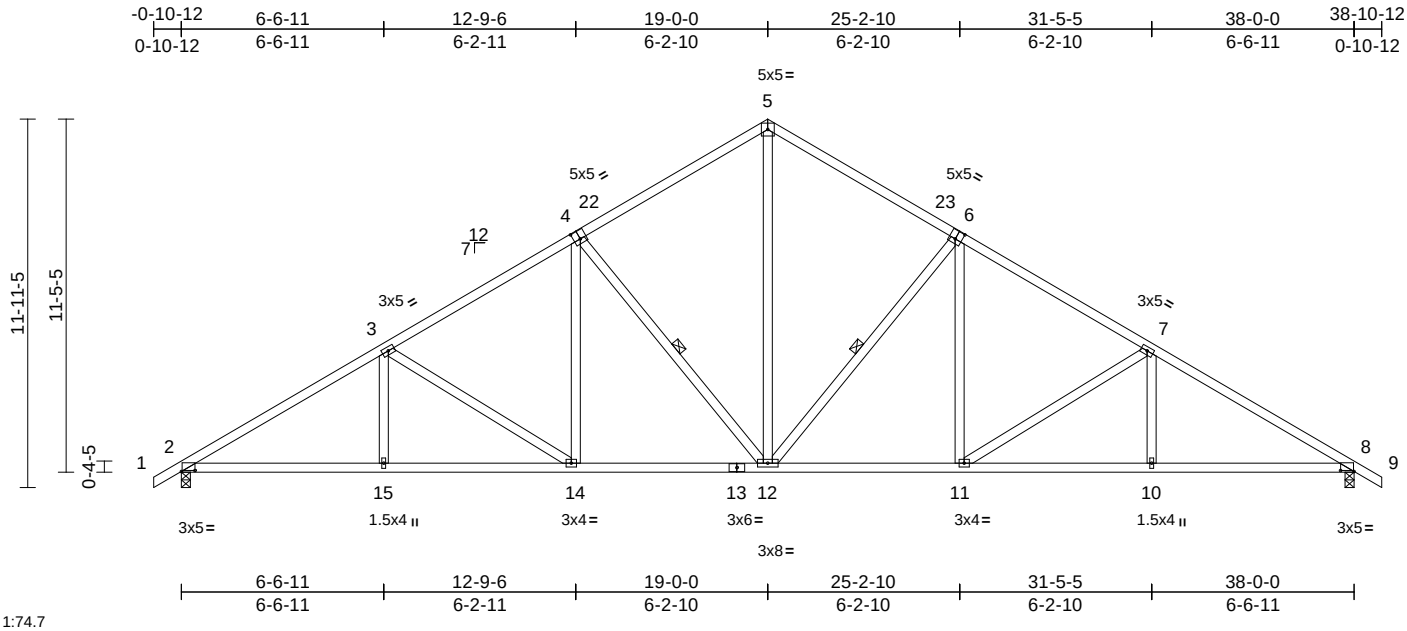

Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.16	11-12	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.32	11-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.14	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.08	12-14	>999	360		
BCDL	10.0										Weight: 223 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-12, 6-12

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=200 (LC 11)
Max Grav 2=1773 (LC 1), 8=1773 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2958/0, 3-5=-2386/67, 5-7=-2386/67, 7-8=-2958/0, 8-9=0/32
BOT CHORD 2-15=-38/2473, 14-15=-36/2473, 12-14=0/1959, 11-12=0/1959, 10-11=0/2473, 8-10=0/2473
WEBS 5-12=0/1294, 4-14=0/456, 4-12=-858/108, 6-11=0/456, 6-12=-857/108, 7-10=0/267, 7-11=-602/86, 3-14=-602/85, 3-15=0/267

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 .
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	T1A	Common	4	1	Job Reference (optional) I65166576

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:06:15 Page: 1
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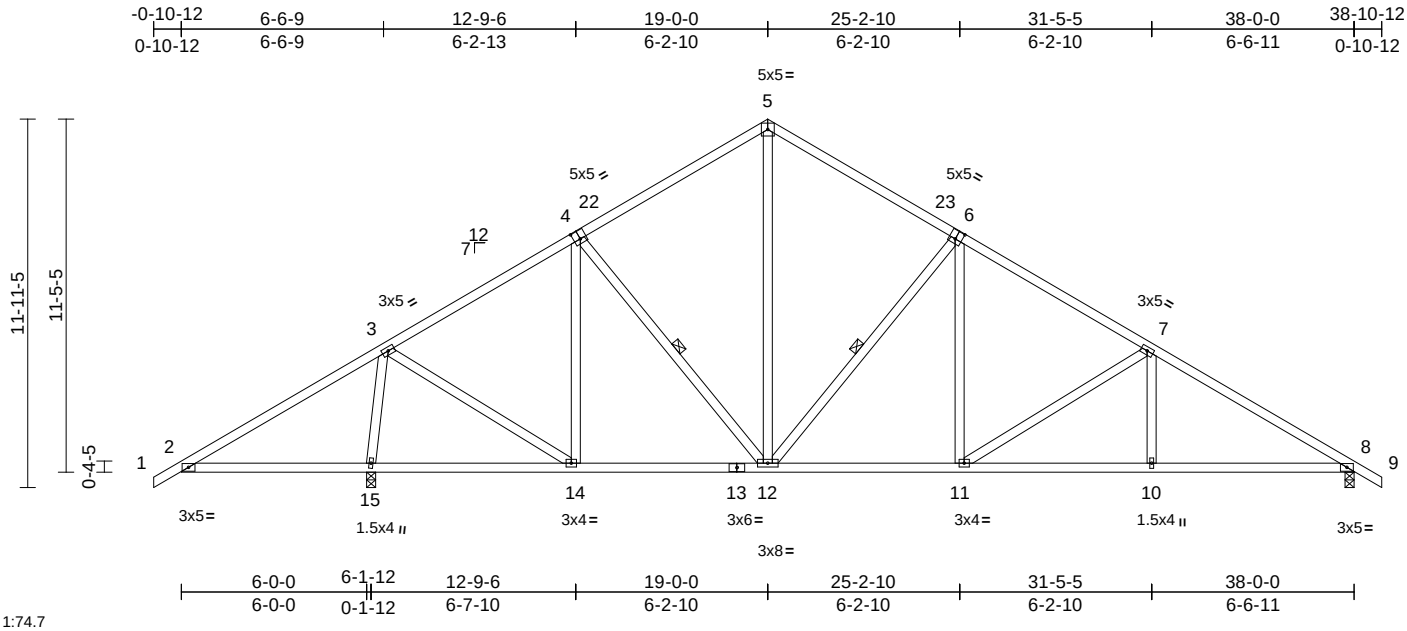

Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.09	11	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.18	10-21	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.05	10-21	>999	360		
BCDL	10.0										Weight: 223 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-12, 6-12

REACTIONS (size) 8=0-3-8, 15=0-3-8
Max Horiz 15=200 (LC 11)
Max Uplift 8=-9 (LC 13)
Max Grav 8=1484 (LC 20), 15=2114 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-46/701, 3-5=-1151/102, 5-7=-1821/83, 7-8=-2389/14, 8-9=0/32
BOT CHORD 2-15=-499/88, 14-15=-336/173, 12-14=0/831, 11-12=0/1479, 10-11=0/1981, 8-10=0/1981
WEBS 4-14=-569/35, 4-12=-60/238, 5-12=-19/615, 6-12=-860/108, 6-11=0/458, 7-11=-609/85, 7-10=0/270, 3-15=-1939/57, 3-14=0/1286

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 8.
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.

LOAD CASE(S) Standard

April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	1404 NE ERNEST WAY LEE'S SUMMIT
MSA2406	T1B	Common	5	1	Job Reference (optional) I65166577

Quality Truss LLC (Smithville, MO), Smithville, MO - 64089,

Run: 8.73 S Apr 3 2024 Print: 8.730 S Apr 3 2024 MiTek Industries, Inc. Thu Apr 25 11:03:16 Page: 1
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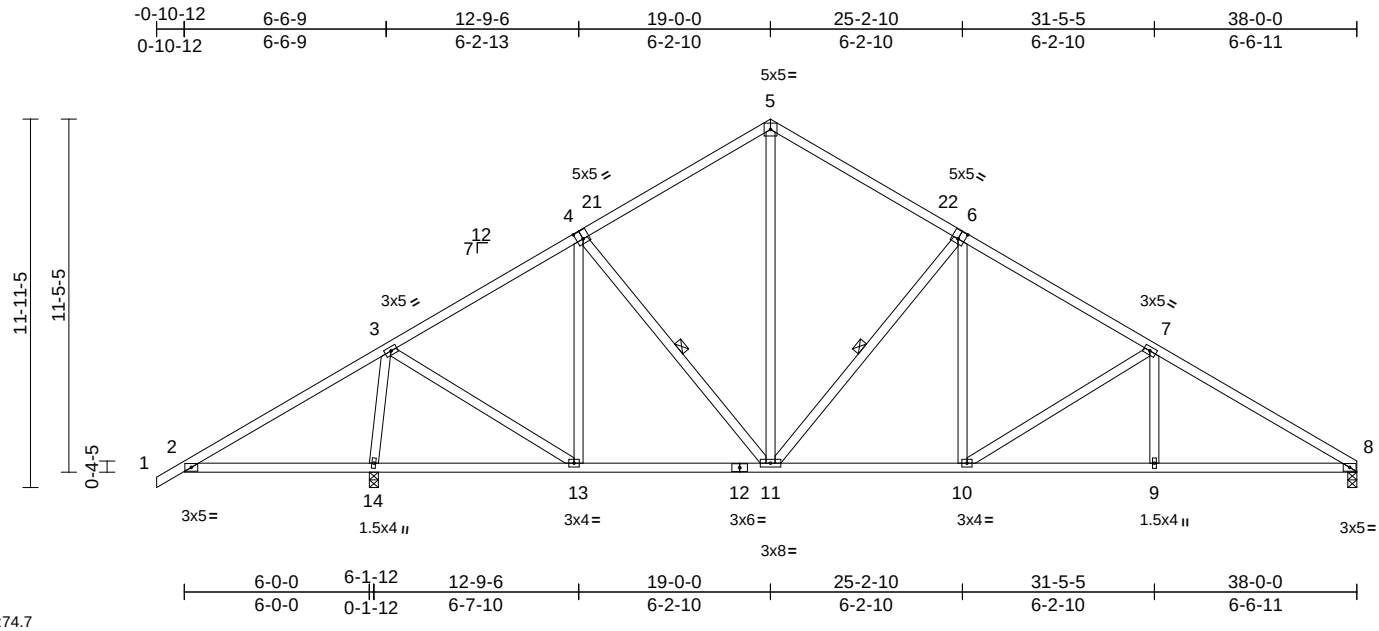


Scale = 1:74.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.09	9-20	>999	240	MT20	244/190
Snow (Pf)	25.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.18	9-20	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MR		Wind(LL)	0.06	9-20	>999	360		
BCDL	10.0										Weight: 221 lb	FT = 0%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-11, 6-11

REACTIONS (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=197 (LC 11)
Max Grav 8=1420 (LC 20), 14=2114 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-46/701, 3-5=-1152/102, 5-7=-1824/83, 7-8=-2397/16
BOT CHORD 2-14=-499/88, 13-14=-333/167, 11-13=0/827, 10-11=0/1481, 9-10=0/1988, 8-9=-2/1988
WEBS 5-11=-19/616, 4-13=-569/35, 4-11=-60/238, 6-10=0/459, 6-11=-861/108, 7-9=0/272, 7-10=-615/87, 3-14=-1940/57, 3-13=0/1287

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=6.0psf; h=20ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 .
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.

LOAD CASE(S) Standard

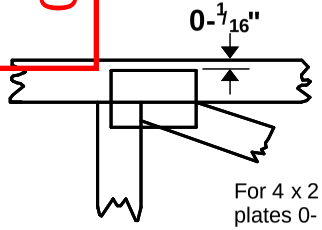
April 26,2024

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

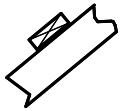
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

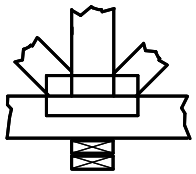
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

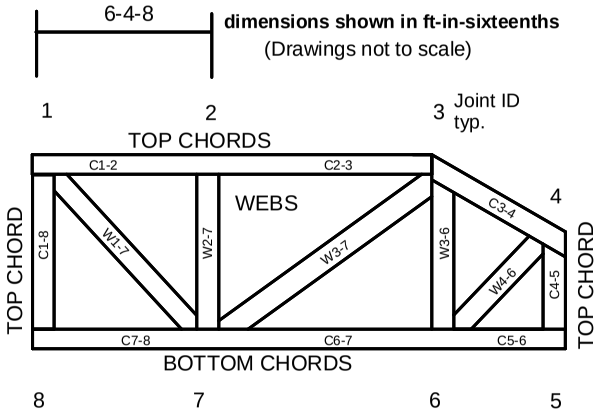


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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.

MiTek®

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor 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.