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

RE: P230180-01 - Roof - Osage Lot 55

Site Information:

Project Customer: Clover & Hive Project Name: Twin Cobalt
Lot/Block: 55 Subdivision: Osage
Model:
Address: 2139/2141 SW Osage Dr
City: Lee's Summit State: MO

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2018/TPI2014
Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Wind Speed: 115 mph
Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Roof Load: 45.0 psf
Floor Load: N/A psf

Mean Roof Height (feet): 35
Exposure Category: C

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I57758142	A1	4/14/23	35	I57758176	V12	4/14/23
2	I57758143	A2	4/14/23	36	I57758177	V13	4/14/23
3	I57758144	A3	4/14/23	37	I57758178	V14	4/14/23
4	I57758145	A4	4/14/23	38	I57758179	V15	4/14/23
5	I57758146	A5	4/14/23	39	I57758180	V16	4/14/23
6	I57758147	A6	4/14/23	40	I57758181	V17	4/14/23
7	I57758148	A7	4/14/23	41	I57758182	V18	4/14/23
8	I57758149	C1	4/14/23	42	I57758183	V19	4/14/23
9	I57758150	C2	4/14/23	43	I57758184	V20	4/14/23
10	I57758151	C3	4/14/23	44	I57758185	V21	4/14/23
11	I57758152	CJ1	4/14/23	45	I57758186	V22	4/14/23
12	I57758153	D1	4/14/23	46	I57758187	V23	4/14/23
13	I57758154	D2	4/14/23				
14	I57758155	E1	4/14/23				
15	I57758156	E2	4/14/23				
16	I57758157	E3	4/14/23				
17	I57758158	E5	4/14/23				
18	I57758159	J1	4/14/23				
19	I57758160	J2	4/14/23				
20	I57758161	J3	4/14/23				
21	I57758162	PB1	4/14/23				
22	I57758163	PB2	4/14/23				
23	I57758164	PB3	4/14/23				
24	I57758165	V1	4/14/23				
25	I57758166	V2	4/14/23				
26	I57758167	V3	4/14/23				
27	I57758168	V4	4/14/23				
28	I57758169	V5	4/14/23				
29	I57758170	V6	4/14/23				
30	I57758171	V7	4/14/23				
31	I57758172	V8	4/14/23				
32	I57758173	V9	4/14/23				
33	I57758174	V10	4/14/23				
34	I57758175	V11	4/14/23				

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Sevier, Scott
My license renewal date for the state of Missouri is December 31, 2023.

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.

April 14,2023
Sevier, Scott

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	A1	Piggyback Base Supported Gable	2	1	Job Reference (optional) I57758142

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:24 Page: 1
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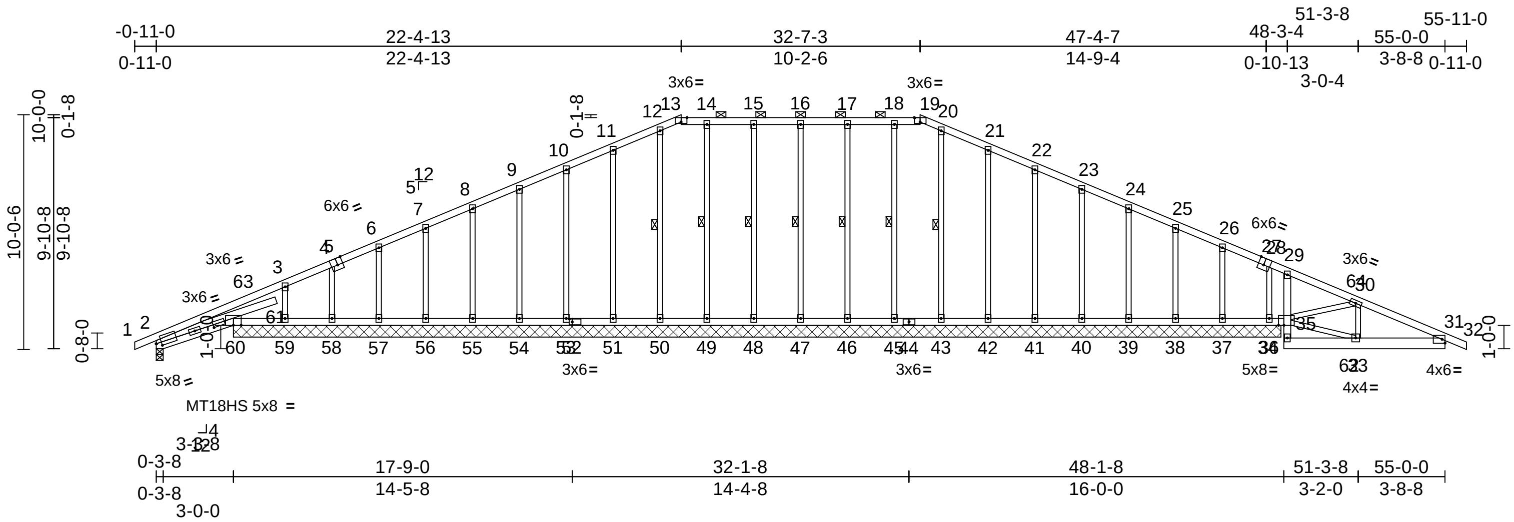

Scale = 1:98.4

Plate Offsets (X, Y): [2:0-2-12,0-1-12], [2:2-6-12,0-1-8], [5:0-2-12,Edge], [13:0-3-0,Edge], [19:0-3-0,Edge], [27:0-2-12,Edge], [35:0-2-12,Edge], [52:0-1-8,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	0.07	61	>917	240	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.66	31	>136	90	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.29	Horz(CT)	0.11	36	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH		Wind(LL)	0.69	31	>131	120	Weight: 295 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 34-31:2x6 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 5-5-5

BRACING
TOP CHORD Sheathed or 4-4-4 oc purlins, except 2-0-0 oc purlins (6-2-4 max.): 13-19.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 34-35
5-4-7 oc bracing: 59-60
5-6-4 oc bracing: 58-59
5-11-0 oc bracing: 57-58
5-11-12 oc bracing: 38-39
5-9-8 oc bracing: 37-38
4-7-14 oc bracing: 36-37
4-7-1 oc bracing: 35-36.
WEBS 1 Row at midpt 16-47, 17-46, 18-45, 20-43, 15-48, 14-49, 12-50

REACTIONS (size) 2=0-3-8, 36=44-8-8, 37=44-8-8, 38=44-8-8, 39=44-8-8, 40=44-8-8, 41=44-8-8, 42=44-8-8, 43=44-8-8, 45=44-8-8, 46=44-8-8, 47=44-8-8, 48=44-8-8, 49=44-8-8, 50=44-8-8, 51=44-8-8, 53=44-8-8, 54=44-8-8, 55=44-8-8, 56=44-8-8, 57=44-8-8, 58=44-8-8, 59=44-8-8
Max Horiz 2=-172 (LC 17)
Max Uplift 2=-136 (LC 26), 36=-205 (LC 9), 37=-226 (LC 26), 38=-71 (LC 13), 39=-44 (LC 13), 40=-51 (LC 13), 41=-49 (LC 13), 42=-54 (LC 13), 43=-55 (LC 9), 45=-52 (LC 9), 46=-42 (LC 8), 47=-36 (LC 9), 48=-42 (LC 8), 49=-51 (LC 9), 50=-51 (LC 9), 51=-57 (LC 12), 53=-49 (LC 12), 54=-50 (LC 12), 55=-49 (LC 12), 56=-49 (LC 12), 57=-53 (LC 12), 58=-89 (LC 9), 59=-103 (LC 12)
Max Grav 2=165 (LC 25), 36=721 (LC 26), 37=106 (LC 9), 38=273 (LC 26), 39=151 (LC 1), 40=180 (LC 26), 41=176 (LC 1), 42=137 (LC 26), 43=482 (LC 1), 45=348 (LC 1), 46=156 (LC 25), 47=185 (LC 1), 48=154 (LC 25), 49=348 (LC 1), 50=482 (LC 1), 51=158 (LC 25), 53=177 (LC 1), 54=175 (LC 1), 55=175 (LC 25), 56=178 (LC 1), 57=196 (LC 25), 58=196 (LC 1), 59=404 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-5/0, 2-3=-1377/1158, 3-4=-1247/1054, 4-6=-1214/1081, 6-7=-1171/1075, 7-8=-1131/1077, 8-9=-1090/1076, 9-10=-1049/1076, 10-11=-1007/1075, 11-12=-979/1090, 12-13=-849/957, 19-20=-849/957, 20-21=-979/1090, 21-22=-1008/1075, 22-23=-1049/1076, 23-24=-1091/1077, 24-25=-1128/1074, 25-26=-1187/1089, 26-28=-1143/1022, 28-29=-1296/1106, 29-30=-1350/1136, 30-31=-548/510, 31-32=0/7, 13-14=-851/963, 14-15=-858/969, 15-16=-858/969, 16-17=-858/969, 17-18=-858/969, 18-19=-851/963

April 14,2023

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758142
P230180-01	A1	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

BOT CHORD 2-60=-1000/1331, 60-61=-32/0, 34-35=-52/35, 29-35=-43/37, 33-34=-173/233, 31-33=-410/553, 59-60=-969/1310, 58-59=-969/1310, 57-58=-969/1310, 56-57=-969/1310, 55-56=-969/1310, 54-55=-969/1310, 53-54=-969/1310, 51-53=-969/1310, 50-51=-969/1310, 49-50=-969/1310, 48-49=-969/1310, 47-48=-969/1310, 46-47=-969/1310, 45-46=-969/1310, 43-45=-969/1310, 42-43=-969/1310, 41-42=-969/1310, 40-41=-969/1310, 39-40=-969/1310, 38-39=-969/1310, 37-38=-969/1310, 36-37=-969/1310, 35-36=-969/1310

WEBS 30-33=-400/212, 33-35=-250/335, 30-35=-623/873, 16-47=-147/77, 17-46=-118/65, 18-45=-309/221, 20-43=-443/351, 21-42=-98/77, 22-41=-138/85, 23-40=-137/84, 24-39=-128/76, 25-38=-174/131, 26-37=-137/60, 28-36=-357/390, 15-48=-115/65, 14-49=-309/221, 12-50=-443/351, 11-51=-119/80, 10-53=-139/85, 9-54=-135/83, 8-55=-136/83, 7-56=-132/82, 6-57=-155/95, 4-58=-65/62, 3-59=-373/290

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 22-4-13, Corner(3R) 22-4-13 to 27-6-0, Exterior(2N) 27-6-0 to 32-7-3, Corner(3R) 32-7-3 to 37-6-0, Exterior(2N) 37-6-0 to 55-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 3x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	A2	Piggyback Base	4	1	Job Reference (optional) I57758143

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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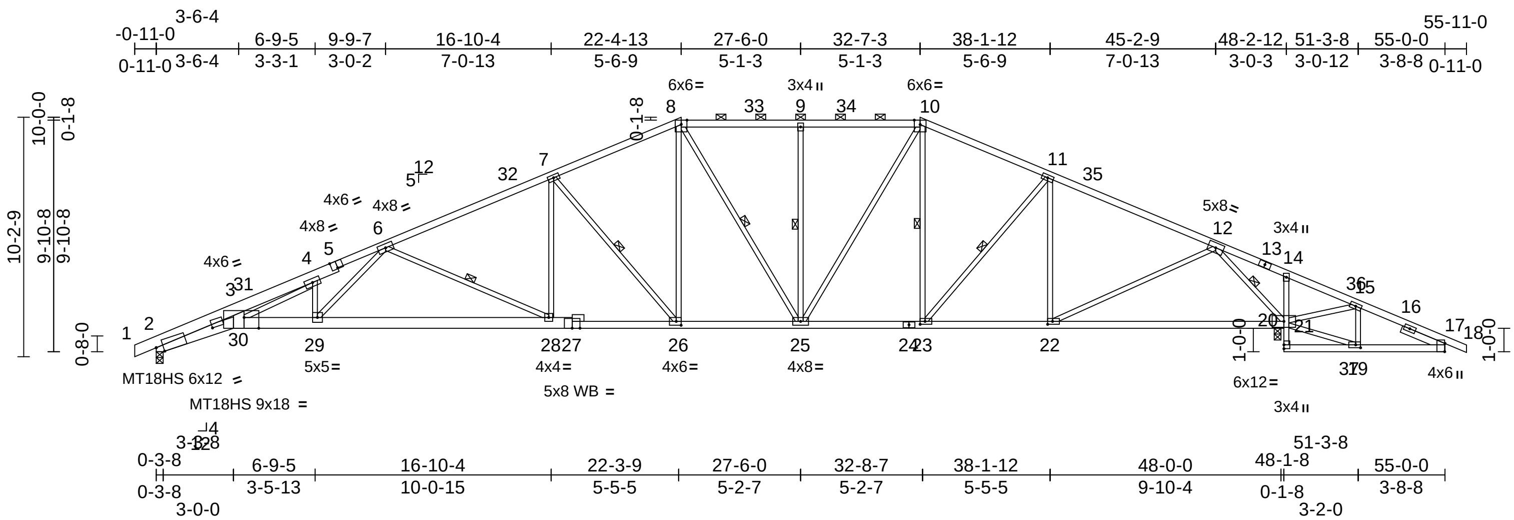

Scale = 1:98.4

Plate Offsets (X, Y): [2:0-3-9,Edge], [2:0-0-1,Edge], [5:0-3-0,Edge], [17:0-4-3,Edge], [19:0-2-8,0-1-8], [22:0-2-8,0-1-8], [23:0-2-8,0-1-8], [26:0-2-8,0-2-0], [30:0-7-8,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	0.76	Vert(LL)	-0.45	28-29	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.86	28-29	>672	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.35	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 291 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x6 SP 2400F 2.0E, 5-8,13-10:2x4 SP 1650F 1.5E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 24-21,24-27:2x4 SP 1650F 1.5E, 14-20:2x3 SPF No.2, 20-17:2x4 SP No.2, 30-3:2x6 SPF No.2
WEBS 2x3 SPF No.2
OTHERS 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 1-11-11

BRACING
TOP CHORD Sheathed or 2-1-15 oc purlins, except 2-0-0 oc purlins (3-1-2 max.): 8-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
9-2-0 oc bracing: 2-30
6-0-0 oc bracing: 19-20,17-19.
WEBS 1 Row at midpt 10-23, 9-25, 6-28, 7-26, 8-25, 11-23, 12-21

REACTIONS (size) 2=0-3-8, 21=0-3-8, (req. 0-4-9)
Max Horiz 2=180 (LC 16)
Max Uplift 2=-320 (LC 12), 21=-435 (LC 9)
Max Grav 2=2186 (LC 1), 21=2889 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8127/1254, 3-4=-7831/1230, 4-6=-6380/910, 6-7=-4019/532, 7-8=-3191/468, 8-9=-2832/459, 9-10=-2832/459, 10-11=-2736/416, 11-12=-2746/337, 12-14=-1072/1222, 14-15=-1089/1216, 15-17=-390/490, 17-18=0/1
BOT CHORD 2-30=-1278/7340, 29-30=-859/5865, 28-29=-738/4825, 26-28=-404/3626, 25-26=-202/2865, 23-25=-132/2454, 22-23=-131/2451, 21-22=-78/1122, 20-21=-55/38, 14-21=-166/61, 19-20=-145/0, 17-19=-389/378, 3-30=-73/877
WEBS 8-26=-181/941, 10-23=-66/173, 9-25=-457/185, 10-25=-161/855, 6-28=-1327/370, 7-26=-1156/309, 8-25=-184/226, 11-23=-109/187, 12-21=-3325/1019, 12-22=-411/1478, 6-29=-180/1557, 4-30=-421/1646, 7-28=-58/734, 4-29=-715/201, 11-22=-467/295, 15-19=-345/201, 19-21=-302/402, 15-21=-731/756

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 22-4-13, Exterior(2R) 22-4-13 to 29-5-10, Interior (1) 29-5-10 to 32-7-3, Exterior(2R) 32-7-3 to 39-8-1, Interior (1) 39-8-1 to 55-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) WARNING: Required bearing size at joint(s) 21 greater than input bearing size.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

April 14,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758144
P230180-01	A3	Piggyback Base	10	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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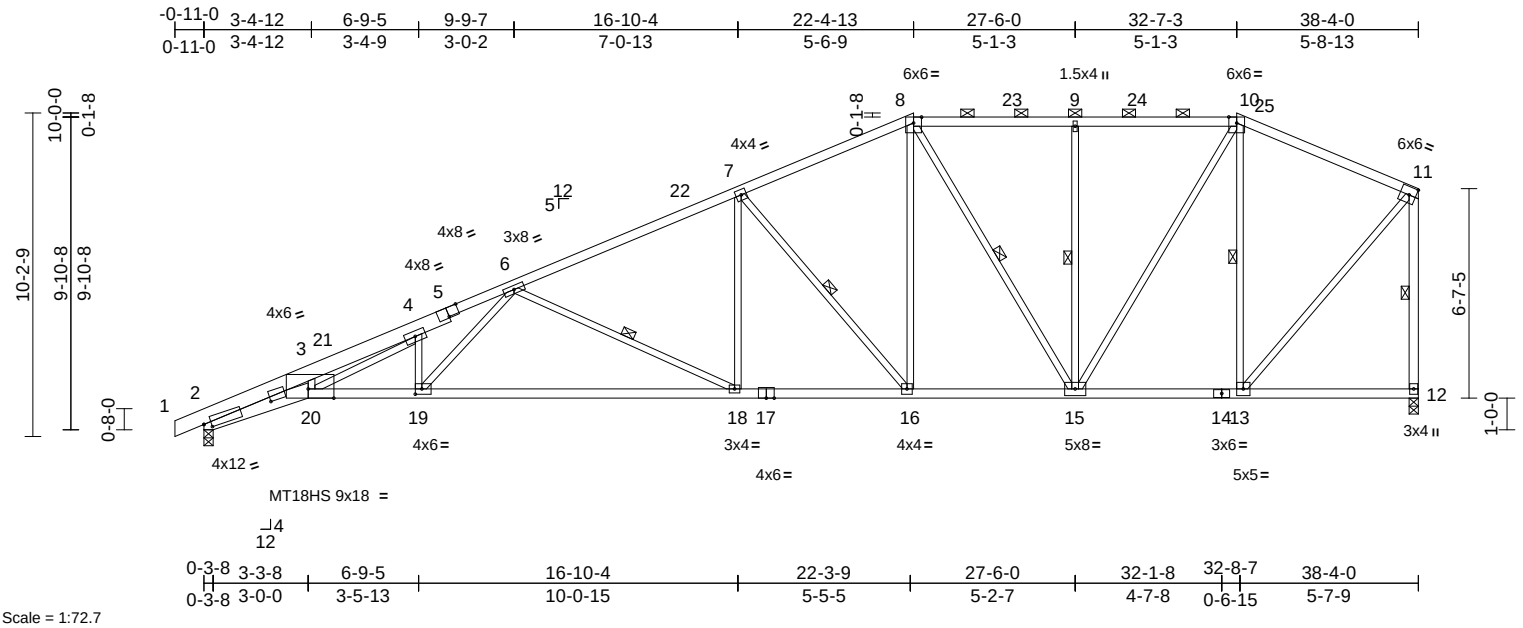

Scale = 1:72.7

Plate Offsets (X, Y): [2:0-2-13,0-1-13], [2:2-2-13,0-0-3], [5:0-4-0,Edge], [19:0-2-8,0-2-0], [20:0-9-11,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	0.68	Vert(LL)	-0.32	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.72	18-19	>632	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.27	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 209 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x6 SP 2400F 2.0E, 5-8:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 2-20:2x6 SP 2400F 2.0E, 17-20:2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 12-11:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 2-9-9 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-3 max.): 8-10.
BOT CHORD Rigid ceiling directly applied or 8-4-1 oc bracing.
WEBS 1 Row at midpt 11-12, 9-15, 10-13, 8-15, 7-16, 6-18

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=356 (LC 12)
Max Uplift 2=-274 (LC 12), 12=-218 (LC 8)
Max Grav 2=1787 (LC 1), 12=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-6964/1356, 3-4=-6275/1279, 4-6=-4840/824, 6-7=-2875/432, 7-8=-2085/390, 8-9=-1558/337, 9-10=-1558/337, 10-11=-1097/218, 11-12=-1661/316
BOT CHORD 2-20=-1556/6304, 19-20=-954/4435, 18-19=-820/3608, 16-18=-485/2570, 15-16=-299/1840, 13-15=-149/962, 12-13=-5/16
WEBS 8-16=-187/932, 9-15=-435/178, 10-13=-971/235, 8-15=-580/184, 10-15=-197/1205, 11-13=-217/1433, 7-16=-1109/310, 6-18=-1154/373, 6-19=-203/1258, 7-18=-57/673, 4-19=-734/254, 4-20=-577/1634, 3-20=-161/1042

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 22-4-13, Exterior(2R) 22-4-13 to 29-5-10, Interior (1) 29-5-10 to 32-7-3, Exterior(2E) 32-7-3 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758145
P230180-01	A4	Piggyback Base Girder	2	**2**	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:29 Page: 1

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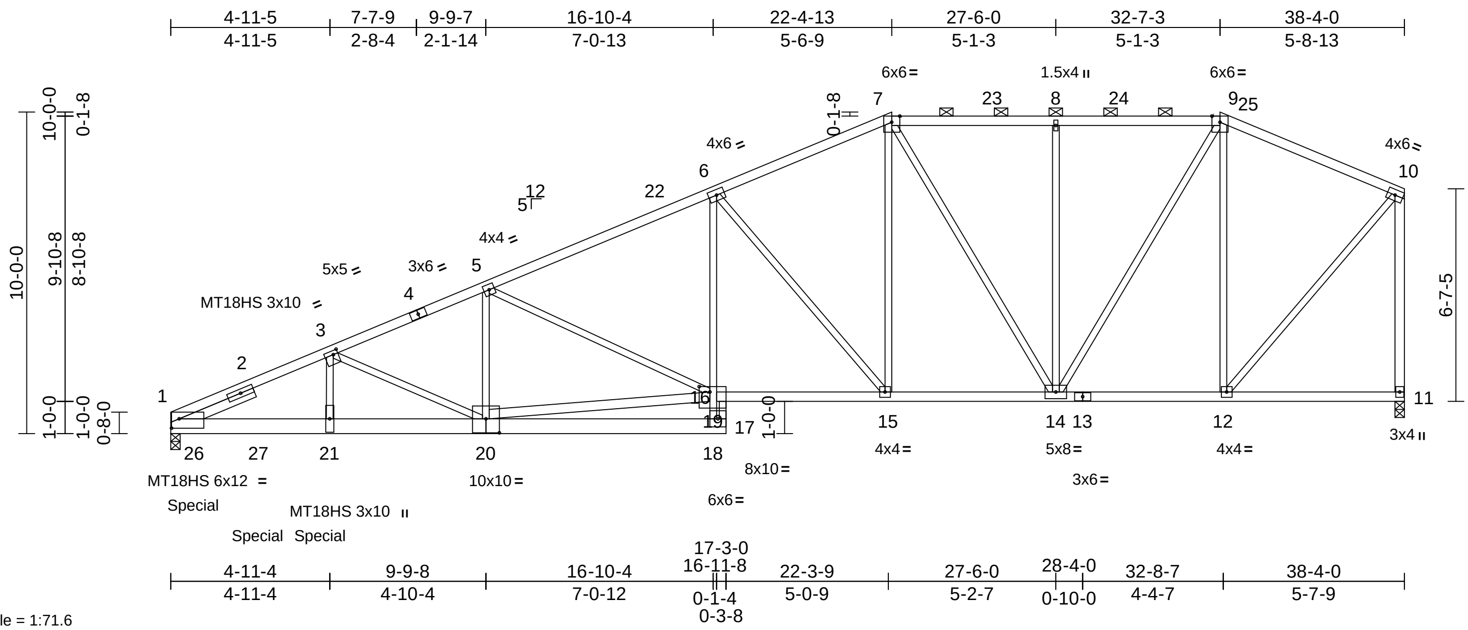

Scale = 1:71.6

Plate Offsets (X, Y): [1:0-2-14,0-3-8], [3:0-1-12,0-1-8], [16:0-4-0,0-2-0], [20:0-5-0,0-5-4]

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	0.88	Vert(LL)	-0.22	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.40	15-16	>999	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.12	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 445 lb	FT = 20%

LUMBER

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

BOT CHORD 2x4 SP No.2 *Except* 17-16:2x3 SPF No.2, 17-20:2x6 SPF No.2, 20-1:2x6 SP 2400F 2.0E

WEBS 2x3 SPF No.2 *Except* 11-10,20-19:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 2-5-12

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-2 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-9.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 16-17.

REACTIONS (size) 1=0-3-8, 11=0-3-8
Max Horiz 1=349 (LC 12)
Max Uplift 1=-1019 (LC 12), 11=-312 (LC 8)
Max Grav 1=6957 (LC 1), 11=2359 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-3=-13024/1878, 3-5=-7714/1114, 5-6=-5174/772, 6-7=-3383/575, 7-8=-2363/454, 8-9=-2363/454, 9-10=-1544/282, 10-11=-2310/409

BOT CHORD 16-17=-372/0, 16-19=-721/4205, 15-16=-799/4692, 14-15=-469/3032, 12-14=-209/1382, 11-12=-5/17, 1-21=-1985/11747, 18-21=-1983/11735, 17-18=-80/480

WEBS 7-15=-347/2075, 9-12=-1447/305, 8-14=-449/180, 9-14=-307/1963, 7-14=-1342/290, 10-12=-308/2066, 18-19=0/546, 6-19=-291/2171, 5-20=-192/1718, 3-20=-5129/827, 5-19=-2720/489, 6-15=-2521/529, 19-20=-1158/6641, 3-21=-620/4623

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x6 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, Except member 3-21 2x3 - 1 row at 0-2-0 oc, 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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-11-5, Interior (1) 4-11-5 to 22-4-13, Exterior(2R) 22-4-13 to 29-5-10, Interior (1) 29-5-10 to 32-7-3, Exterior(2E) 32-7-3 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 563 lb down and 90 lb up at 0-8-12, and 559 lb down and 93 lb up at 2-8-12, and 4771 lb down and 681 lb up at 4-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-70, 7-9=-70, 9-10=-70, 11-16=-20, 1-17=-20
Concentrated Loads (lb)
Vert: 21=-4771 (F), 26=-563 (F), 27=-559 (F)

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	A5	Piggyback Base	4	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

I57758146

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:30 Page: 1
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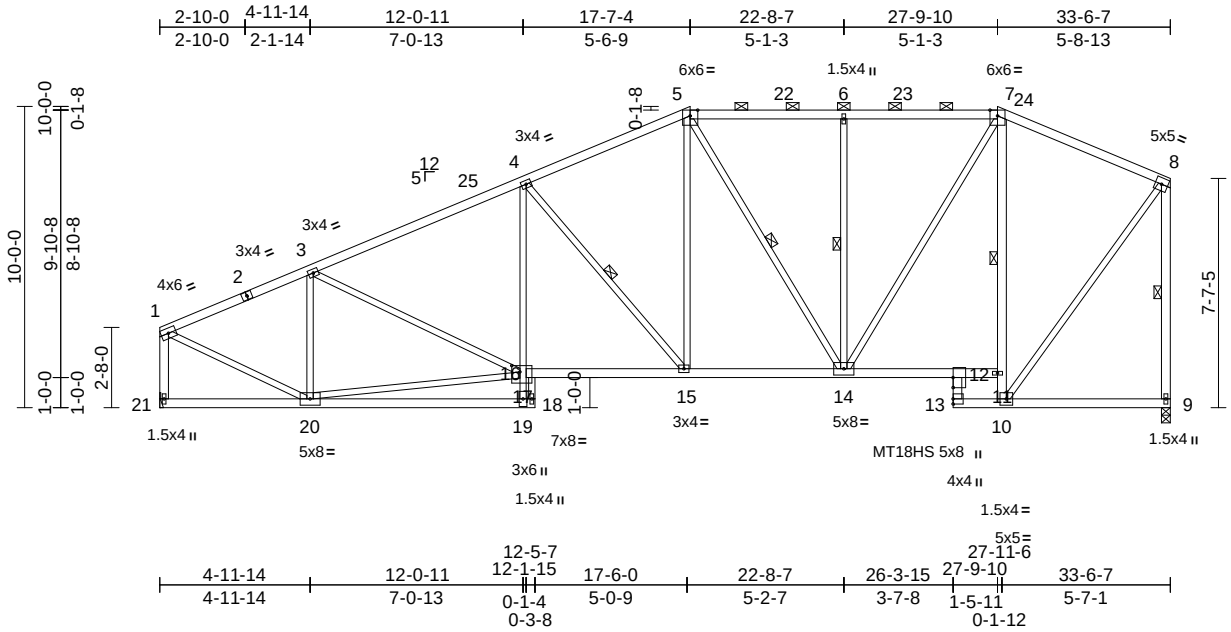

Scale = 1:76.5

Plate Offsets (X, Y): [12:0-4-0,Edge], [16:0-3-4,0-2-8]

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	0.72	Vert(LL)	-0.15	12-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.27	12-14	>999	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.19	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 203 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 18-16:2x3 SPF No.2, 11-17:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 9-8,21-1,10-7:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 3-1-2 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-6 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 16-18,12-13.
WEBS 1 Row at midpt 8-9, 6-14, 7-10, 5-14, 4-15

REACTIONS (size) 9=0-3-8, 21= Mechanical
Max Horiz 21=250 (LC 12)
Max Uplift 9=-200 (LC 8), 21=-193 (LC 12)
Max Grav 9=1496 (LC 1), 21=1496 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 5-6=-1302/307, 6-7=-1302/307, 7-8=-860/185, 8-9=-1460/291, 1-21=-1451/212, 1-3=-1630/224, 3-4=-2071/342, 4-5=-1657/336
BOT CHORD 20-21=-257/99, 19-20=-12/76, 18-19=-7/56, 16-18=-488/0, 12-13=-31/57, 10-13=-93/574, 9-10=-4/11, 16-17=-354/1792, 15-16=-380/1828, 14-15=-250/1449, 12-14=-123/765, 11-12=-29/192
WEBS 5-15=-125/544, 6-14=-431/177, 10-11=-929/238, 7-11=-963/242, 5-14=-320/143, 7-14=-189/1079, 8-10=-189/1211, 17-19=0/648, 4-17=0/256, 3-20=-788/216, 3-17=-34/409, 4-15=-581/242, 1-20=-174/1597, 17-20=-404/1395

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 4-11-5 to 9-9-7, Interior (1) 9-9-7 to 22-4-13, Exterior(2R) 22-4-13 to 29-5-10, Interior (1) 29-5-10 to 32-7-3, Exterior(2E) 32-7-3 to 38-2-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758147
P230180-01	A6	Piggyback Base	8	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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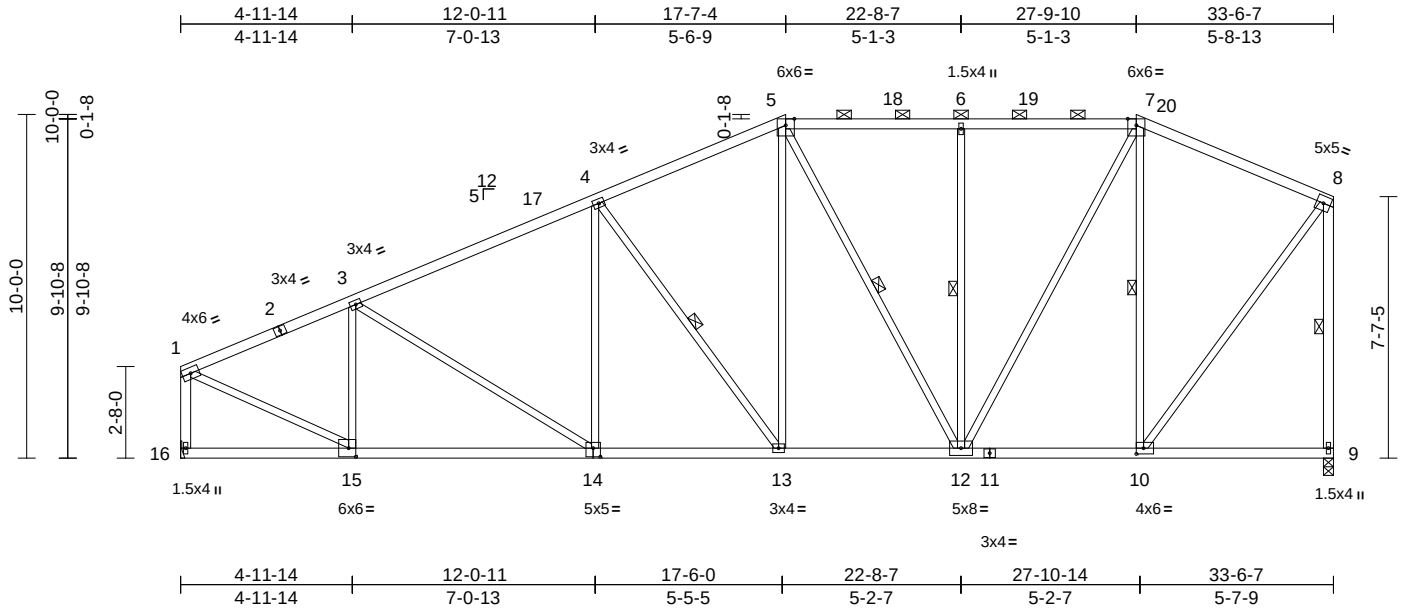

Scale = 1:67

Plate Offsets (X, Y): [10:0-2-8,0-2-0], [14:0-2-8,0-3-0], [15:0-2-8,0-3-0]

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	0.71	Vert(LL)	-0.09	13-14	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.18	14-15	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 191 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-8,16-1:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 3-5-2 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-1 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 9-1-8 oc bracing.
WEBS 1 Row at midpt 8-9, 6-12, 7-10, 5-12, 4-13

REACTIONS (size) 9=0-3-8, 16= Mechanical
Max Horiz 16=250 (LC 12)
Max Uplift 9=-200 (LC 8), 16=-193 (LC 12)
Max Grav 9=1496 (LC 1), 16=1496 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-1633/225, 3-4=-1820/292, 4-5=-1493/308, 5-6=-1156/282, 6-7=-1155/282, 7-8=-857/185, 8-9=-1446/290, 1-16=-1454/213
BOT CHORD 15-16=-256/98, 13-15=-413/1593, 12-13=-224/1298, 10-12=-118/738, 9-10=-4/13
WEBS 5-13=-117/502, 6-12=-426/177, 7-10=-847/223, 5-12=-334/140, 7-12=-162/928, 8-10=-188/1200, 4-14=0/206, 3-15=-592/159, 3-14=0/183, 4-13=-496/221, 1-15=-175/1602

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 4-11-5 to 9-9-7, Interior (1) 9-9-7 to 22-4-13, Exterior(2R) 22-4-13 to 29-5-10, Interior (1) 29-5-10 to 32-7-3, Exterior(2E) 32-7-3 to 38-2-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Refer to girder(s) for truss to truss connections.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	A7	Piggyback Base Supported Gable	2	1	I57758148 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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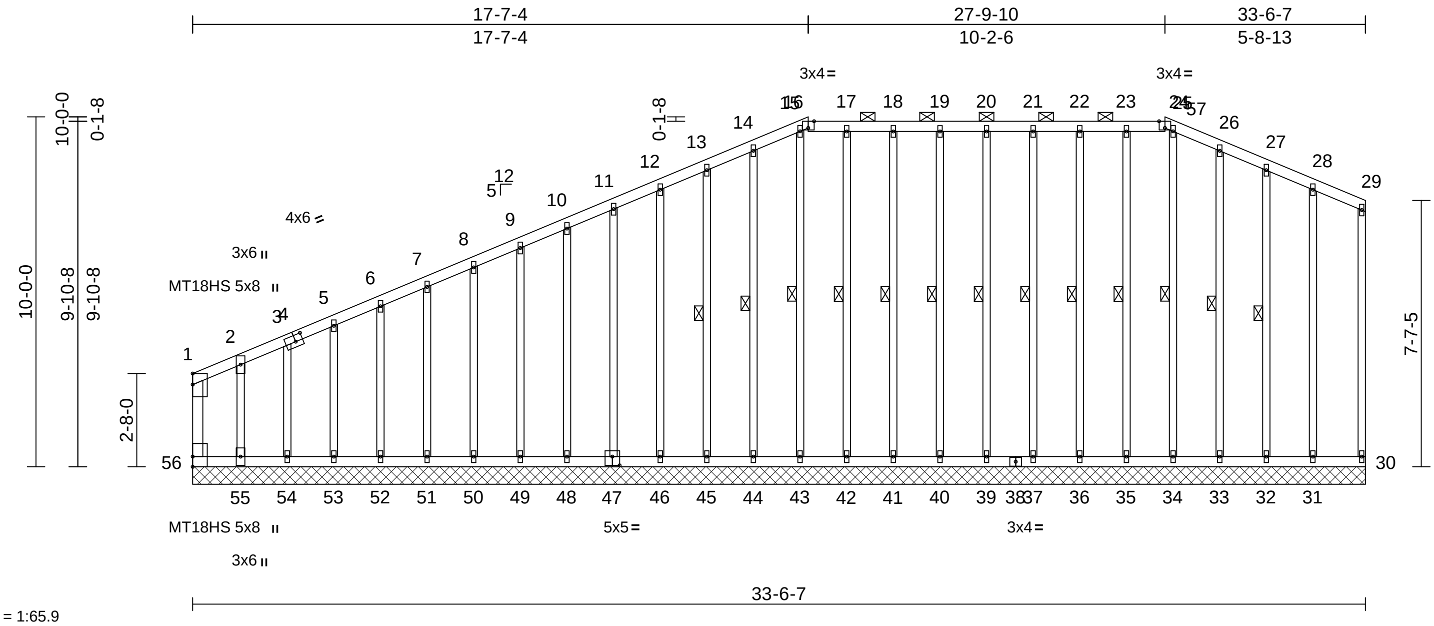

Scale = 1:65.9

Plate Offsets (X, Y): [4:0-2-8,0-2-4], [16:0-2-0,Edge], [24:0-2-0,Edge], [47:0-2-8,0-3-0]

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	0.64	Vert(LL)	n/a	-	n/a	999	MT18HS	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(TL)	n/a	-	n/a	999	MT20	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horiz(TL)	0.00	30	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 256 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 29-30:2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 16-24.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 20-39, 21-37, 22-36, 23-35, 25-34, 26-33, 27-32, 19-40, 18-41, 17-42, 15-43, 14-44, 13-45

REACTIONS (size) 30=33-6-7, 31=33-6-7, 32=33-6-7, 33=33-6-7, 34=33-6-7, 35=33-6-7, 36=33-6-7, 37=33-6-7, 39=33-6-7, 40=33-6-7, 41=33-6-7, 42=33-6-7, 43=33-6-7, 44=33-6-7, 45=33-6-7, 46=33-6-7, 47=33-6-7, 48=33-6-7, 49=33-6-7, 50=33-6-7, 51=33-6-7, 52=33-6-7, 53=33-6-7, 54=33-6-7, 55=33-6-7, 56=33-6-7

Max Horiz 56=250 (LC 12)

Max Uplift 30=-37 (LC 12), 31=-25 (LC 13), 32=-40 (LC 13), 33=-29 (LC 13), 35=-19 (LC 8), 36=-26 (LC 9), 37=-25 (LC 9), 39=-24 (LC 8), 40=-25 (LC 9), 41=-27 (LC 9), 42=-20 (LC 8), 44=-31 (LC 12), 45=-33 (LC 12), 46=-46 (LC 12), 47=-15 (LC 12), 48=-47 (LC 12), 49=-31 (LC 12), 50=-33 (LC 12), 51=-36 (LC 12), 52=-28 (LC 12), 53=-60 (LC 12), 55=-734 (LC 12)

Max Grav 30=54 (LC 1), 31=132 (LC 26), 32=120 (LC 1), 33=120 (LC 26), 34=119 (LC 26), 35=120 (LC 26), 36=122 (LC 25), 37=120 (LC 25), 39=120 (LC 1), 40=120 (LC 26), 41=122 (LC 26), 42=120 (LC 25), 43=119 (LC 25), 44=120 (LC 25), 45=120 (LC 1), 46=121 (LC 25), 47=120 (LC 1), 48=120 (LC 25), 49=120 (LC 1), 50=120 (LC 1), 51=120 (LC 25), 52=120 (LC 1), 53=120 (LC 25), 54=143 (LC 21), 55=127 (LC 25), 56=676 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-56=-379/106, 1-2=-394/121, 2-3=-221/72, 3-5=-207/67, 5-6=-182/57, 6-7=-156/47, 7-8=-131/38, 8-9=-105/36, 9-10=-81/41, 10-11=-52/48, 11-12=-40/64, 12-13=-24/96, 13-14=-32/124, 14-15=-41/149, 15-16=-42/152, 16-17=-39/150, 17-18=-38/149, 18-19=-38/149, 19-20=-38/149, 20-21=-38/149, 21-22=-38/149, 22-23=-38/149, 23-24=-39/150, 24-25=-42/153, 25-26=-41/147, 26-27=-32/111, 27-28=-22/69, 28-29=-13/30, 29-30=-43/52

BOT CHORD 55-56=-5/2, 54-55=-5/2, 53-54=-5/2, 52-53=-5/2, 51-52=-5/2, 50-51=-5/2, 49-50=-5/2, 48-49=-5/2, 46-48=-6/2, 45-46=-6/2, 44-45=-6/2, 43-44=-6/2, 42-43=-6/2, 41-42=-6/2, 40-41=-6/2, 39-40=-6/2, 37-39=-6/2, 36-37=-6/2, 35-36=-6/2, 34-35=-6/2, 33-34=-6/2, 32-33=-6/2, 31-32=-6/2, 30-31=-6/2

WEBS 20-39=-93/46, 21-37=-93/47, 22-36=-95/50, 23-35=-94/39, 25-34=-92/13, 26-33=-93/77, 27-32=-94/94, 28-31=-101/85, 19-40=-93/47, 18-41=-95/50, 17-42=-94/39, 15-43=-93/16, 14-44=-94/51, 13-45=-93/58, 12-46=-93/71, 11-47=-93/43, 10-48=-93/71, 9-49=-93/54, 8-50=-93/57, 7-51=-93/57, 6-52=-93/73, 5-53=-93/91, 3-54=-94/47, 2-55=-154/434

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 4-11-5 to 10-2-0, Exterior(2N) 10-2-0 to 22-4-13, Corner(3R) 22-4-13 to 27-6-0, Exterior(2N) 27-6-0 to 32-7-3, Corner(3R) 32-7-3 to 37-7-3, Exterior(2N) 37-7-3 to 38-2-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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

April 14,2023

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758148
P230180-01	A7	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) All plates are 1.5x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 1-4-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	C1	Common Supported Gable	2	1	I57758149 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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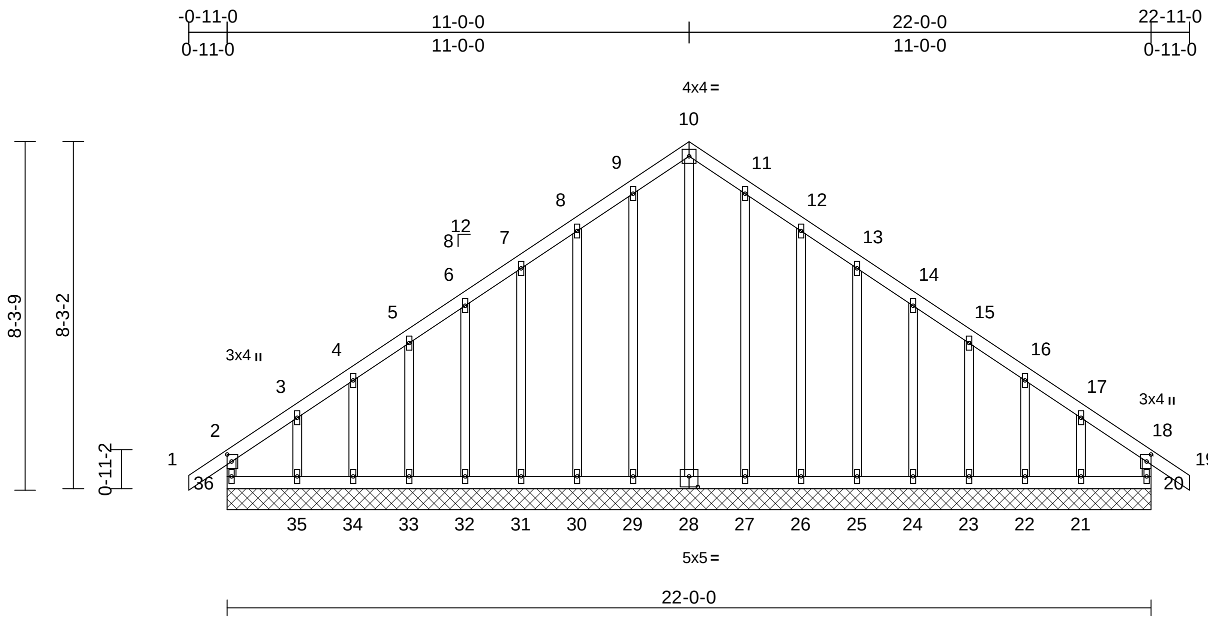

Scale = 1:54.9

Plate Offsets (X, Y): [2:0-2-0,0-1-4], [18:0-2-0,0-1-4], [28:0-2-8,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.36	Horz(CT)	0.00	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 130 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 20=22-0-0, 21=22-0-0, 22=22-0-0, 23=22-0-0, 24=22-0-0, 25=22-0-0, 26=22-0-0, 27=22-0-0, 28=22-0-0, 29=22-0-0, 30=22-0-0, 31=22-0-0, 32=22-0-0, 33=22-0-0, 34=22-0-0, 35=22-0-0, 36=22-0-0
Max Horiz 36=-234 (LC 10)
Max Uplift 20=-69 (LC 9), 21=-116 (LC 13), 22=-29 (LC 13), 23=-52 (LC 13), 24=-47 (LC 13), 25=-48 (LC 13), 26=-59 (LC 13), 27=-16 (LC 13), 29=-19 (LC 12), 30=-58 (LC 12), 31=-48 (LC 12), 32=-47 (LC 12), 33=-52 (LC 12), 34=-26 (LC 12), 35=-127 (LC 12), 36=-103 (LC 8)
Max Grav 20=178 (LC 19), 21=168 (LC 20), 22=118 (LC 26), 23=124 (LC 20), 24=121 (LC 20), 25=121 (LC 20), 26=123 (LC 20), 27=122 (LC 20), 28=202 (LC 13), 29=125 (LC 19), 30=122 (LC 19), 31=121 (LC 19), 32=120 (LC 19), 33=125 (LC 19), 34=118 (LC 25), 35=184 (LC 19), 36=205 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-36=-167/84, 1-2=0/38, 2-3=-153/147, 3-4=-115/114, 4-5=-108/116, 5-6=-95/141, 6-7=-92/171, 7-8=-116/215, 8-9=-144/266, 9-10=-155/288, 10-11=-155/288, 11-12=-144/266, 12-13=-116/215, 13-14=-92/171, 14-15=-68/128, 15-16=-72/98, 16-17=-80/82, 17-18=-115/106, 18-19=0/38, 18-20=-146/68
BOT CHORD 35-36=-105/117, 34-35=-105/117, 33-34=-105/117, 32-33=-105/117, 31-32=-105/117, 30-31=-105/117, 29-30=-105/117, 27-29=-105/117, 26-27=-105/117, 25-26=-105/117, 24-25=-105/117, 23-24=-105/117, 22-23=-105/117, 21-22=-105/117, 20-21=-105/117
WEBS 10-28=-237/92, 9-29=-100/34, 8-30=-96/77, 7-31=-95/63, 6-32=-95/63, 5-33=-96/70, 4-34=-93/74, 3-35=-121/104, 11-27=-96/32, 12-26=-97/77, 13-25=-95/63, 14-24=-95/63, 15-23=-96/70, 16-22=-93/74, 17-21=-113/99

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-4-0, Exterior(2N) 4-4-0 to 11-0-0, Corner(3R) 11-0-0 to 16-0-0, Exterior(2N) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 36, 69 lb uplift at joint 20, 19 lb uplift at joint 29, 58 lb uplift at joint 30, 48 lb uplift at joint 31, 47 lb uplift at joint 32, 52 lb uplift at joint 33, 26 lb uplift at joint 34, 127 lb uplift at joint 35, 16 lb uplift at joint 27, 59 lb uplift at joint 26, 48 lb uplift at joint 25, 47 lb uplift at joint 24, 52 lb uplift at joint 23, 29 lb uplift at joint 22 and 116 lb uplift at joint 21.
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.

LOAD CASE(S) Standard

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

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758150
P230180-01	C2	Common	2	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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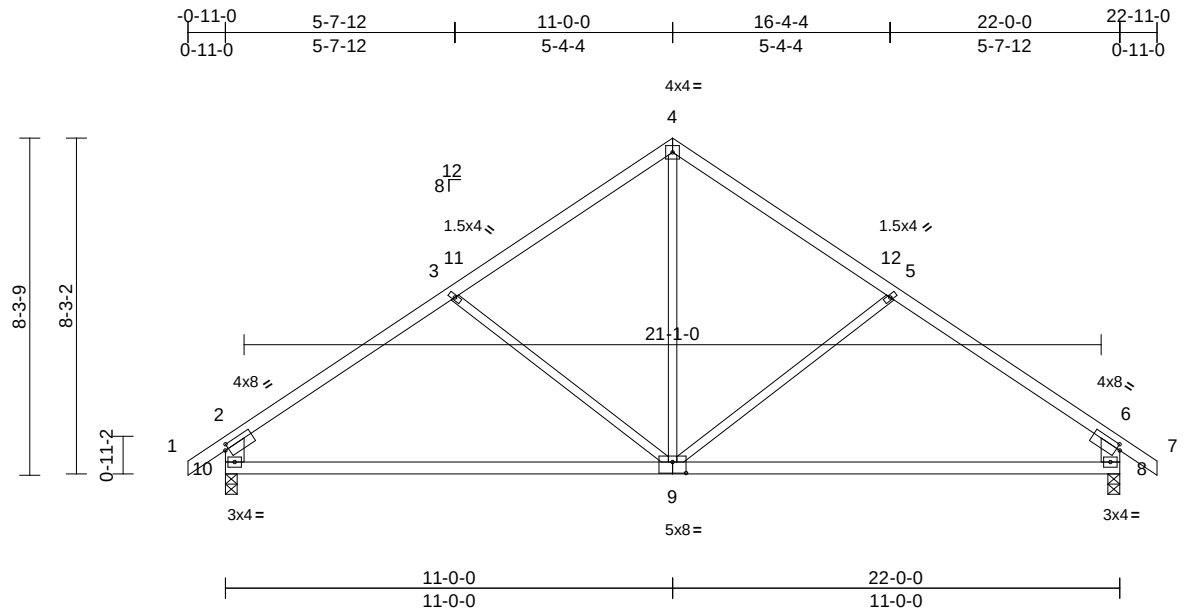

Scale = 1:56.7

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

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	0.82	Vert(LL)	-0.24	8-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.48	8-9	>535	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.35	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 96 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 10-2,8-6:2x6 SP 2400F 2.0E

BRACING
TOP CHORD Sheathed or 5-0-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 10=0-3-8
Max Horiz 10=-245 (LC 10)
Max Uplift 8=-149 (LC 13), 10=-149 (LC 12)
Max Grav 8=1050 (LC 1), 10=1050 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-1209/214, 3-4=-927/200, 4-5=-927/200, 5-6=-1209/214, 6-7=0/44, 2-10=-937/221, 6-8=-937/221
BOT CHORD 8-10=-176/924
WEBS 4-9=-67/539, 5-9=-294/246, 3-9=-294/246

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 11-0-0, Exterior(2R) 11-0-0 to 16-0-0, Interior (1) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 149 lb uplift at joint 10 and 149 lb uplift at joint 8.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758151
P230180-01	C3	Common	9	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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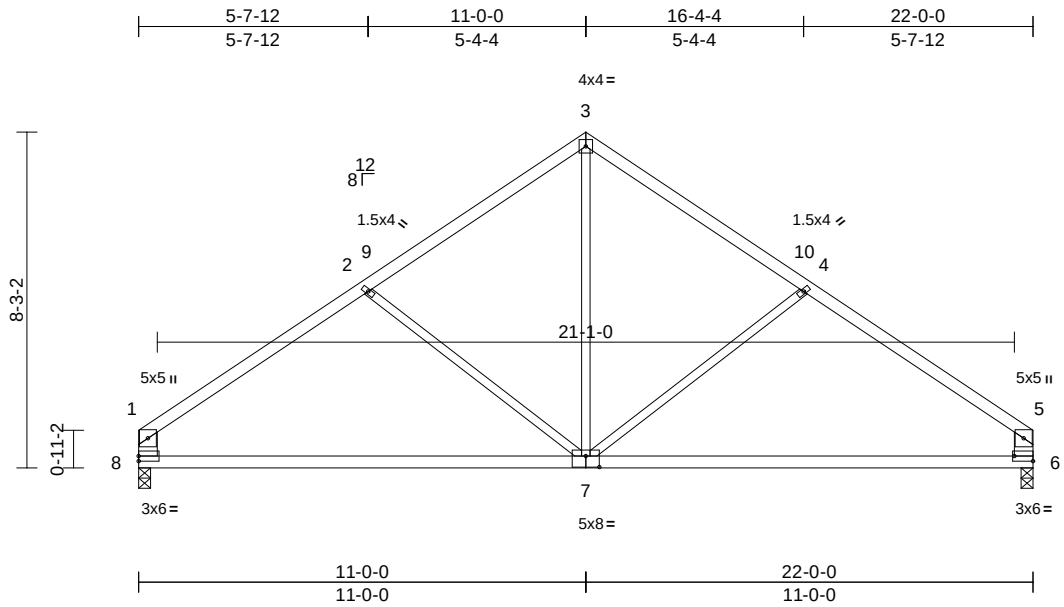

Scale = 1:56.7

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

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	0.95	Vert(LL)	-0.24	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.48	7-8	>535	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 92 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 8-1,6-5:2x6 SP 2400F 2.0E

BRACING
TOP CHORD Sheathed or 3-7-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6=0-3-8, 8=0-3-8
Max Horiz 8=224 (LC 11)
Max Uplift 6=-121 (LC 13), 8=-121 (LC 12)
Max Grav 6=969 (LC 1), 8=969 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1217/216, 2-3=-927/200, 3-4=-927/200, 4-5=-1217/216, 1-8=-845/173, 5-6=-845/173
BOT CHORD 6-8=-192/928
WEBS 3-7=-67/540, 4-7=-314/251, 2-7=-314/251

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 5-6-5, Interior (1) 5-6-5 to 11-0-0, Exterior(2R) 11-0-0 to 16-0-0, Interior (1) 16-0-0 to 21-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 8 and 121 lb uplift at joint 6.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758152
P230180-01	CJ1	Diagonal Hip Girder	4	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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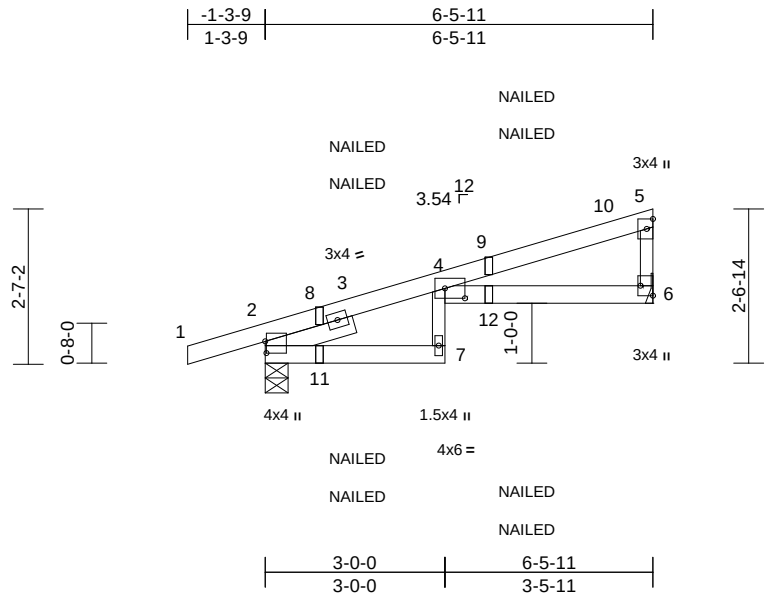

Scale = 1:38.5

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

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	0.73	Vert(LL)	-0.16	7	>492	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.22	7	>347	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.11	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 26 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 7-4:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-6

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-4-9, 6= Mechanical
Max Horiz 2=85 (LC 31)
Max Uplift 2=-106 (LC 8), 6=-90 (LC 12)
Max Grav 2=282 (LC 1), 6=280 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-4=-217/50, 4-5=-104/51, 5-6=-163/170
BOT CHORD 2-7=-15/17, 4-7=-29/61, 4-6=-90/91

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-3-9 to 5-9-5, Exterior(2R) 5-9-5 to 6-4-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) 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.
5) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
6) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-5=-70, 2-7=-20, 4-6=-20
Concentrated Loads (lb)
Vert: 8=88 (F=44, B=44), 11=52 (F=26, B=26), 12=-38 (F=-19, B=-19)

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	
P230180-01	D1	Common Structural Gable	1	1	Job Reference (optional)	I57758153

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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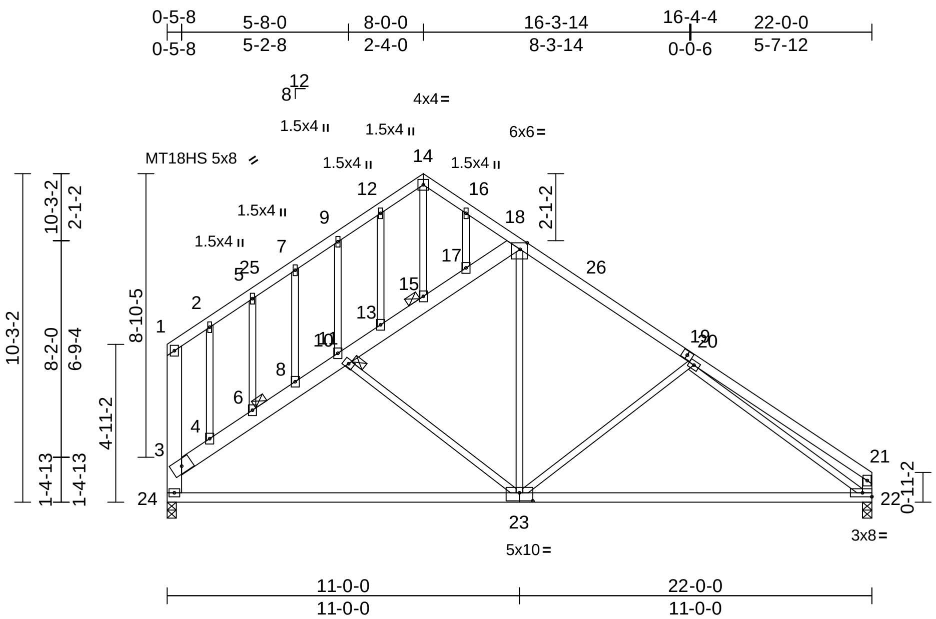

Scale = 1:72

Plate Offsets (X, Y): [18:0-2-10,Edge], [23:0-5-0,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.25	22-23	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.51	22-23	>510	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.03	22	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 146 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-18:2x6 SPF No.2
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 24-1:2x6 SPF No.2, 22-21:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 5-10-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 11, 15, 6

REACTIONS (size) 22=0-3-8, 24=0-3-8
Max Horiz 24=-325 (LC 8)
Max Uplift 22=-125 (LC 13), 24=-120 (LC 13)
Max Grav 22=943 (LC 1), 24=943 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-102/94, 2-5=-107/115, 5-7=-120/146, 7-9=-136/180, 9-12=-161/221, 12-14=-180/260, 14-16=-186/268, 16-18=-185/234, 18-20=-933/198, 20-21=-454/92, 3-24=-846/201, 1-3=-94/79, 21-22=-375/109, 3-4=-1189/283, 4-6=-1109/237, 6-8=-1074/219, 8-10=-1034/199, 10-11=-985/171, 11-13=-937/152, 13-15=-917/131, 15-17=-823/190, 17-18=-795/162
BOT CHORD 22-24=-121/898
WEBS 18-23=-9/529, 20-23=-294/239, 11-23=-224/78, 20-22=-773/167, 14-15=-232/132, 12-13=-80/58, 9-10=-118/68, 7-8=-77/50, 5-6=-73/48, 2-4=-146/83, 16-17=-56/51

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 5-4-0, Interior (1) 5-4-0 to 8-0-0, Exterior(2R) 8-0-0 to 13-0-0, Interior (1) 13-0-0 to 21-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x4 MT20 unless otherwise indicated.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758154
P230180-01	D2	Common	8	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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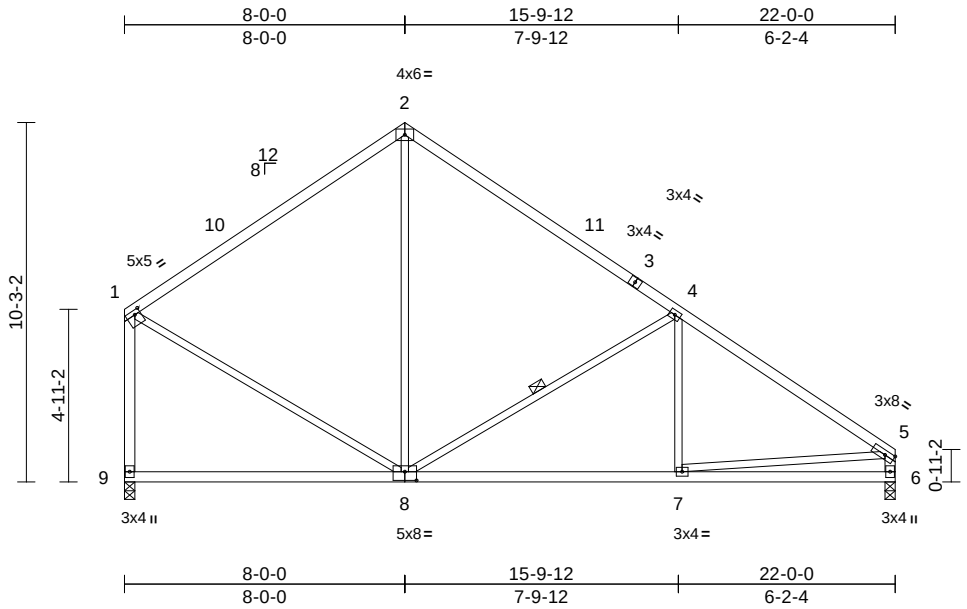

Scale = 1:65.8

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

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	0.91	Vert(LL)	-0.09	8-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.19	8-9	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.45	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 111 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 2-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 9-1,6-5:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 4-5-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-8

REACTIONS (size) 6=0-3-8, 9=0-3-8
Max Horiz 9=-334 (LC 8)
Max Uplift 6=-129 (LC 13), 9=-123 (LC 13)
Max Grav 6=977 (LC 1), 9=977 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-782/207, 2-4=-795/221, 4-5=-1283/189, 1-9=-907/189, 5-6=-921/159
BOT CHORD 7-9=-239/990, 6-7=-51/190
WEBS 2-8=-21/325, 1-8=-73/588, 5-7=-56/806, 4-8=-594/281, 4-7=0/222

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 8-0-0, Exterior(2R) 8-0-0 to 13-0-0, Interior (1) 13-0-0 to 21-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) 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

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	
P230180-01	E1	Hip Girder	2	1	Job Reference (optional)	I57758155

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:35 Page: 1

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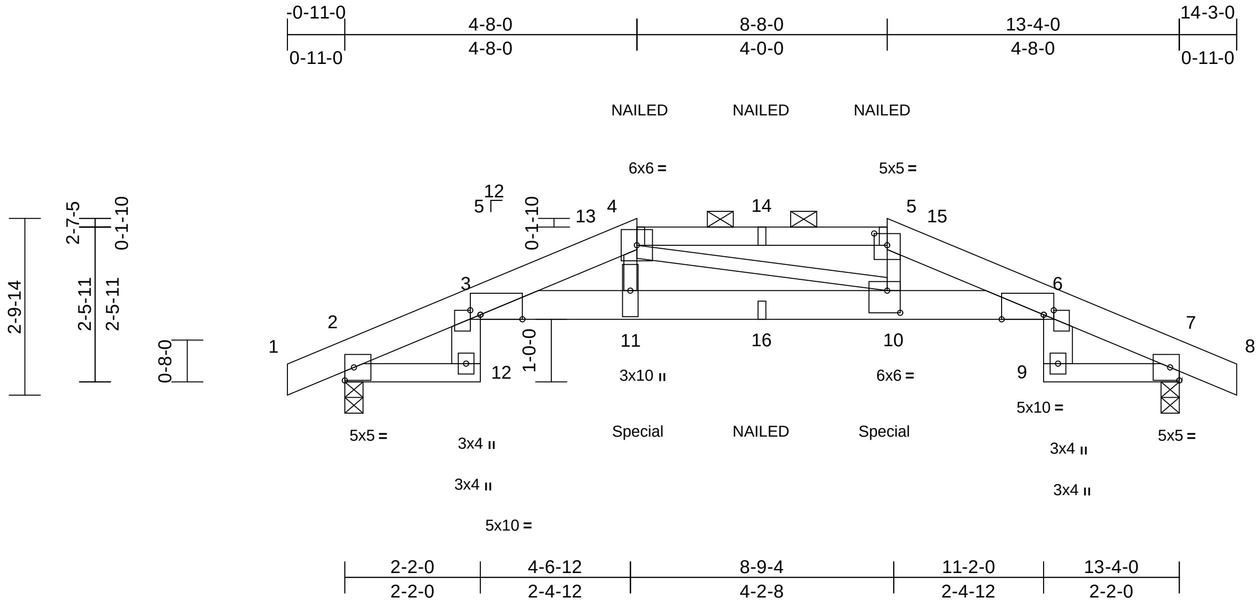

Scale = 1:36.8

Plate Offsets (X, Y): [3:0-8-1,Edge], [3:0-0-14,0-1-15], [5:0-2-8,0-2-4], [6:0-8-1,Edge], [6:0-0-14,0-1-15], [10:0-2-8,0-4-4]

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	0.72	Vert(LL)	-0.16	10-11	>976	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.27	10-11	>574	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.26	Horz(CT)	0.25	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 70 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 4-5:2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 12-3,6-9:2x6 SPF No.2, 3-6:2x6 SP 2400F 2.0E

WEBS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 4-11-11 oc purlins, except 2-0-0 oc purlins (2-9-8 max.): 4-5.

BOT CHORD Rigid ceiling directly applied or 9-11-10 oc bracing.

REACTIONS (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=-42 (LC 17)
Max Uplift 2=-288 (LC 12), 7=-288 (LC 13)
Max Grav 2=1079 (LC 1), 7=1079 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/8, 2-3=-590/228, 3-4=-3520/1180, 4-5=-3132/1082, 5-6=-3372/1123, 6-7=-590/227, 7-8=0/8

BOT CHORD 2-12=-9/33, 3-12=-24/119, 3-11=-1031/3339, 10-11=-1012/3269, 6-10=-976/3197, 6-9=-24/119, 7-9=-9/33

WEBS 4-11=-205/748, 4-10=-235/90, 5-10=-187/704

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 4-8-0, Exterior(2E) 4-8-0 to 14-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 310 lb down and 128 lb up at 4-8-0, and 310 lb down and 128 lb up at 8-7-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 6-8=-70, 2-12=-20, 3-6=-20, 7-9=-20
Concentrated Loads (lb)
Vert: 4=-52 (B), 5=-52 (B), 11=-310 (B), 10=-310 (B), 14=-52 (B), 16=-59 (B)

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758156
P230180-01	E2	Roof Special	2	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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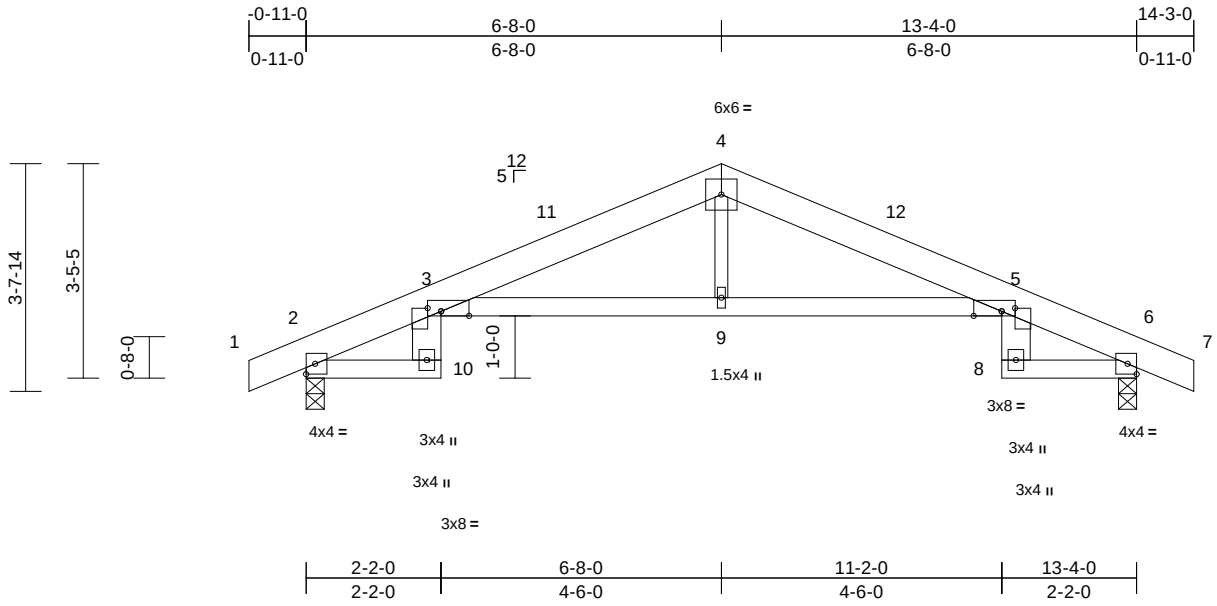

Scale = 1:37

Plate Offsets (X, Y): [3:0-5-6,Edge], [3:0-0-10,0-2-9], [5:0-5-6,Edge], [5:0-0-10,0-2-9]

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	3-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.28	3-9	>565	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.26	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 55 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SP No.2 *Except* 10-3:2x6 SPF No.2, 5-8:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 4-10-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-58 (LC 17)
Max Uplift 2=-109 (LC 12), 6=-109 (LC 13)
Max Grav 2=661 (LC 1), 6=661 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/8, 2-3=-350/149, 3-4=-1192/384, 4-5=-1192/392, 5-6=-352/139, 6-7=0/8
BOT CHORD 2-10=-6/24, 3-10=-14/88, 3-9=-254/1110, 5-9=-254/1110, 5-8=-13/89, 6-8=-5/25
WEBS 4-9=0/264

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-0, Exterior(2R) 6-8-0 to 11-4-12, Interior (1) 11-4-12 to 14-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) 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 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758157
P230180-01	E3	Roof Special	4	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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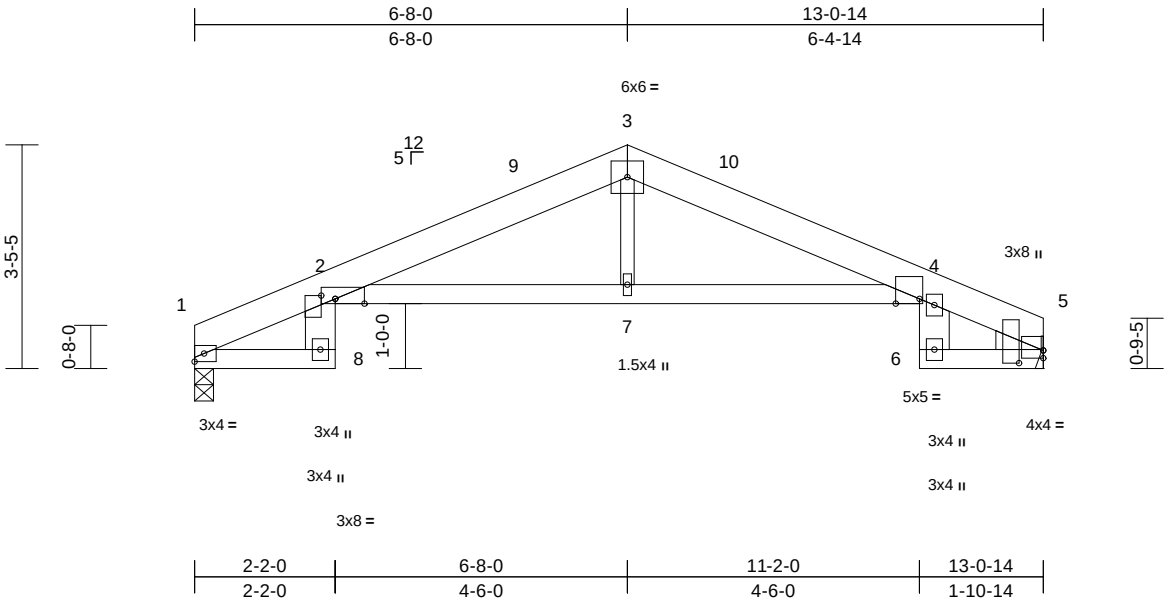

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Plate Offsets (X, Y): [2:0-5-6,Edge], [2:0-0-10,0-2-9], [4:0-4-6,Edge], [5:Edge,0-1-7], [5:0-2-6,0-4-8]

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	0.84	Vert(LL)	-0.15	2-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.27	2-7	>563	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.26	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 51 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SP No.2 *Except* 8-2,4-6:2x6 SPF No.2
WEBS 2x3 SPF No.2
WEDGE Right: 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5= Mechanical
Max Horiz 1=56 (LC 12)
Max Uplift 1=-82 (LC 12), 5=-81 (LC 13)
Max Grav 1=579 (LC 1), 5=579 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-353/152, 2-3=-1182/406, 3-4=-1187/418, 4-5=-377/151
BOT CHORD 1-8=-7/27, 2-8=-20/97, 2-7=-285/1102, 4-7=-285/1102, 4-6=-20/97, 5-6=-6/23
WEBS 3-7=0/261

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-4-12, Interior (1) 11-4-12 to 13-0-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Refer to girder(s) for truss to truss connections.
5) 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 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758158
P230180-01	E5	Common Girder	2	2	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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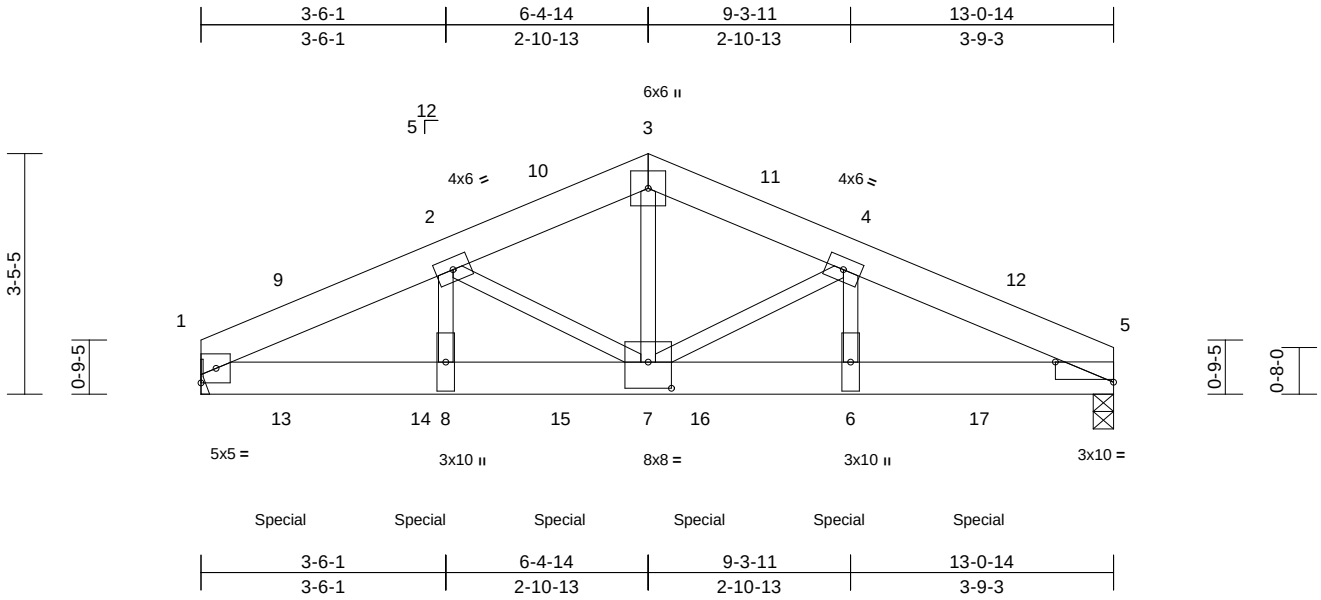


Scale = 1:33

Plate Offsets (X, Y): [1:Edge,0-2-8], [5:0-10-0,Edge], [7:0-4-0,0-4-8]

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	0.39	Vert(LL)	-0.07	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.12	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 131 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1= Mechanical, 5=0-3-8, (req. 0-3-12)
Max Horiz 1=-54 (LC 17)
Max Uplift 1=-727 (LC 12), 5=-669 (LC 13)
Max Grav 1=5223 (LC 1), 5=4791 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8515/1409, 2-3=-6488/1121, 3-4=-6486/1120, 4-5=-8657/1435
BOT CHORD 1-8=-1222/7552, 7-8=-1222/7552, 6-7=-1239/7748, 5-6=-1239/7748
WEBS 2-8=-265/2217, 2-7=-1837/367, 3-7=-698/4472, 4-7=-2062/406, 4-6=-270/2258

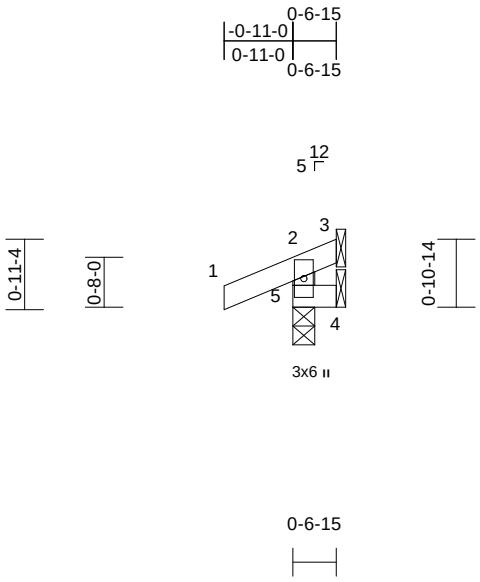
NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc,
Except member 4-6 2x3 - 1 row at 0-2-0 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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 5-0-12, Interior (1) 5-0-12 to 6-4-14, Exterior(2R) 6-4-14 to 11-4-14, Interior (1) 11-4-14 to 12-11-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) WARNING: Required bearing size at joint(s) 5 greater than input bearing size.
7) Refer to girder(s) for truss to truss connections.
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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1476 lb down and 205 lb up at 1-1-14, 1476 lb down and 205 lb up at 3-1-14, 1476 lb down and 205 lb up at 5-1-14, 1476 lb down and 205 lb up at 7-1-14, and 1476 lb down and 205 lb up at 9-1-14, and 1476 lb down and 205 lb up at 11-1-14 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 6=-1476 (F), 13=-1476 (F), 14=-1476 (F), 15=-1476 (F), 16=-1476 (F), 17=-1476 (F)

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	J1	Jack-Open	8	1	Job Reference (optional) I57758159



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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	0.10	Vert(LL)	0.00	5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 4 lb	FT = 20%

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

BRACING
TOP CHORD Sheathed or 0-6-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=24 (LC 9)
Max Uplift 3=-56 (LC 1), 4=-19 (LC 1), 5=-67 (LC 8)
Max Grav 3=25 (LC 8), 4=5 (LC 8), 5=187 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-160/154, 1-2=0/29, 2-3=-33/19
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) 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 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	J2	Jack-Open	8	1	I57758160 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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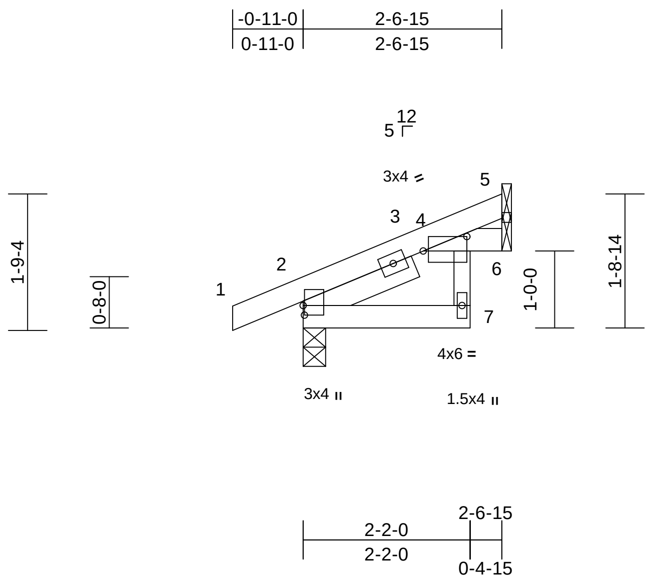

Scale = 1:29.9

Plate Offsets (X, Y): [2:0-1-8,0-0-3], [4:0-6-13,0-2-4]

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	0.16	Vert(LL)	0.00	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 13 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 7-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-8

BRACING

TOP CHORD Sheathed or 2-6-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=60 (LC 12)
Max Uplift 2=-31 (LC 12), 5=-24 (LC 12), 6=-7 (LC 12)
Max Grav 2=192 (LC 1), 5=62 (LC 1), 6=49 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-4=-57/23, 4-5=-25/22
BOT CHORD 2-7=-14/0, 4-7=0/41, 4-6=0/0

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) 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

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	
P230180-01	J3	Jack-Open	6	1	Job Reference (optional)	I57758161

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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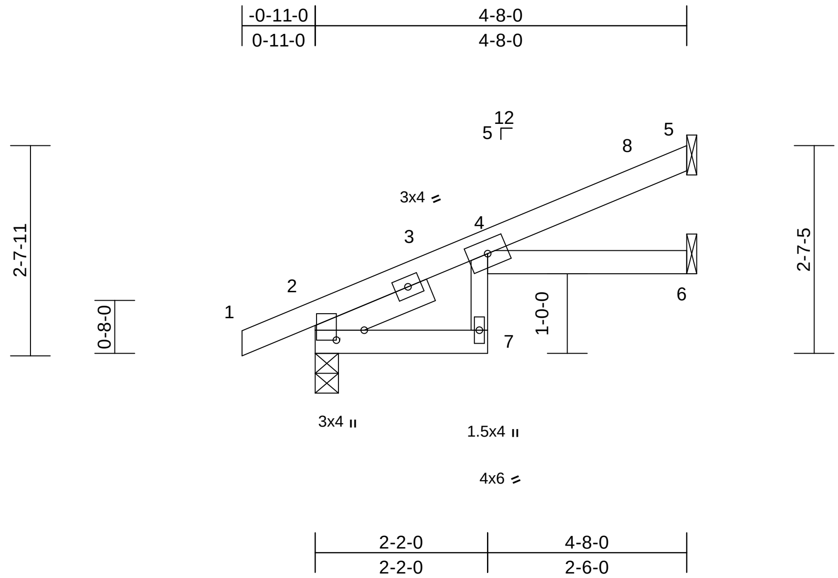

Scale = 1:28.9

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

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	0.58	Vert(LL)	0.05	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.07	7	>804	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 19 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 7-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7

BRACING
TOP CHORD Sheathed or 4-8-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=97 (LC 12)
Max Uplift 2=-42 (LC 12), 5=-55 (LC 12), 6=-9 (LC 12)
Max Grav 2=278 (LC 1), 5=122 (LC 1), 6=79 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/1, 2-4=-136/0, 4-5=-55/40
BOT CHORD 2-7=-10/14, 4-7=-20/57, 4-6=-6/6

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 4-7-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 5, 42 lb uplift at joint 2 and 9 lb uplift at joint 6.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758162
P230180-01	PB1	Piggyback	2	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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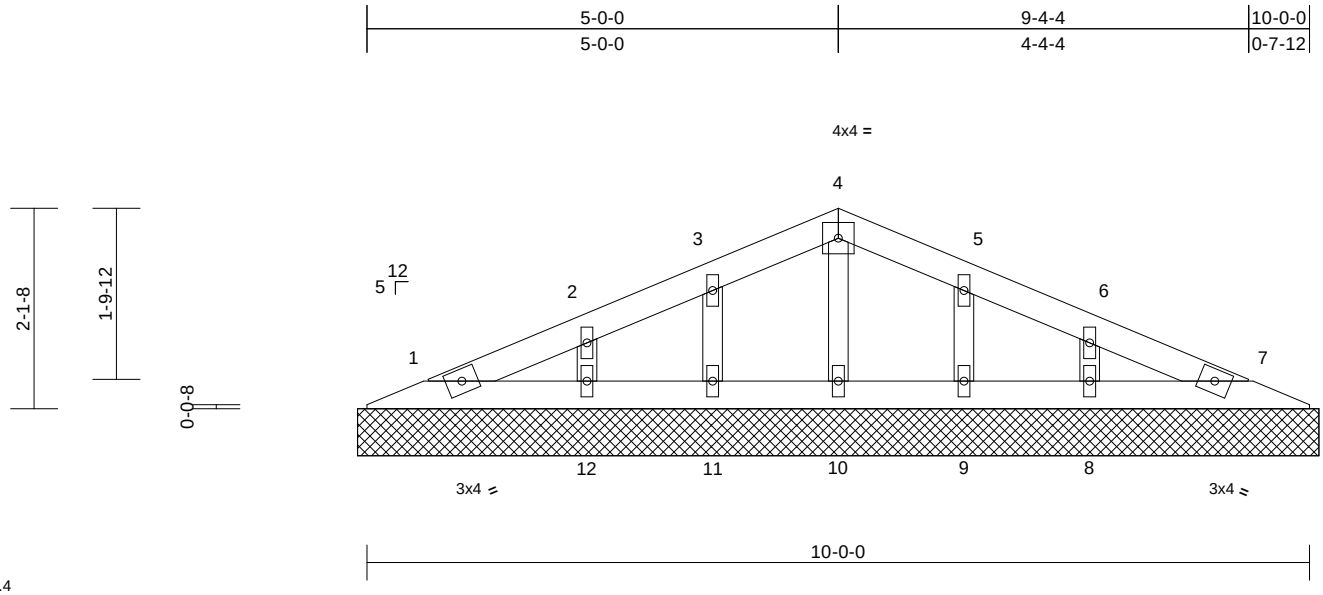

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=10-2-6, 7=10-2-6, 8=10-2-6, 9=10-2-6, 10=10-2-6, 11=10-2-6, 12=10-2-6
Max Horiz 1=33 (LC 12)
Max Uplift 1=-6 (LC 13), 7=-6 (LC 13), 8=-46 (LC 13), 9=-32 (LC 13), 11=-33 (LC 12), 12=-46 (LC 12)
Max Grav 1=65 (LC 1), 7=65 (LC 1), 8=159 (LC 1), 9=114 (LC 26), 10=109 (LC 1), 11=114 (LC 25), 12=159 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-44/27, 2-3=-29/37, 3-4=-35/72, 4-5=-35/75, 5-6=-29/40, 6-7=-33/19
BOT CHORD 1-12=-8/30, 11-12=-8/30, 10-11=-8/30, 9-10=-8/30, 8-9=-8/30, 7-8=-8/30
WEBS 4-10=-80/15, 3-11=-94/92, 2-12=-115/115, 5-9=-94/75, 6-8=-115/94

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758163
P230180-01	PB2	Piggyback	28	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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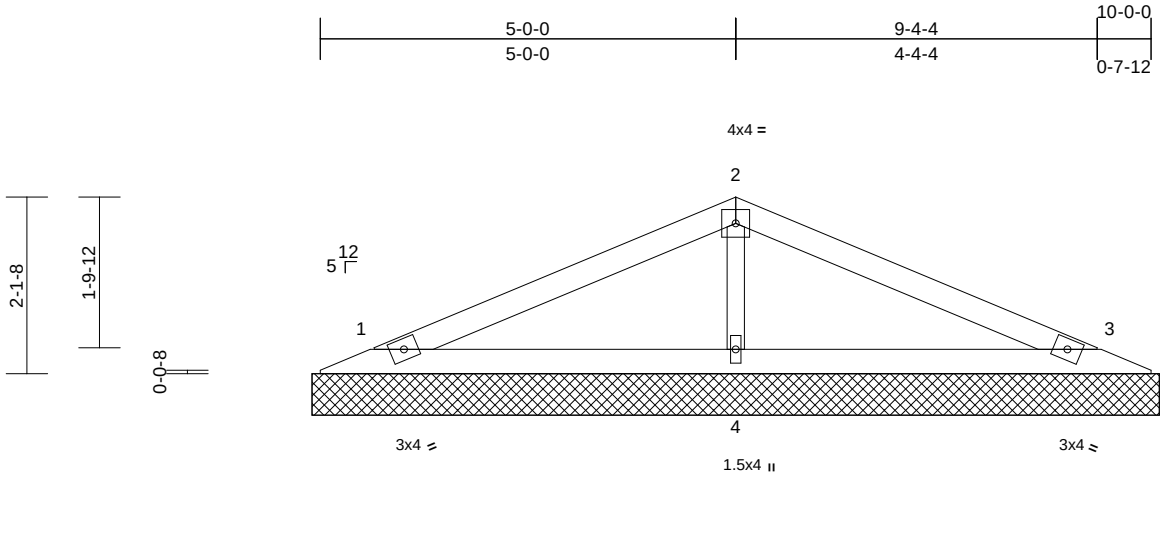

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 30 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=10-2-6, 3=10-2-6, 4=10-2-6
Max Horiz 1=33 (LC 16)
Max Uplift 1=-38 (LC 12), 3=-44 (LC 13), 4=-36 (LC 12)
Max Grav 1=178 (LC 25), 3=178 (LC 26), 4=436 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-92/56, 2-3=-92/61
BOT CHORD 1-4=0/35, 3-4=0/35
WEBS 2-4=-284/191

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	PB3	Piggyback	2	1	I57758164 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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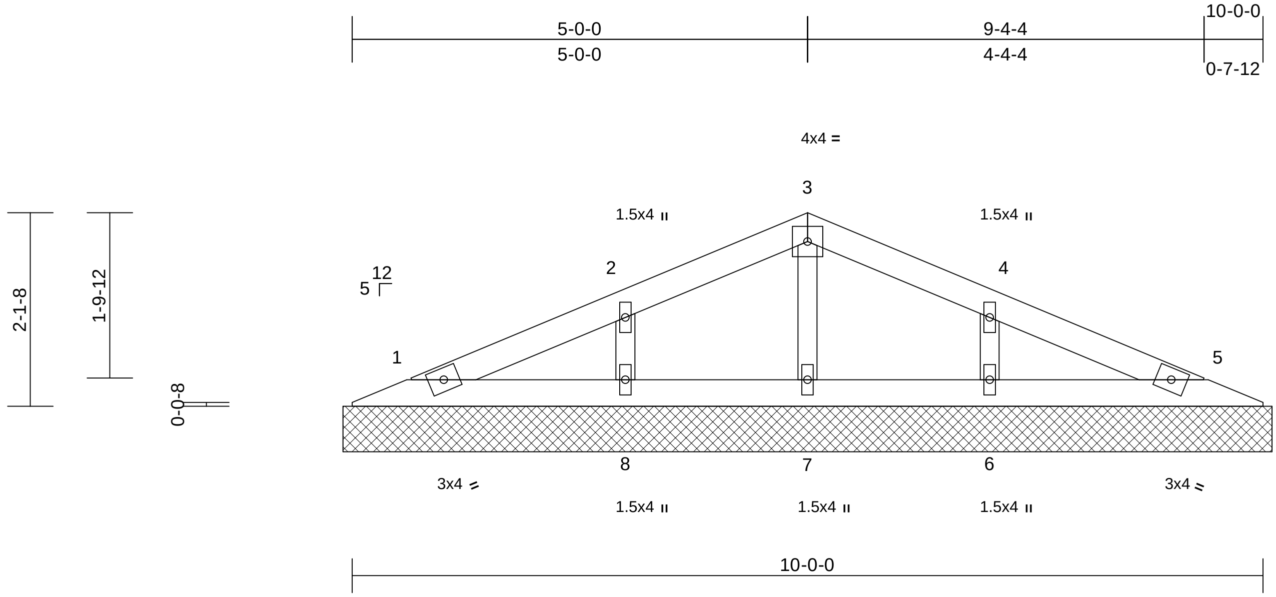

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=10-2-6, 5=10-2-6, 6=10-2-6, 7=10-2-6, 8=10-2-6
Max Horiz 1=33 (LC 16)
Max Uplift 1=-7 (LC 12), 5=-13 (LC 13), 6=-69 (LC 13), 8=-69 (LC 12)
Max Grav 1=89 (LC 1), 5=89 (LC 1), 6=238 (LC 26), 7=132 (LC 1), 8=238 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-48/36, 2-3=-44/70, 3-4=-44/73, 4-5=-40/28
BOT CHORD 1-8=-7/28, 7-8=-7/28, 6-7=-7/28, 5-6=-7/28
WEBS 3-7=-104/38, 2-8=-177/173, 4-6=-177/140

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V1	Valley	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I57758165
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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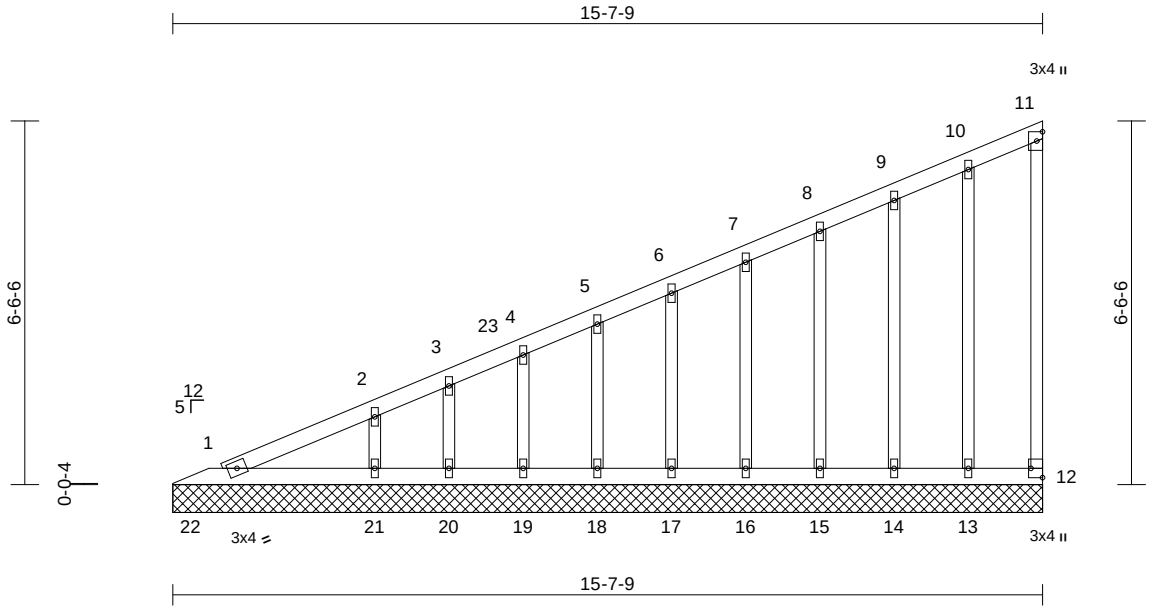

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Plate Offsets (X, Y): [12:Edge,0-2-8]

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	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.08	Horiz(TL)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 75 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-0-13 oc bracing.

REACTIONS (size) 1=15-7-9, 12=15-7-9, 13=15-7-9, 14=15-7-9, 15=15-7-9, 16=15-7-9, 17=15-7-9, 18=15-7-9, 19=15-7-9, 20=15-7-9, 21=15-7-9, 22=15-7-9
Max Horiz 22=280 (LC 9)
Max Uplift 12=-35 (LC 11), 13=-45 (LC 12), 14=-25 (LC 12), 15=-38 (LC 12), 16=-33 (LC 12), 17=-34 (LC 12), 18=-34 (LC 12), 19=-36 (LC 12), 20=-25 (LC 12), 21=-67 (LC 12), 22=-71 (LC 1)
Max Grav 1=208 (LC 20), 12=47 (LC 1), 13=123 (LC 1), 14=122 (LC 1), 15=120 (LC 1), 16=120 (LC 1), 17=120 (LC 1), 18=119 (LC 1), 19=128 (LC 1), 20=83 (LC 1), 21=214 (LC 1), 22=27 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-365/204, 2-3=-312/174, 3-4=-290/169, 4-5=-262/158, 5-6=-236/148, 6-7=-209/137, 7-8=-180/127, 8-9=-151/117, 9-10=-121/107, 10-11=-92/92, 11-12=-40/42
BOT CHORD 1-22=-425/267, 1-21=-107/117, 20-21=-107/117, 19-20=-107/117, 18-19=-107/117, 17-18=-107/117, 16-17=-107/117, 15-16=-107/117, 14-15=-107/117, 13-14=-107/117, 12-13=-107/117
WEBS 10-13=-105/106, 9-14=-95/61, 8-15=-93/61, 7-16=-93/58, 6-17=-93/54, 5-18=-93/53, 4-19=-98/58, 3-20=-69/46, 2-21=-160/110

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-6 to 5-11-6, Interior (1) 5-11-6 to 15-6-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758166
P230180-01	V2	Valley	2	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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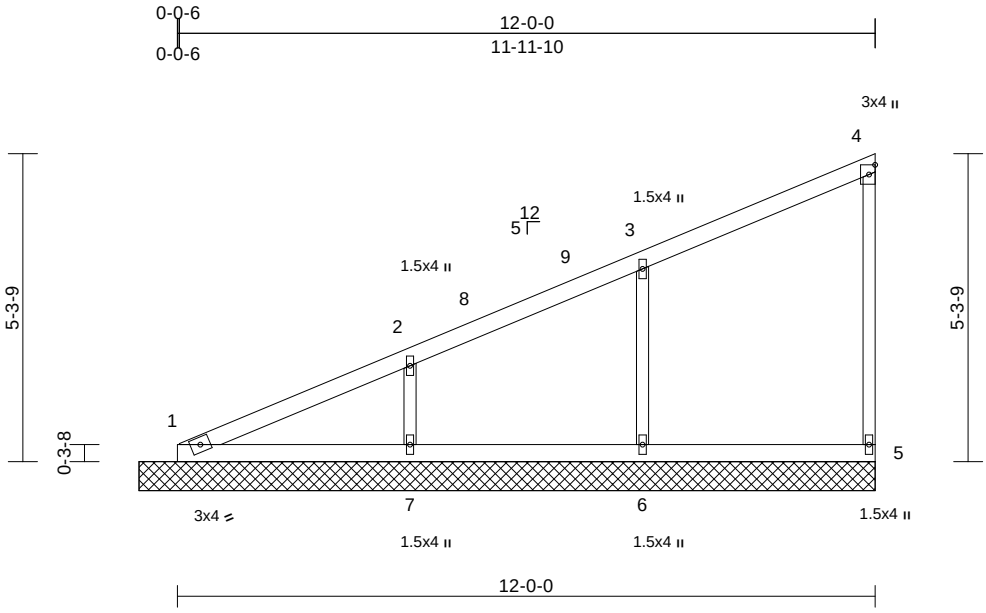

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 45 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-7-15, 5=12-7-15, 6=12-7-15, 7=12-7-15
Max Horiz 1=224 (LC 9)
Max Uplift 5=-32 (LC 9), 6=-109 (LC 12), 7=-114 (LC 12)
Max Grav 1=147 (LC 20), 5=144 (LC 1), 6=384 (LC 1), 7=391 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-308/182, 2-3=-219/141, 3-4=-118/90, 4-5=-110/101
BOT CHORD 1-7=-86/96, 6-7=-86/96, 5-6=-86/96
WEBS 3-6=-303/238, 2-7=-290/216

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-5 to 5-10-5, Interior (1) 5-10-5 to 12-7-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

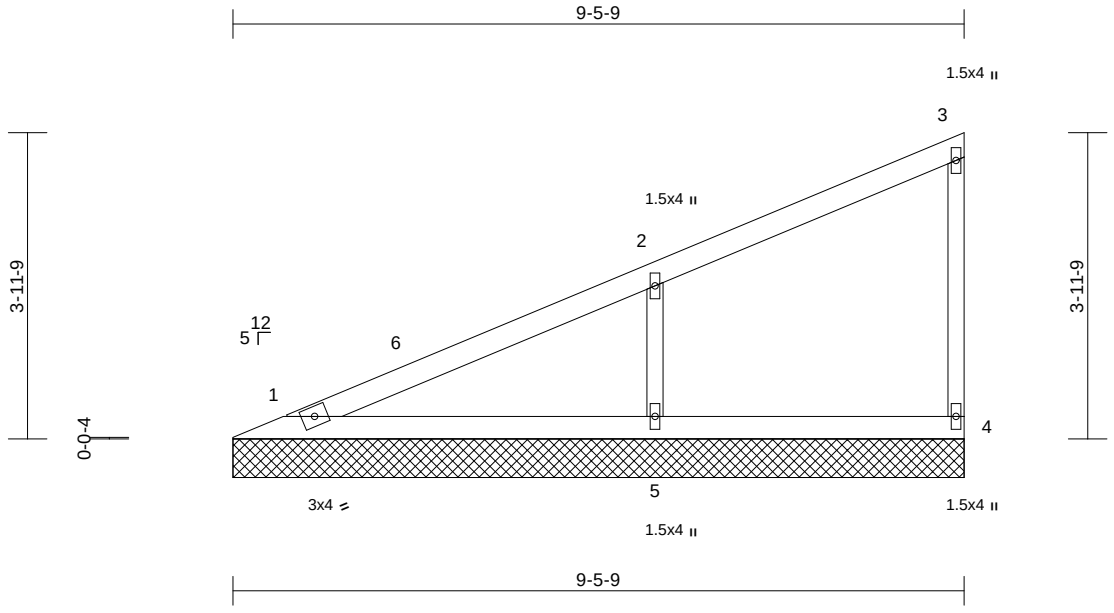
LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758167
P230180-01	V3	Valley	2	1	Job Reference (optional)	



Scale = 1:29.8

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	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=9-5-9, 4=9-5-9, 5=9-5-9
Max Horiz 1=164 (LC 9)
Max Uplift 1=-1 (LC 12), 4=-25 (LC 9), 5=-138 (LC 12)
Max Grav 1=171 (LC 1), 4=123 (LC 1), 5=485 (LC 1)

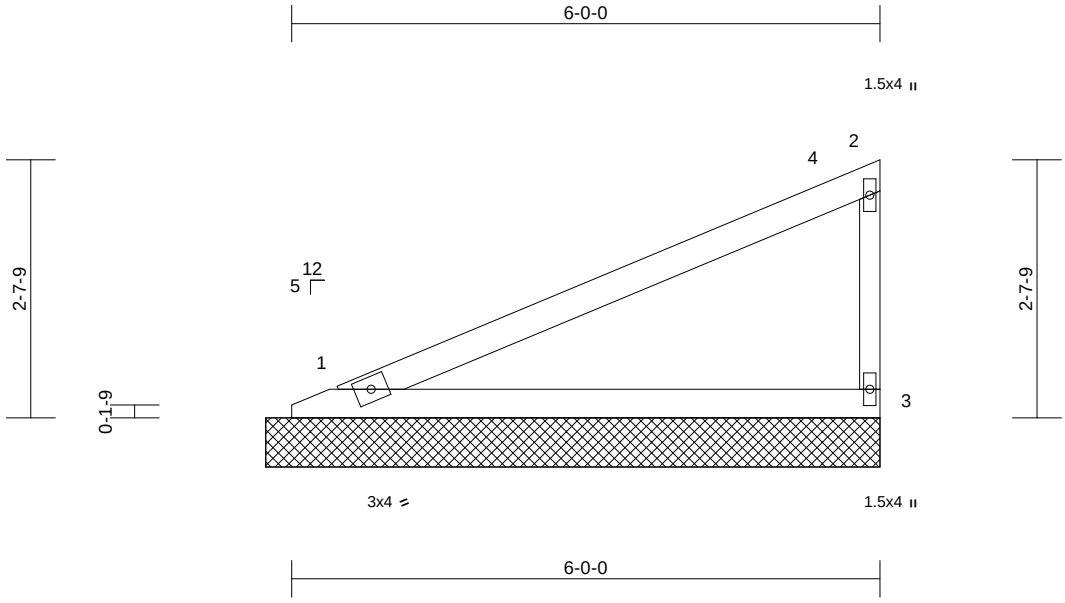
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-234/143, 2-3=-107/73, 3-4=-99/102
BOT CHORD 1-5=-64/73, 4-5=-64/73
WEBS 2-5=-360/300

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-6-3, Interior (1) 5-6-3 to 9-4-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V4	Valley	2	1	Job Reference (optional) I57758168



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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	0.79	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-3-3, 3=6-3-3
Max Horiz 1=103 (LC 9)
Max Uplift 1=-39 (LC 12), 3=-60 (LC 12)
Max Grav 1=244 (LC 1), 3=244 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-133/91, 2-3=-190/209
BOT CHORD 1-3=-45/49

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-8 to 5-9-8, Interior (1) 5-9-8 to 6-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V5	Valley	2	1	I57758169 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:40 Page: 1
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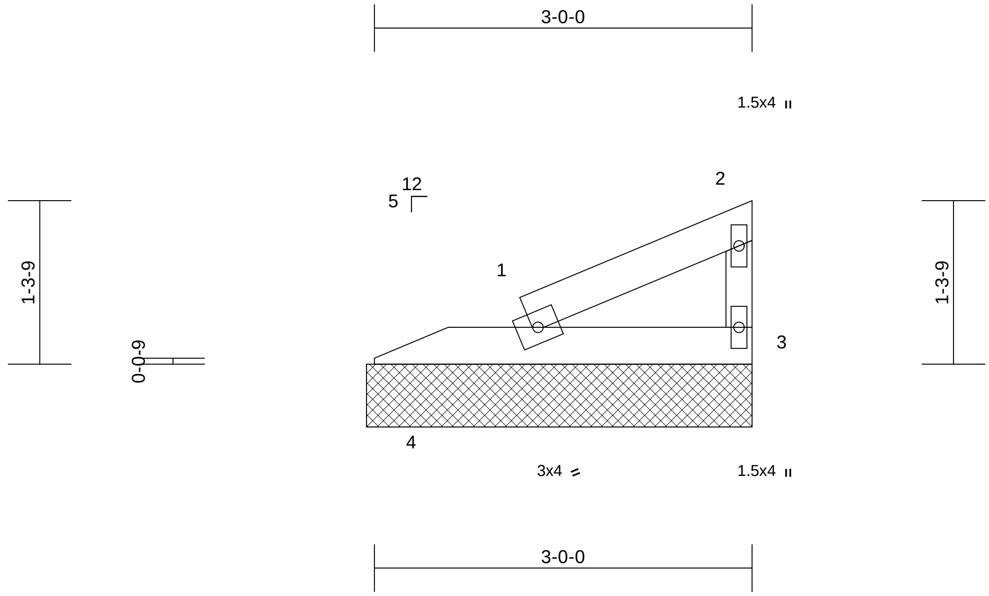

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 3-1-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-0-12, 3=3-0-12, 4=3-0-12
Max Horiz 4=43 (LC 9)
Max Uplift 3=-23 (LC 12)
Max Grav 1=92 (LC 1), 3=71 (LC 1), 4=9 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-60/40, 2-3=-58/78
BOT CHORD 1-4=-96/58, 1-3=-19/21

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

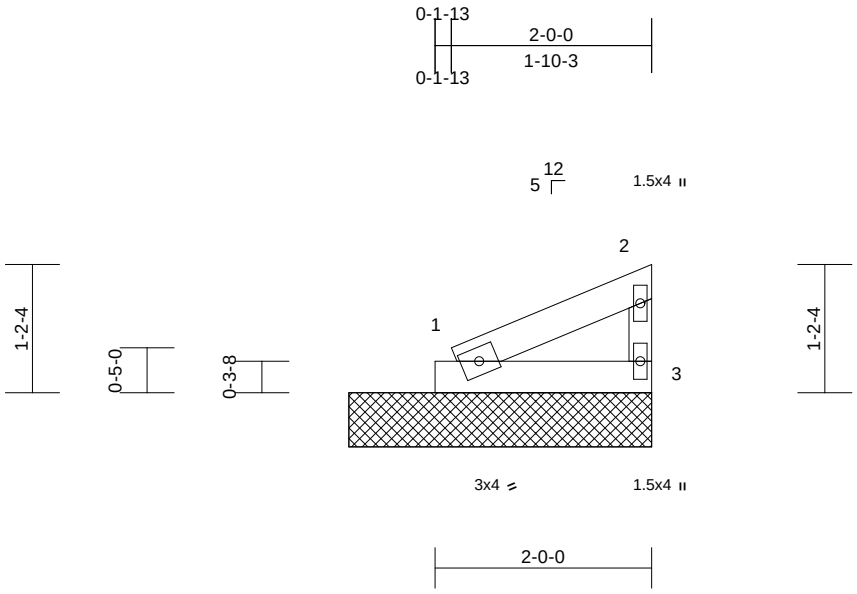
LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758170
P230180-01	V6	Valley	2	1	Job Reference (optional)	



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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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 2-10-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-9-9, 3=2-9-9
Max Horiz 1=38 (LC 9)
Max Uplift 1=-11 (LC 12), 3=-20 (LC 12)
Max Grav 1=76 (LC 1), 3=76 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-51/34, 2-3=-59/73
BOT CHORD 1-3=-17/18

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758171
P230180-01	V7	Valley	2	1	Job Reference (optional)	

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:40 Page: 1
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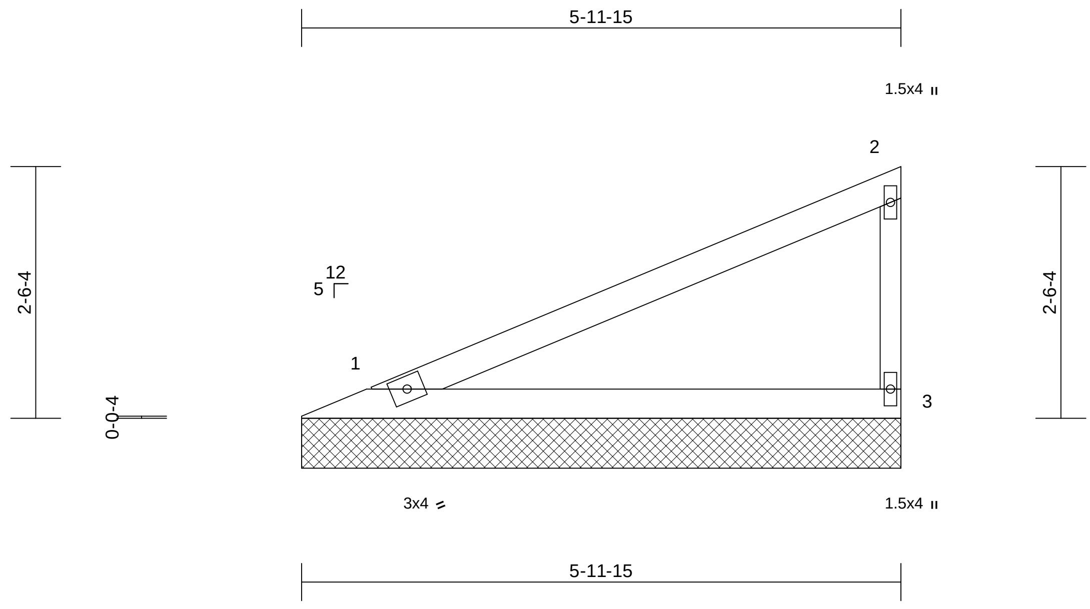


Scale = 1:23.1

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	0.72	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-11-15, 3=5-11-15
Max Horiz 1=98 (LC 9)
Max Uplift 1=-37 (LC 12), 3=-57 (LC 12)
Max Grav 1=233 (LC 1), 3=233 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-126/86, 2-3=-182/200
BOT CHORD 1-3=-43/46

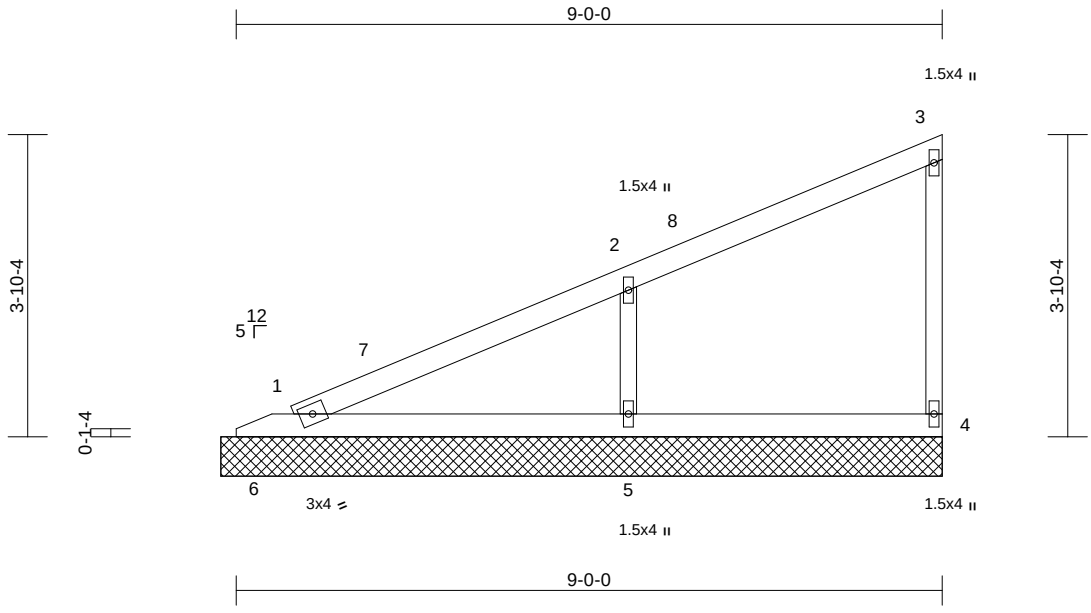
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758172
P230180-01	V8	Valley	1	1	Job Reference (optional)	



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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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=9-2-6, 4=9-2-6, 5=9-2-6, 6=9-2-6
Max Horiz 6=159 (LC 9)
Max Uplift 4=-24 (LC 9), 5=-139 (LC 12), 6=-88 (LC 3)
Max Grav 1=221 (LC 3), 4=129 (LC 1), 5=450 (LC 1), 6=-26 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-242/148, 2-3=-104/77, 3-4=-99/105
BOT CHORD 1-6=-299/184, 1-5=-65/71, 4-5=-65/71
WEBS 2-5=-357/315

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-13 to 5-11-13, Interior (1) 5-11-13 to 9-1-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758173
P230180-01	V9	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:43 Page: 1
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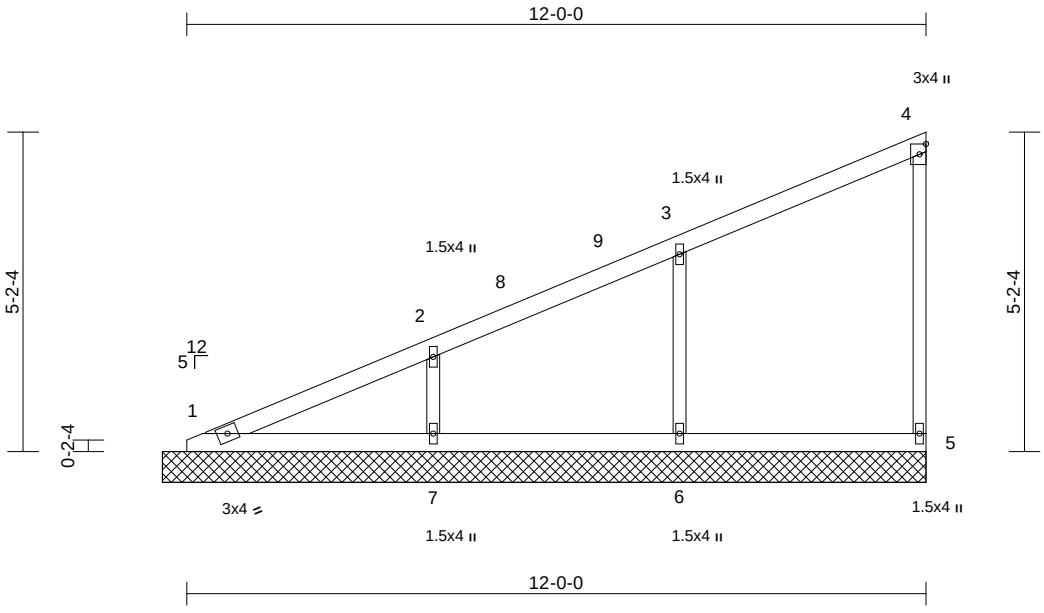

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 44 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-4-12, 5=12-4-12, 6=12-4-12, 7=12-4-12
Max Horiz 1=219 (LC 9)
Max Uplift 5=-32 (LC 9), 6=-110 (LC 12), 7=-109 (LC 12)
Max Grav 1=140 (LC 20), 5=143 (LC 1), 6=387 (LC 1), 7=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-302/177, 2-3=-218/139, 3-4=-117/88, 4-5=-110/101
BOT CHORD 1-7=-84/93, 6-7=-84/93, 5-6=-84/93
WEBS 3-6=-305/238, 2-7=-283/210

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 12-4-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758174
P230180-01	V10	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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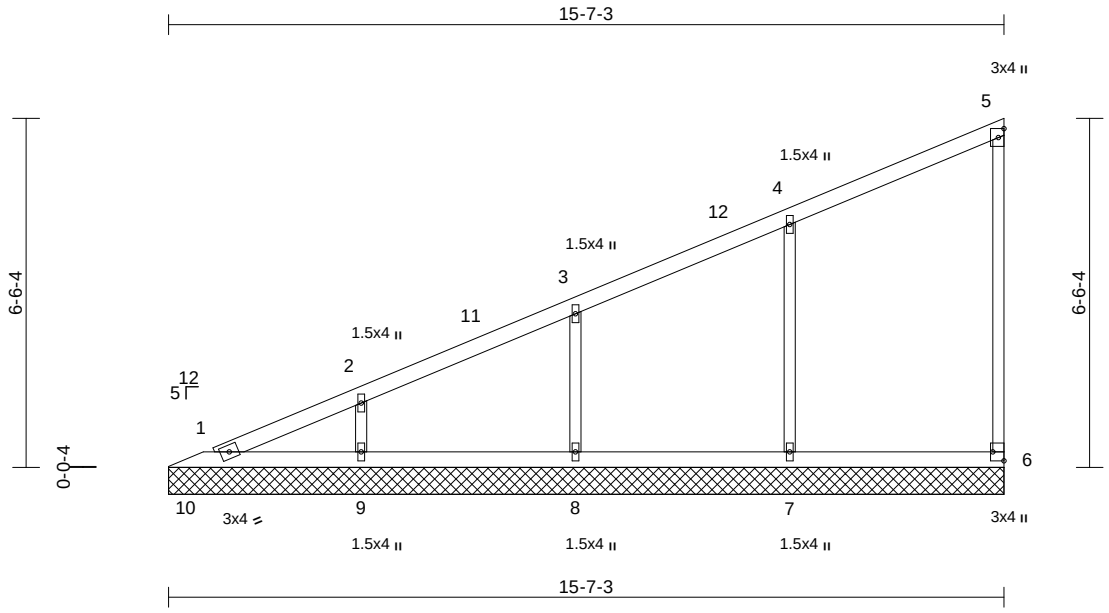

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Plate Offsets (X, Y): [6:Edge,0-2-8]

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.16	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 58 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-1-5 oc bracing.

REACTIONS (size) 1=15-7-3, 6=15-7-3, 7=15-7-3, 8=15-7-3, 9=15-7-3, 10=15-7-3
Max Horiz 10=279 (LC 9)
Max Uplift 6=-37 (LC 9), 7=-111 (LC 12), 8=-102 (LC 12), 9=-97 (LC 12), 10=-43 (LC 1)
Max Grav 1=169 (LC 20), 6=142 (LC 1), 7=393 (LC 1), 8=360 (LC 1), 9=325 (LC 1), 10=19 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-369/207, 2-3=-294/178, 3-4=-216/148, 4-5=-130/100, 5-6=-110/90
BOT CHORD 1-10=-424/266, 1-9=-105/116, 8-9=-105/116, 7-8=-105/116, 6-7=-105/116
WEBS 4-7=-306/215, 3-8=-280/172, 2-9=-251/168

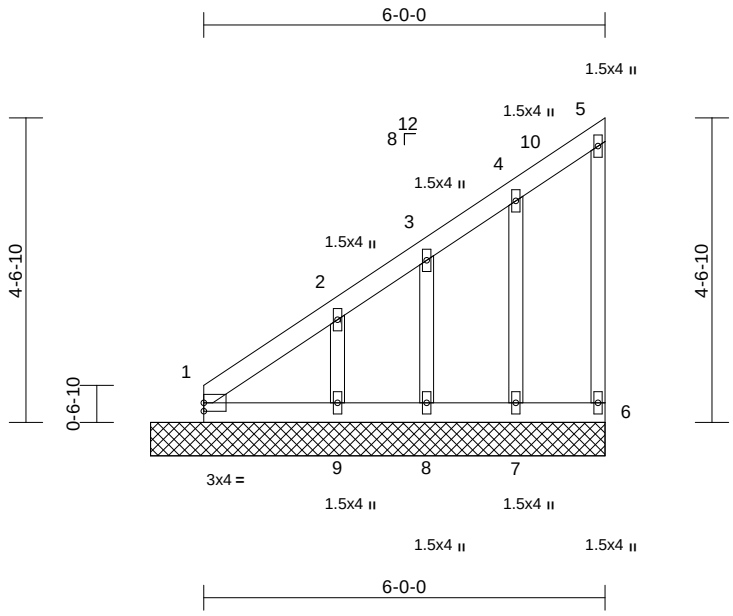
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-10-14 to 5-10-14, Interior (1) 5-10-14 to 15-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758175
P230180-01	V11	Valley	1	1	Job Reference (optional)	



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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	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 28 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-9-9, 6=6-9-9, 7=6-9-9, 8=6-9-9, 9=6-9-9
Max Horiz 1=172 (LC 9)
Max Uplift 1=-28 (LC 8), 6=-29 (LC 9), 7=-50 (LC 12), 8=-43 (LC 12), 9=-95 (LC 12)
Max Grav 1=117 (LC 20), 6=57 (LC 19), 7=134 (LC 19), 8=109 (LC 19), 9=191 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-346/222, 2-3=-216/149, 3-4=-162/126, 4-5=-96/91, 5-6=-71/73
BOT CHORD 1-9=-82/89, 8-9=-82/89, 7-8=-82/89, 6-7=-82/89
WEBS 4-7=-105/103, 3-8=-87/82, 2-9=-152/192

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-11 to 5-11-11, Interior (1) 5-11-11 to 6-8-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758176
P230180-01	V12	Valley	1	1	Job Reference (optional)	

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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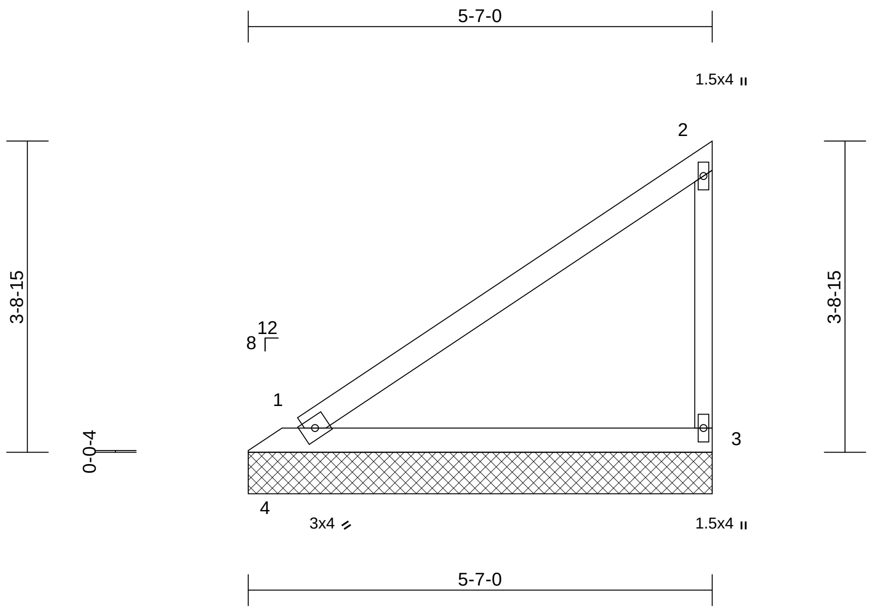

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 5-7-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-7-1, 3=5-7-1, 4=5-7-1
Max Horiz 4=138 (LC 9)
Max Uplift 3=-76 (LC 12), 4=-213 (LC 3)
Max Grav 1=398 (LC 3), 3=225 (LC 19), 4=-64 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-190/141, 2-3=-188/213
BOT CHORD 1-4=-289/196, 1-3=-66/72

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V13	Valley	1	1	Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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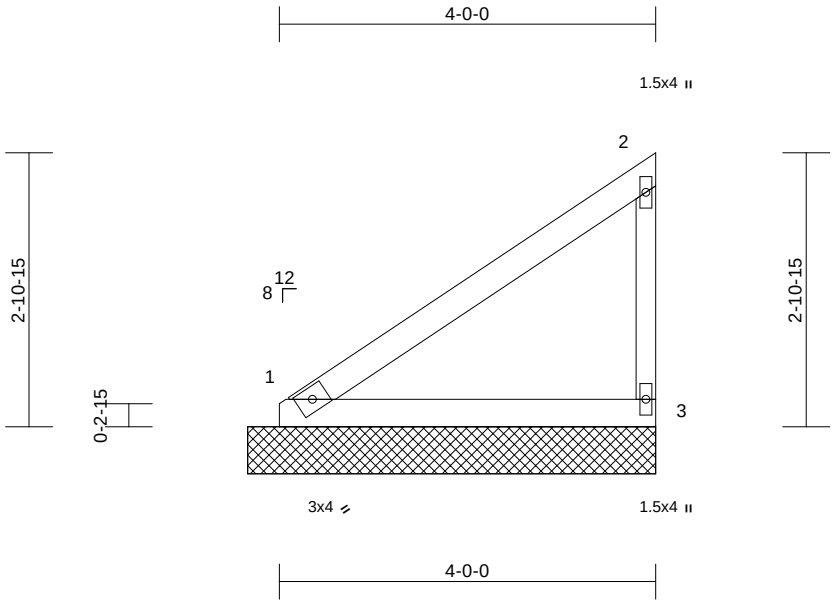

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 4-4-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-4-1, 3=4-4-1
Max Horiz 1=104 (LC 9)
Max Uplift 1=-16 (LC 12), 3=-53 (LC 12)
Max Grav 1=169 (LC 1), 3=183 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-146/108, 2-3=-145/169
BOT CHORD 1-3=-50/55

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758178
P230180-01	V14	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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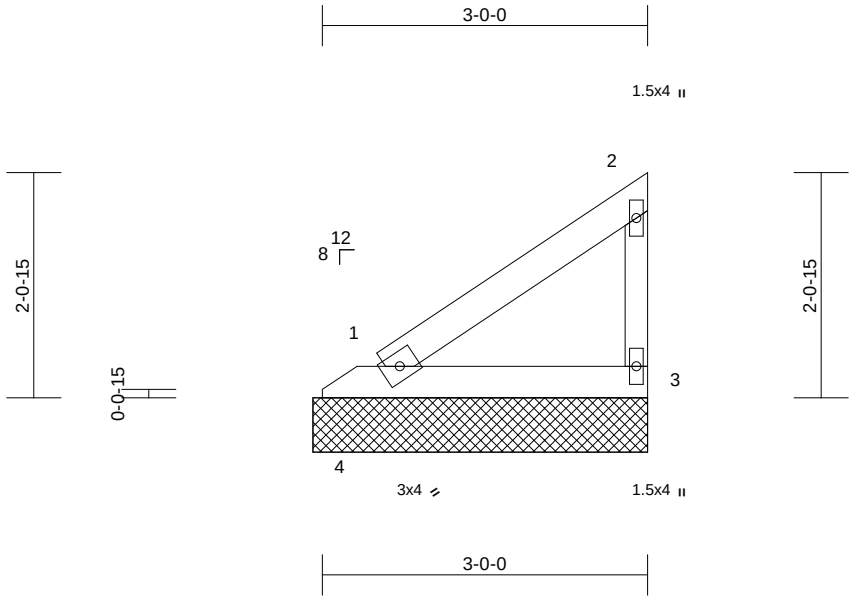

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 3-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-1, 3=3-1-1, 4=3-1-1
Max Horiz 4=70 (LC 9)
Max Uplift 3=-37 (LC 12), 4=-45 (LC 3)
Max Grav 1=141 (LC 3), 3=110 (LC 19), 4=-14 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-102/76, 2-3=-97/117
BOT CHORD 1-4=-155/104, 1-3=-34/36

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V15	Valley	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I57758179
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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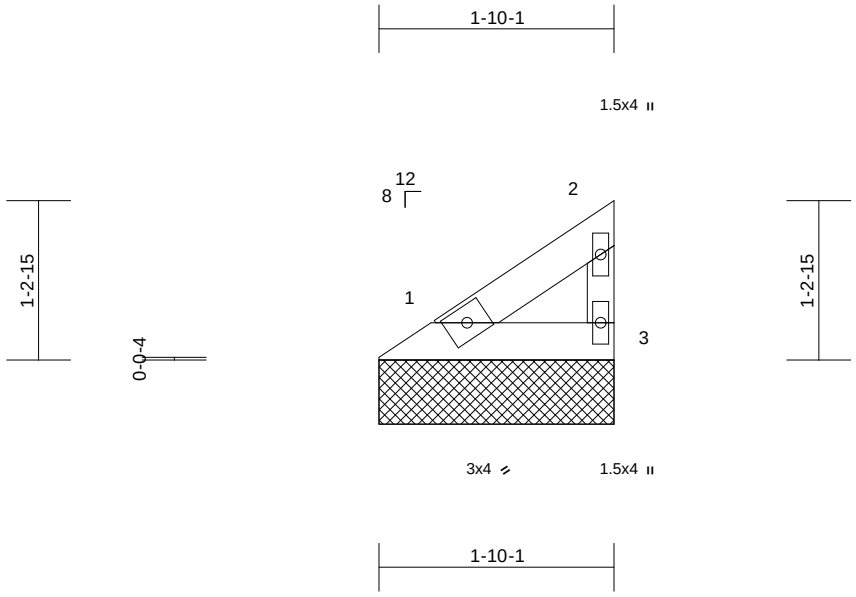

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 1-10-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-10-1, 3=1-10-1
Max Horiz 1=35 (LC 9)
Max Uplift 1=-6 (LC 12), 3=-18 (LC 12)
Max Grav 1=58 (LC 1), 3=62 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-51/39, 2-3=-53/61
BOT CHORD 1-3=-17/18

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V16	Valley	1	1	Job Reference (optional) I57758180

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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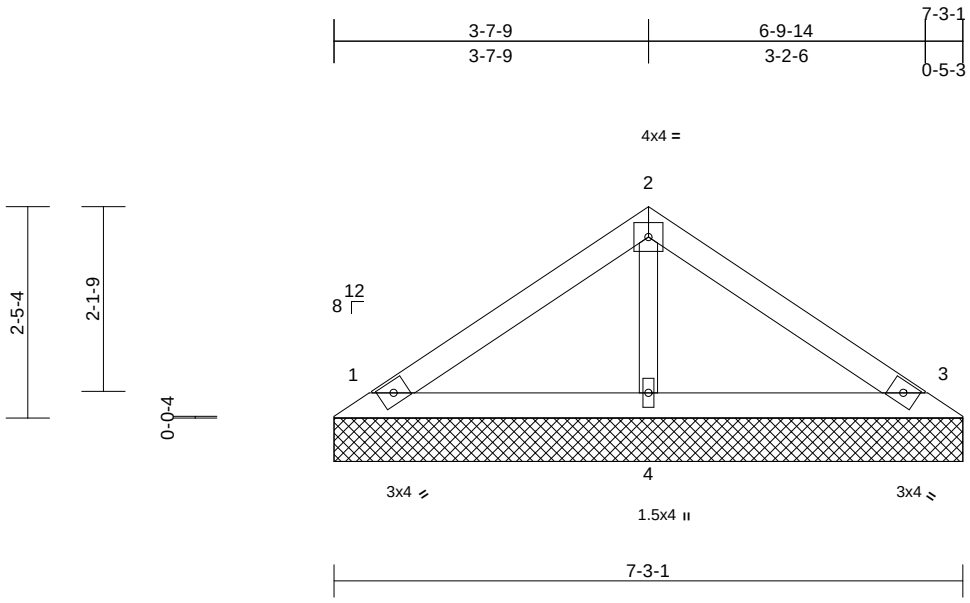

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-3-1, 3=7-3-1, 4=7-3-1
Max Horiz 1=57 (LC 9)
Max Uplift 1=-38 (LC 12), 3=-45 (LC 13)
Max Grav 1=161 (LC 1), 3=161 (LC 1), 4=250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-100/60, 2-3=-96/60
BOT CHORD 1-4=-12/47, 3-4=-12/47
WEBS 2-4=-171/91

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

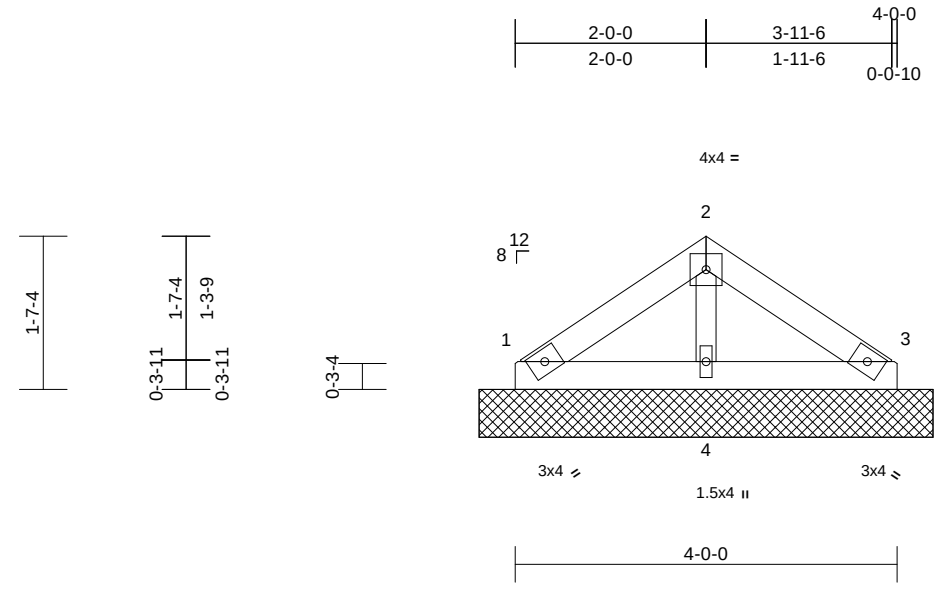
LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758181
P230180-01	V17	Valley	1	1	Job Reference (optional)	



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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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 4-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-9-1, 3=4-9-1, 4=4-9-1
Max Horiz 1=-35 (LC 10)
Max Uplift 1=-22 (LC 12), 3=-27 (LC 13)
Max Grav 1=95 (LC 1), 3=95 (LC 1), 4=144 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-61/41, 2-3=-58/41
BOT CHORD 1-4=-7/29, 3-4=-7/29
WEBS 2-4=-97/60

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758182
P230180-01	V18	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:43 Page: 1
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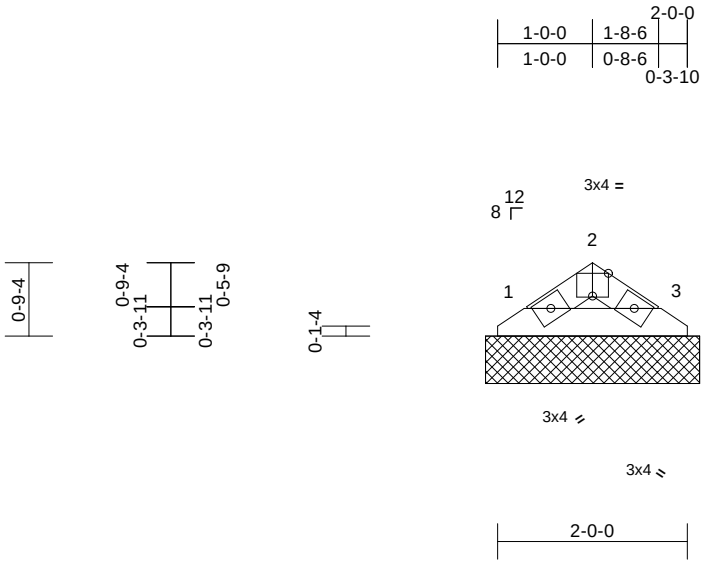

Scale = 1:24.3

Plate Offsets (X, Y): [2:0-2-0,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	0.01	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 20%

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

BRACING
TOP CHORD Sheathed or 2-3-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-3-1, 3=2-3-1
Max Horiz 1=-12 (LC 8)
Max Uplift 1=-8 (LC 12), 3=-8 (LC 13)
Max Grav 1=61 (LC 1), 3=61 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-53/36, 2-3=-53/36
BOT CHORD 1-3=-13/36

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758183
P230180-01	V19	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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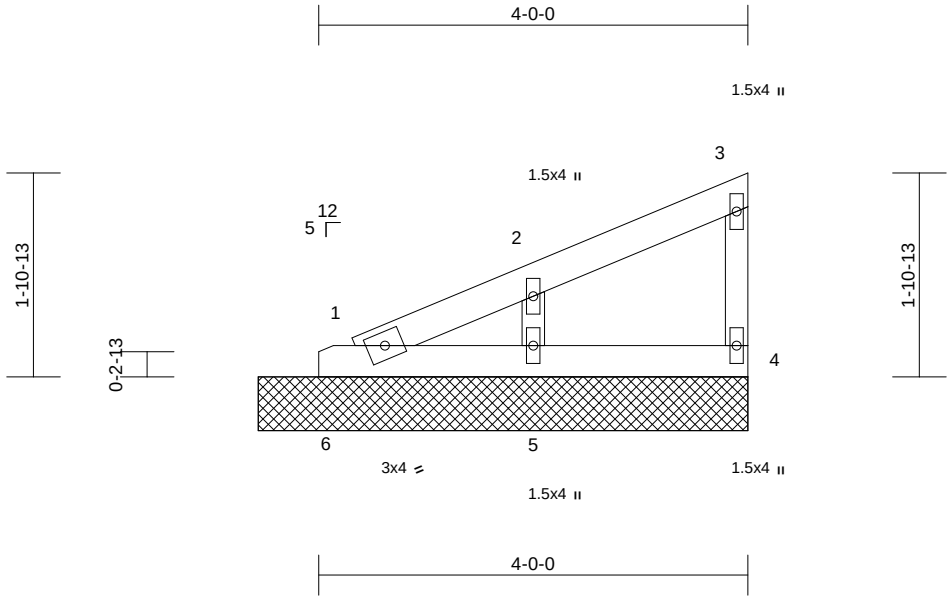

Scale = 1:21.5

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-6-12, 4=4-6-12, 5=4-6-12, 6=4-6-12
Max Horiz 6=70 (LC 9)
Max Uplift 4=-12 (LC 12), 5=-60 (LC 12), 6=-15 (LC 3)
Max Grav 1=69 (LC 20), 4=67 (LC 1), 5=197 (LC 1), 6=-5 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-129/77, 2-3=-53/40, 3-4=-52/64
BOT CHORD 1-6=-158/95, 1-5=-31/34, 4-5=-31/34
WEBS 2-5=-155/171

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55	I57758184
P230180-01	V20	Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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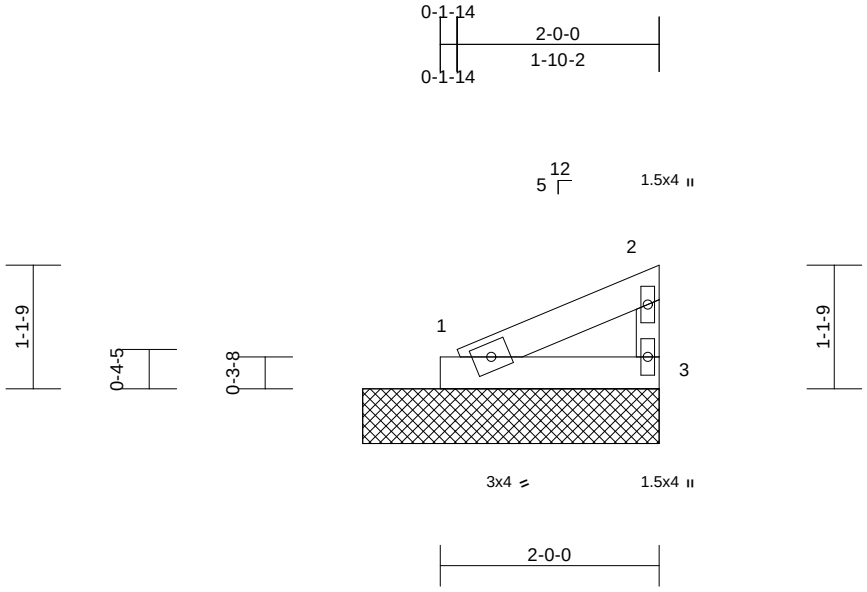

Scale = 1:21.1

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=2-8-8, 3=2-8-8
Max Horiz 1=35 (LC 11)
Max Uplift 1=-12 (LC 12), 3=-19 (LC 12)
Max Grav 1=77 (LC 1), 3=77 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-47/32, 2-3=-60/71
BOT CHORD 1-3=-16/17

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V21	Valley	2	1	Job Reference (optional) I57758185

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:44 Page: 1
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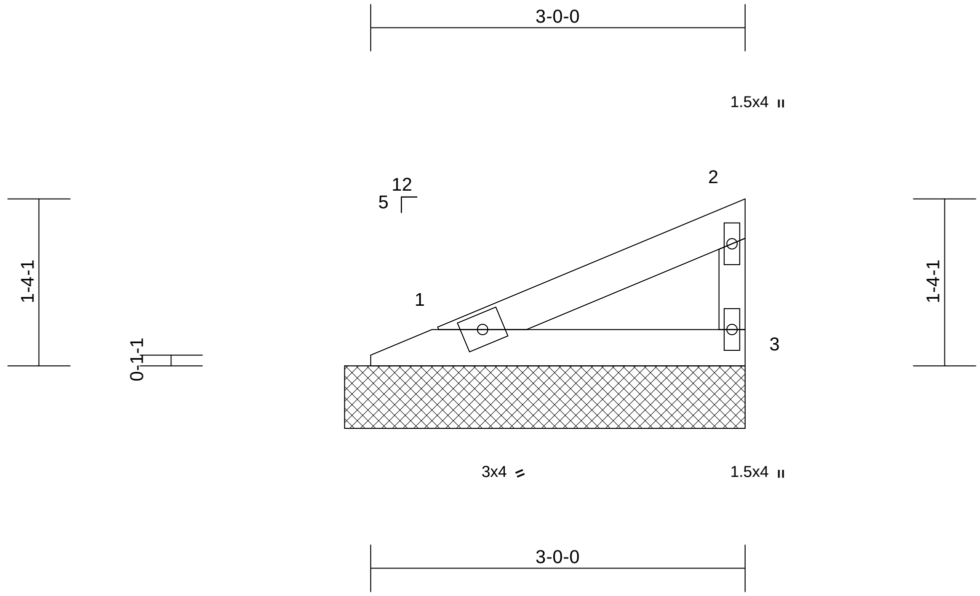

Scale = 1:18.5

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=3-2-8, 3=3-2-8
Max Horiz 1=45 (LC 9)
Max Uplift 1=-17 (LC 12), 3=-26 (LC 12)
Max Grav 1=106 (LC 1), 3=106 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-59/40, 2-3=-82/94
BOT CHORD 1-3=-20/21

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V22	Valley	1	1	Job Reference (optional) I57758186

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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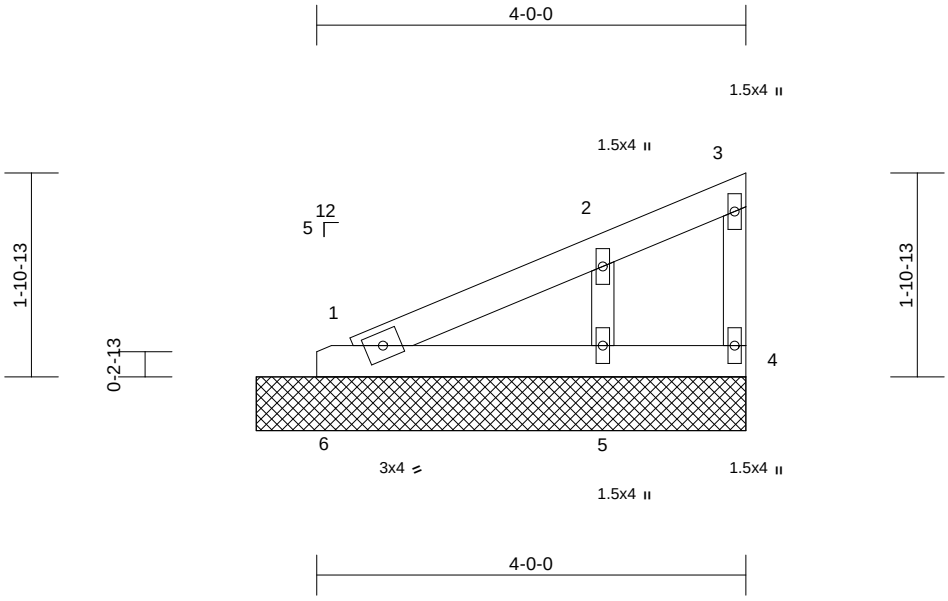

Scale = 1:21.5

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-6-12, 4=4-6-12, 5=4-6-12, 6=4-6-12
Max Horiz 6=70 (LC 9)
Max Uplift 4=-6 (LC 9), 5=-67 (LC 12), 6=-60 (LC 3)
Max Grav 1=138 (LC 3), 4=22 (LC 1), 5=208 (LC 1), 6=-18 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-118/74, 2-3=-42/30, 3-4=-22/25
BOT CHORD 1-6=-158/95, 1-5=-31/34, 4-5=-31/34
WEBS 2-5=-167/183

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 1-4-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 55
P230180-01	V23	Valley	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I57758187
05/08/2023

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 10:44:45 Page: 1
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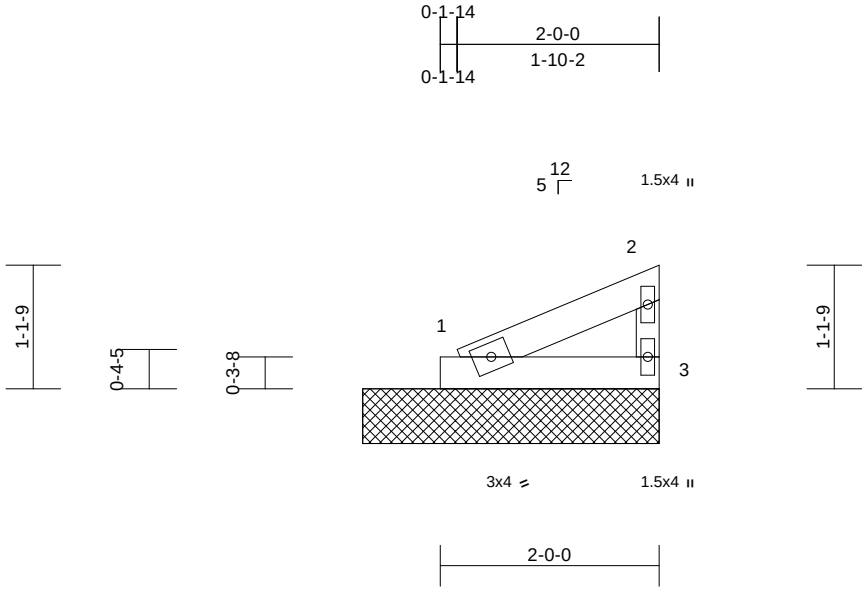


Scale = 1:21.1

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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 1=2-8-8, 3=2-8-8
Max Horiz 1=35 (LC 9)
Max Uplift 1=-12 (LC 12), 3=-19 (LC 12)
Max Grav 1=77 (LC 1), 3=77 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-47/32, 2-3=-60/71
BOT CHORD 1-3=-16/17

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

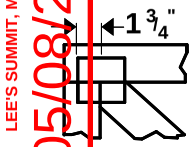
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

April 14,2023

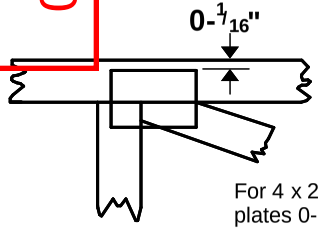
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

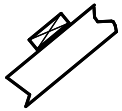
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

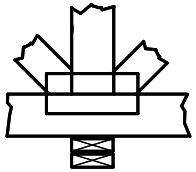
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

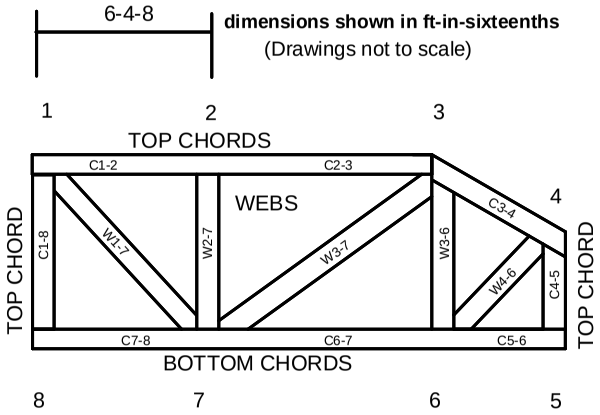


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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.