RE: 240616
Lot 133 MN

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

Site Information:

Customer: Avital Homes Project Name: 240616
Lot/Block: Model: Serenade - Modern 3rd Car
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 39 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64627061	A1	4/3/2024	21	I64627081	H3	4/3/2024
2	I64627062	A2	4/3/2024	22	I64627082	J1	4/3/2024
3	I64627063	A3	4/3/2024	23	I64627083	J2	4/3/2024
4	I64627064	A4	4/3/2024	24	I64627084	J3	4/3/2024
5	I64627065	A5	4/3/2024	25	I64627085	J4	4/3/2024
6	I64627066	A6	4/3/2024	26	I64627086	J5	4/3/2024
7	I64627067	B1	4/3/2024	27	I64627087	J6	4/3/2024
8	I64627068	B2	4/3/2024	28	I64627088	J7	4/3/2024
9	I64627069	B3	4/3/2024	29	I64627089	J8	4/3/2024
10	I64627070	B4	4/3/2024	30	I64627090	J9	4/3/2024
11	I64627071	B5A	4/3/2024	31	I64627091	J11	4/3/2024
12	I64627072	B6A	4/3/2024	32	I64627092	J12	4/3/2024
13	I64627073	B8	4/3/2024	33	I64627093	K1	4/3/2024
14	I64627074	E1	4/3/2024	34	I64627094	K2	4/3/2024
15	I64627075	G1	4/3/2024	35	I64627095	LAY1	4/3/2024
16	I64627076	G2	4/3/2024	36	I64627096	LAY2	4/3/2024
17	I64627077	G3	4/3/2024	37	I64627097	V1	4/3/2024
18	I64627078	G4	4/3/2024	38	I64627098	V2	4/3/2024
19	I64627079	H1	4/3/2024	39	I64627099	V3	4/3/2024
20	I64627080	H2	4/3/2024				

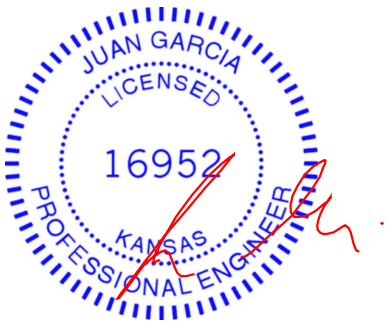
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2024.

Kansas COA: E-943

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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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 03, 2024
Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/22/2024 8:36:12

MiTek®

RE: 240616
Lot 133 MN

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

Site Information:

Customer: Avital Homes Project Name: 240616
Lot/Block: Model: Serenade - Modern 3rd Car
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 39 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I64627061	A1	4/3/2024	21	I64627081	H3	4/3/2024
2	I64627062	A2	4/3/2024	22	I64627082	J1	4/3/2024
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4	I64627064	A4	4/3/2024	24	I64627084	J3	4/3/2024
5	I64627065	A5	4/3/2024	25	I64627085	J4	4/3/2024
6	I64627066	A6	4/3/2024	26	I64627086	J5	4/3/2024
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9	I64627069	B3	4/3/2024	29	I64627089	J8	4/3/2024
10	I64627070	B4	4/3/2024	30	I64627090	J9	4/3/2024
11	I64627071	B5A	4/3/2024	31	I64627091	J11	4/3/2024
12	I64627072	B6A	4/3/2024	32	I64627092	J12	4/3/2024
13	I64627073	B8	4/3/2024	33	I64627093	K1	4/3/2024
14	I64627074	E1	4/3/2024	34	I64627094	K2	4/3/2024
15	I64627075	G1	4/3/2024	35	I64627095	LAY1	4/3/2024
16	I64627076	G2	4/3/2024	36	I64627096	LAY2	4/3/2024
17	I64627077	G3	4/3/2024	37	I64627097	V1	4/3/2024
18	I64627078	G4	4/3/2024	38	I64627098	V2	4/3/2024
19	I64627079	H1	4/3/2024	39	I64627099	V3	4/3/2024
20	I64627080	H2	4/3/2024				

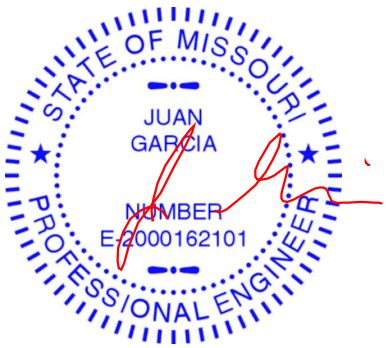
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2024.

Missouri COA: 001193

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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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 03, 2024
Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/22/2024 8:36:12

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A1	Hip Girder	1	3	Job Reference (optional)	I64627061

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:33 Page: 1
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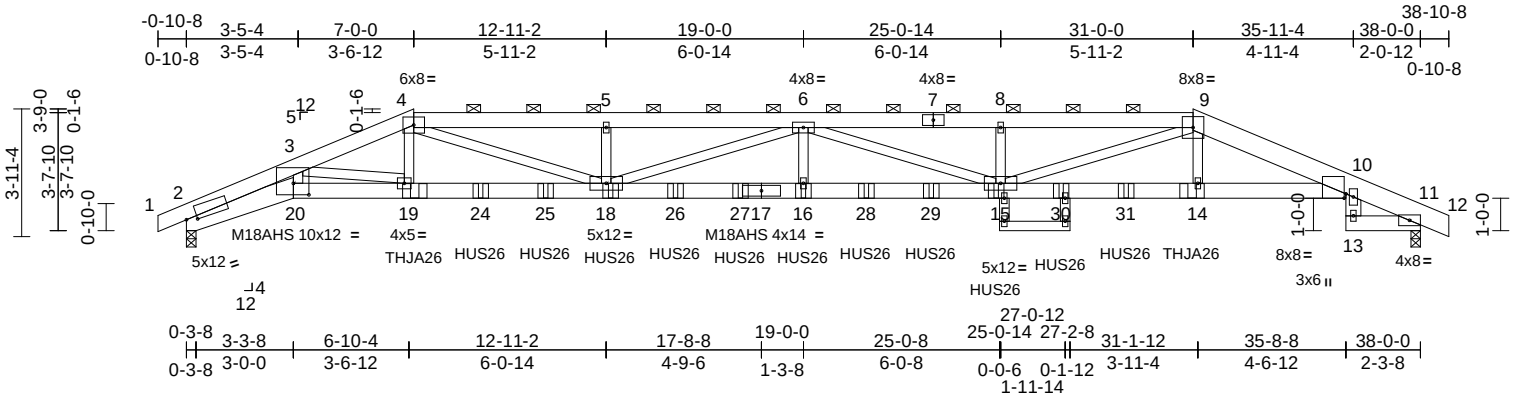

Scale = 1:71

Plate Offsets (X, Y): [2:0-4-0,0-1-0], [10:0-0-11,Edge], [20:0-5-12,0-4-4]

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	0.71	Vert(LL)	-0.54	16	>837	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.94	16	>482	240	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	NO	WB	0.48	Horz(CT)	0.41	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.47	16-18	>962	240	Weight: 701 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 1-4:2x6 SPF No.2, 9-12:2x8 SP 2400F 2.0E

BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-20:2x8 SP 2400F 2.0E, 13-11:2x6 SPF No.2, 21-22:2x4 SPF No.2

WEBS 2x4 SPF No.2 *Except* 10-13:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-11-7 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 4-9.

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

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-59 (LC 9)
Max Uplift 2=-988 (LC 4), 11=-952 (LC 5)
Max Grav 2=4089 (LC 1), 11=4103 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/3, 2-3=-15764/3819, 3-4=-12678/3193, 4-5=-17153/4374, 5-6=-17152/4373, 6-8=-17167/4314, 8-9=-17167/4314, 9-10=-12722/3064, 10-11=-2210/529, 11-12=0/6

BOT CHORD 2-20=-3427/14220, 19-20=-3144/13011, 18-19=-2893/11741, 16-18=-4788/19203, 15-16=-4788/19203, 14-15=-2840/12056, 10-14=-2856/12140, 11-13=0/0

WEBS 3-20=-784/3478, 4-19=-473/2018, 10-13=-64/342, 3-19=-1175/309, 9-14=-258/1371, 5-18=-450/187, 4-18=-1497/5886, 6-16=-197/992, 8-15=-289/229, 9-15=-1477/5573, 6-15=-2242/600, 6-18=-2260/542

NOTES

1) 3-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, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered 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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SPF No.2 .
11) 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 952 lb uplift at joint 11 and 988 lb uplift at joint 2.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Use Simpson Strong-Tie THJA26 (THJA26 on 2-ply, Right Hand Hip) or equivalent at 7-0-6 from the left end to connect truss(es) to back face of bottom chord.
16) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 9-0-12 from the left end to 28-11-4 to connect truss(es) to back face of bottom chord.
17) Use Simpson Strong-Tie THJA26 (THJA26 on 2-ply, Left Hand Hip) or equivalent at 30-11-10 from the left end to connect truss(es) to back face of bottom chord.
18) Fill all nail holes where hanger is in contact with lumber.
19) Filler applied to ply: 1(Front)

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)

April 3,2024

Continued on page 2

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

Vert: 1-4=-70, 4-9=-70, 9-12=-70, 2-20=-20, 10-20=-20, 11-13=-20

Concentrated Loads (lb)

Vert: 19=-786 (B), 14=-807 (B), 18=-278 (B), 16=-278 (B), 15=-278 (B), 24=-278 (B), 25=-278 (B), 26=-278 (B), 27=-278 (B), 28=-278 (B), 29=-278 (B), 30=-278 (B), 31=-278 (B)

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A2	Hip	1	1	Job Reference (optional)	I64627062

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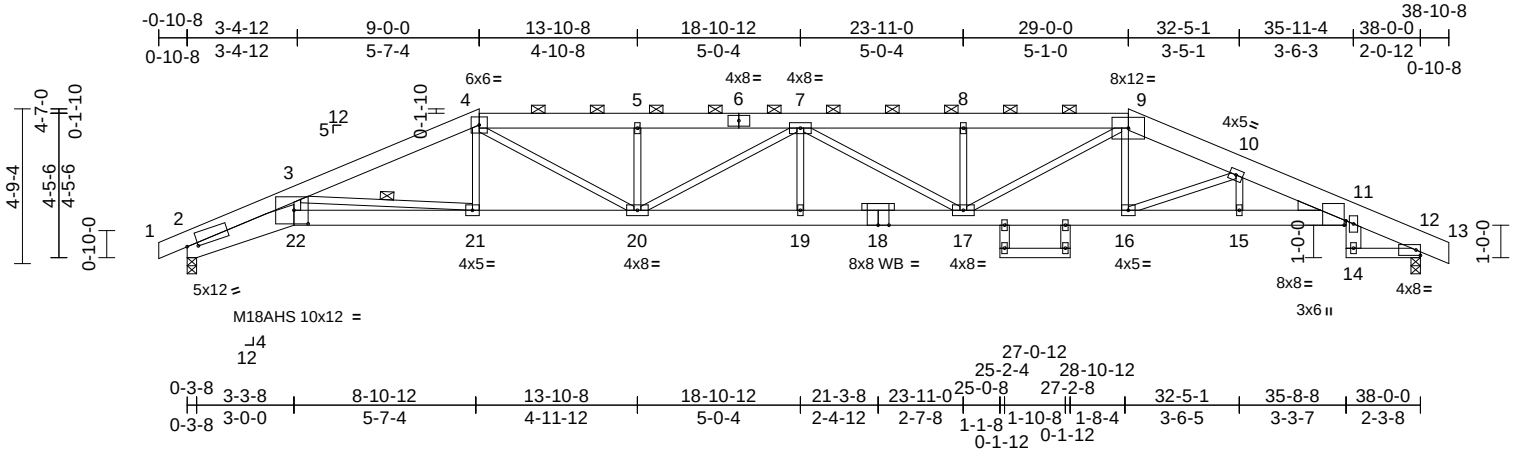

Scale = 1:71

Plate Offsets (X, Y): [2:0-4-0,0-1-0], [11:0-0-11,Edge], [22:0-5-4,0-5-0]

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	0.68	Vert(LL)	-0.39	19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.71	19	>636	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.42	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.29	19	>999	240	Weight: 239 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SP 2400F 2.0E *Except* 9-13:2x8 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-22:2x8 SP 2400F 2.0E, 14-12,23-24:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-14:2x6 SPF No.2, 23-25,24-26:2x4 SPF No.2
OTHERS 2x3 SPF No.2
WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-8-12 oc purlins, except 2-0-0 oc purlins (4-6-12 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-21

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=-74 (LC 9)
Max Uplift 2=-245 (LC 4), 12=-245 (LC 5)
Max Grav 2=1768 (LC 1), 12=1768 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/3, 2-3=-6344/807, 3-4=-4246/621, 4-5=-4918/797, 5-7=-4916/796, 7-8=-4968/801, 8-9=-4968/801, 9-10=-4216/632, 10-11=-5021/673, 11-12=-913/136, 12-13=0/0
BOT CHORD 2-22=-707/5692, 21-22=-660/5238, 20-21=-492/3916, 19-20=-765/5356, 17-19=-765/5356, 16-17=-480/3889, 15-16=-587/4840, 11-15=-588/4840, 12-14=0/0
WEBS 11-14=0/60, 3-22=-126/1571, 3-21=-1320/271, 4-21=0/466, 9-16=-19/628, 10-16=-1067/161, 10-15=-51/58, 4-20=-242/1327, 5-20=-365/148, 7-20=-598/101, 7-19=0/212, 7-17=-550/92, 8-17=-352/149, 9-17=-244/1360

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 2x4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 245 lb uplift at joint 2 and 245 lb uplift at joint 12.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A3	Hip	1	1	Job Reference (optional)	I64627063

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:34 Page: 1
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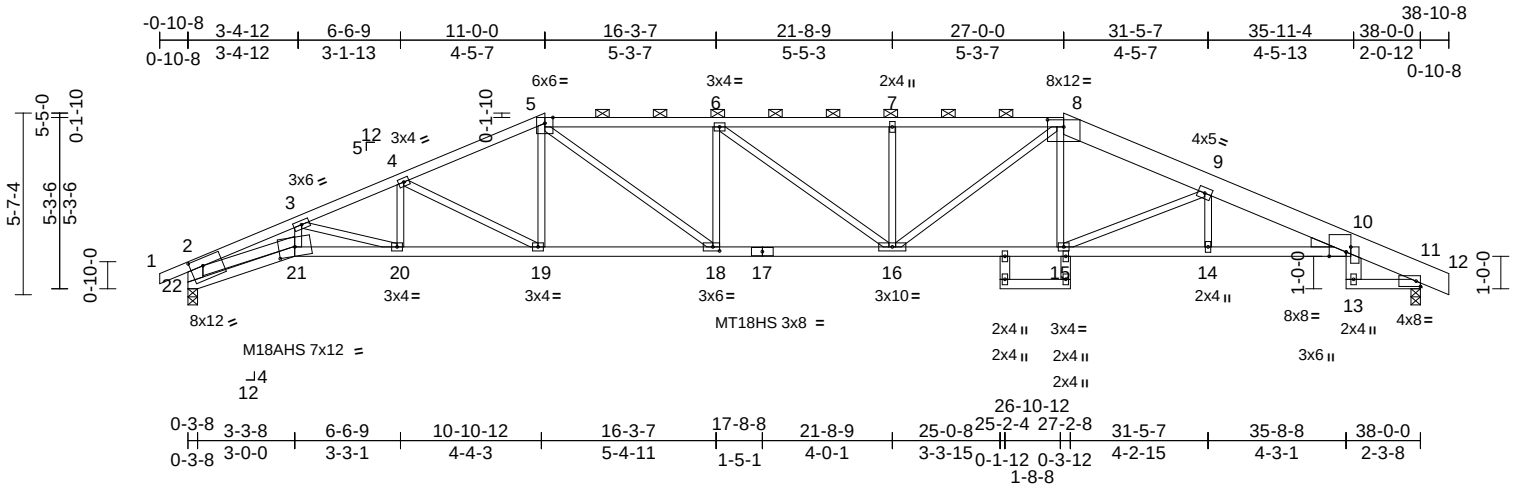


Scale = 1:71

Plate Offsets (X, Y): [8:0-6-0,0-2-10], [10:0-6-4,Edge], [10:0-1-14,0-1-11], [18:0-2-8,0-1-8], [21:0-6-0,0-3-7], [22:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.46	16-18	>982	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.84	16-18	>540	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.52	11	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	16-18	>999	240	Weight: 169 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 8-12:2x8 SP 2400F 2.0E

BOT CHORD 2x4 SPF No.2 *Except* 21-17,17-10:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 10-13,22-2:2x6 SPF No.2, 21-2:2x4 SPF 2100F 1.8E, 23-25,24-15:2x4 SPF No.2

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-11-9 oc purlins, except end verticals, and 2-0-0 oc purlins (2-3-13 max.): 5-8.

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

REACTIONS (size) 11=0-3-8, 22=0-3-8
Max Horiz 22=-82 (LC 13)
Max Uplift 11=-220 (LC 5), 22=-223 (LC 4)
Max Grav 11=1764 (LC 1), 22=1771 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5444/609, 3-4=-4305/534, 4-5=-3558/500, 5-6=-3948/610, 6-7=-3946/606, 7-8=-3947/606, 8-9=-3661/512, 9-10=-4559/550, 10-11=-911/123, 11-12=0/0, 2-22=-1814/246

BOT CHORD 21-22=-123/444, 20-21=-522/4872, 19-20=-425/3972, 18-19=-343/3231, 16-18=-473/3946, 15-16=-343/3324, 14-15=-460/4398, 10-14=-463/4404, 11-13=0/0

WEBS 10-13=0/60, 3-21=-37/659, 5-19=-32/488, 8-15=-32/610, 9-15=-1198/213, 2-21=-493/4545, 5-18=-178/1027, 8-16=-159/912, 6-18=-517/175, 6-16=-130/127, 7-16=-372/157, 9-14=-97/77, 4-19=-821/198, 4-20=-6/370, 3-20=-939/174

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 22 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 22 and 220 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

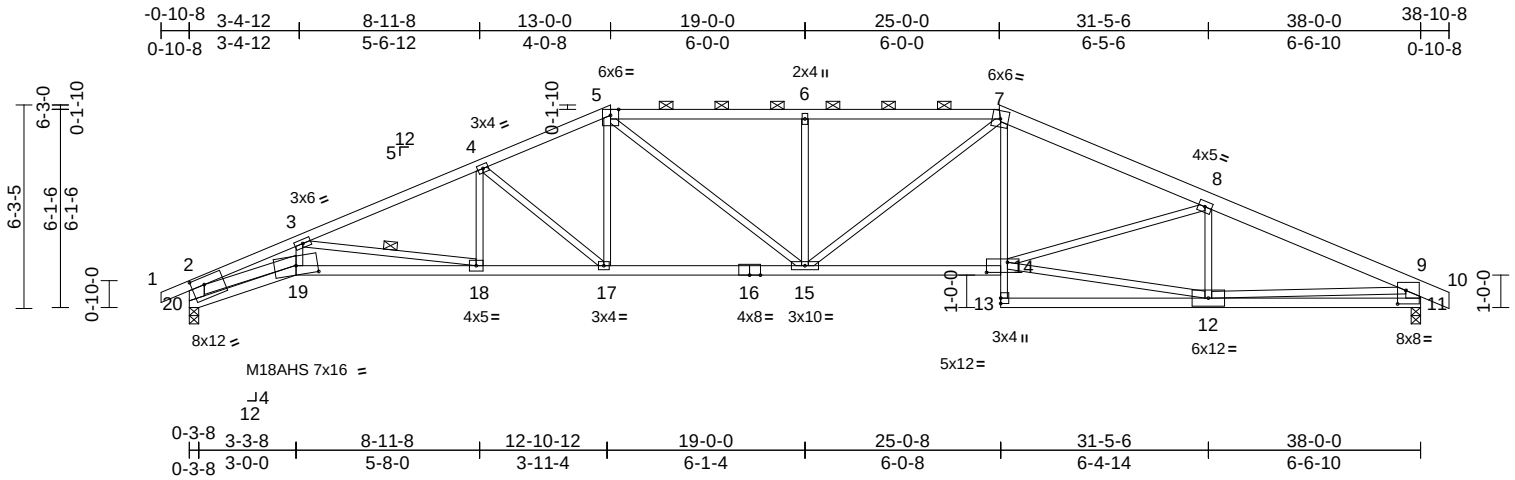
April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A4	Hip	1	1	Job Reference (optional)	I64627064

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:34
ID:aUMj1vUkVY9EIgxaGrXo0RzymK2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:71.1

Plate Offsets (X, Y): [11:0-3-0,0-5-0], [14:0-7-12,0-3-12], [19:0-8-0,0-3-7], [20:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.34	15-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.63	15-17	>715	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.34	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	15-17	>999	240	Weight: 160 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 7-10:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 19-16:2x4 SPF 2100F 1.8E, 7-13:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-2:2x6 SPF No.2, 19-2:2x4 SPF 2100F 1.8E, 11-9:2x6 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-10-13 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-18

REACTIONS (size) 11=0-3-8, 20=0-3-8
Max Horiz 20=-84 (LC 13)
Max Uplift 11=-198 (LC 5), 20=-198 (LC 4)
Max Grav 11=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5547/594, 3-4=-3871/432, 4-5=-3230/424, 5-6=-3347/478, 6-7=-3345/476, 7-8=-3398/430, 8-9=-3176/340, 9-10=0/30, 2-20=-1790/230, 9-11=-1696/229
BOT CHORD 19-20=-109/373, 18-19=-586/4981, 17-18=-304/3533, 15-17=-240/2926, 14-15=-256/3054, 13-14=0/115, 7-14=-25/624, 12-13=-7/104, 11-12=-121/987
WEBS 3-19=-29/692, 4-17=-773/199, 5-17=-70/580, 5-15=-110/706, 6-15=-513/203, 12-14=-246/2774, 8-14=-21/452, 8-12=-545/148, 2-19=-491/4727, 9-12=-154/1851, 4-18=0/384, 3-18=-1468/321, 7-15=-89/572

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 20 and 198 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A5	Hip	1	1	Job Reference (optional)	I64627065

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:34
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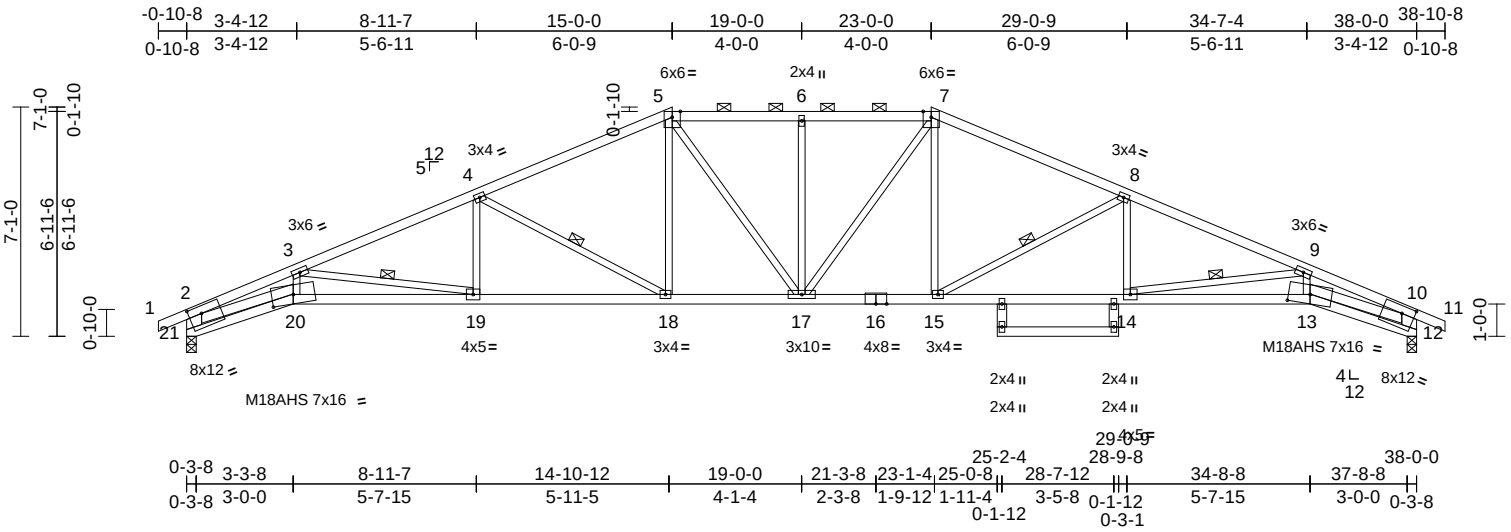

Scale = 1:71.2

Plate Offsets (X, Y): [12:0-4-12,0-2-12], [13:0-8-0,0-3-7], [20:0-8-0,0-3-7], [21:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.38	17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.68	17-18	>661	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.45	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	17	>999	240	Weight: 157 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 20-16,16-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 21-2,12-10:2x6 SPF No.2, 20-2,13-10:2x4 SPF 2100F 1.8E, 22-24,23-25:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-2 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 9-7-15 oc bracing.
WEBS 1 Row at midpt 3-19, 4-18, 8-15, 9-14

REACTIONS (size) 12=0-3-8, 21=0-3-8
Max Horiz 21=-94 (LC 13)
Max Uplift 12=-209 (LC 9), 21=-209 (LC 8)
Max Grav 12=1767 (LC 1), 21=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-5523/670, 3-4=-3894/402, 4-5=-2975/341, 5-6=-2814/361, 6-7=-2814/361, 2-21=-1795/258, 10-12=-1795/228, 7-8=-2975/341, 8-9=-3894/370, 9-10=-5523/566, 10-11=0/30
BOT CHORD 20-21=-137/388, 19-20=-667/4955, 18-19=-351/3561, 17-18=-149/2661, 15-17=-149/2661, 14-15=-245/3561, 13-14=-482/4955, 12-13=-36/388
WEBS 3-20=-48/690, 3-19=-1414/321, 4-19=0/428, 4-18=-1014/258, 5-18=-62/589, 7-15=-55/589, 8-15=-1014/243, 8-14=0/428, 9-14=-1414/258, 9-13=-6/690, 2-20=-547/4686, 10-13=-453/4686, 5-17=-76/449, 7-17=-77/449, 6-17=-366/131

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 21, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 209 lb uplift at joint 21 and 209 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	A6	Hip	1	1	Job Reference (optional)	I64627066

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:34
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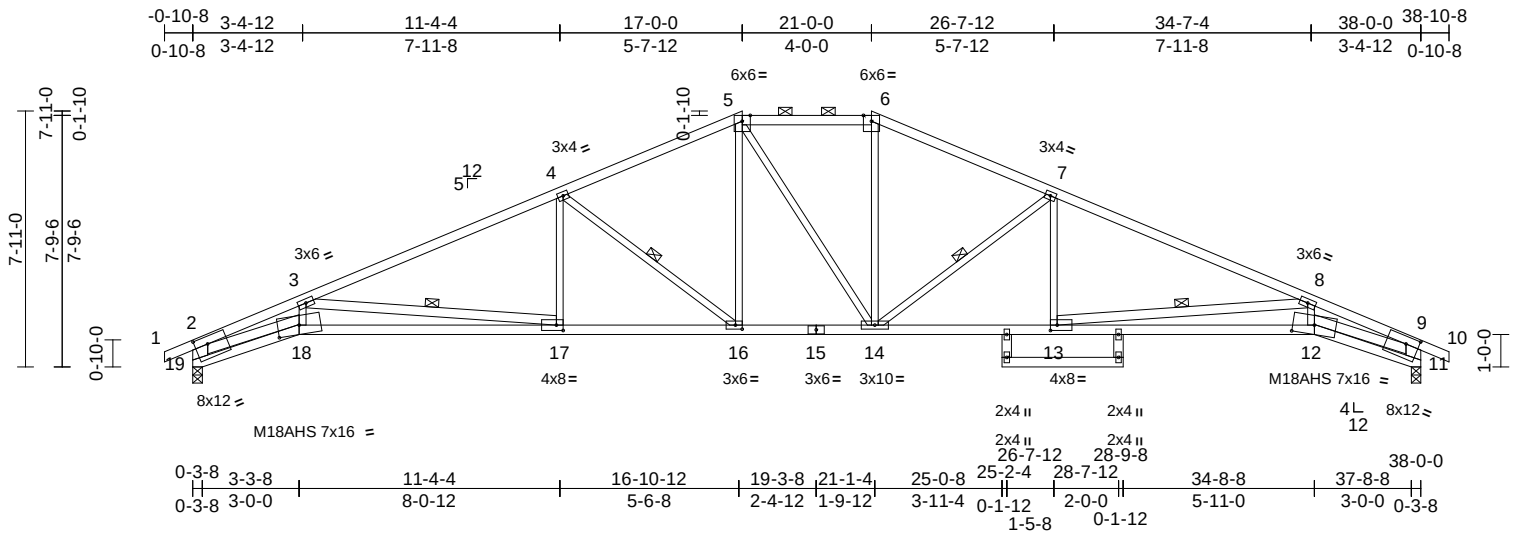

Scale = 1:71.3

Plate Offsets (X, Y): [11:0-4-12,0-2-12], [12:0-8-0,0-3-7], [13:0-2-8,0-2-0], [16:0-2-8,0-1-8], [17:0-2-8,0-2-0], [18:0-8-0,0-3-7], [19:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.35	14-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.70	17-18	>643	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.48	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.25	17-18	>999	240	Weight: 160 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 5-6:2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 18-15,15-12:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 17-3,13-8,20-22,21-23:2x4 SPF No.2, 19-2,11-9:2x6 SPF No.2, 18-2,12-9:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-4 max.): 5-6.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-7-7 oc bracing: 17-18
9-11-12 oc bracing: 12-13.

WEBS 1 Row at midpt 3-17, 4-16, 7-14, 8-13

REACTIONS (size) 11=0-3-8, 19=0-3-8
Max Horiz 19=-109 (LC 13)
Max Uplift 11=-226 (LC 9), 19=-226 (LC 8)
Max Grav 11=1767 (LC 1), 19=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 5-6=-2398/287, 6-7=-2696/283, 7-8=-3553/367, 8-9=-5709/692, 9-10=0/30, 2-19=-1785/261, 9-11=-1785/226, 1-2=0/30, 2-3=-5708/813, 3-4=-3554/395, 4-5=-2694/301

BOT CHORD 18-19=-114/341, 17-18=-827/5141, 16-17=-331/3215, 14-16=-121/2396, 13-14=-196/3214, 12-13=-613/5142, 11-12=0/323

WEBS 3-18=-40/741, 3-17=-1939/500, 4-17=0/478, 4-16=-1019/262, 5-16=-108/696, 5-14=-222/228, 6-14=-52/697, 7-14=-1016/250, 7-13=0/476, 8-13=-1941/420, 8-12=0/742, 2-18=-728/4945, 9-12=-619/4946

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 19, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 226 lb uplift at joint 19 and 226 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B1	Roof Special	1	1	Job Reference (optional)	I64627067

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35
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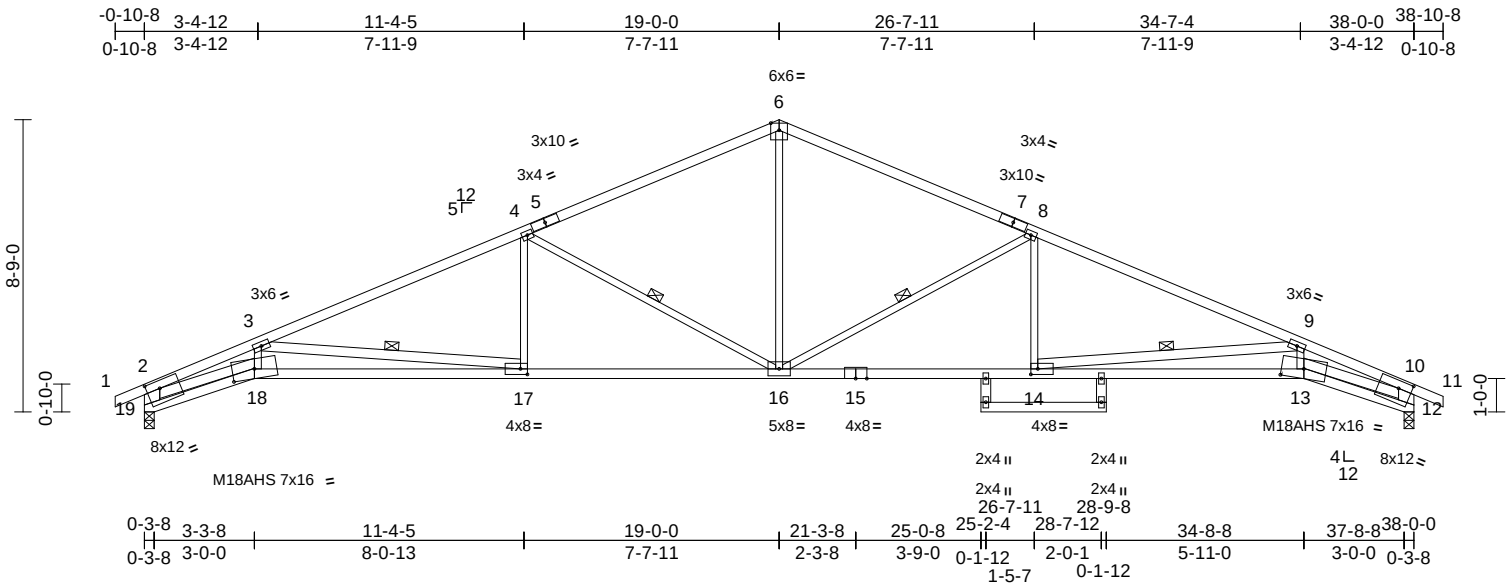

Scale = 1:69

Plate Offsets (X, Y): [12:0-4-12,0-2-12], [13:0-8-0,0-3-7], [14:0-2-8,0-2-0], [17:0-2-8,0-2-0], [18:0-8-0,0-3-7], [19:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.35	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.71	13-14	>638	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.48	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.26	17-18	>999	240	Weight: 153 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 18-15,15-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 14-9,17-3,20-22,21-23:2x4 SPF No.2, 19-2,12-10:2x6 SPF No.2, 18-2,13-10:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-3-13 oc bracing.
WEBS 1 Row at midpt 8-16, 9-14, 4-16, 3-17

REACTIONS (size) 12=0-3-8, 19=0-3-8
Max Horiz 19=-124 (LC 13)
Max Uplift 12=-242 (LC 9), 19=-242 (LC 8)
Max Grav 12=1767 (LC 1), 19=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-5684/871, 3-4=-3568/448, 4-6=-2454/302, 6-8=-2453/321, 8-9=-3568/416, 9-10=-5684/733, 10-11=0/30, 2-19=-1790/286, 10-12=-1790/245
BOT CHORD 18-19=-143/361, 17-18=-891/5115, 16-17=-398/3232, 14-16=-243/3232, 13-14=-647/5115, 12-13=-10/338
WEBS 6-16=-93/1339, 8-16=-1232/311, 8-14=0/499, 9-14=-1896/406, 9-13=0/740, 4-16=-1232/326, 4-17=0/499, 3-17=-1896/497, 3-18=-55/740, 2-18=-767/4905, 10-13=-642/4905

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Bearing at joint(s) 19, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 19 and 242 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B2	Roof Special	1	1	Job Reference (optional)	I64627068

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35
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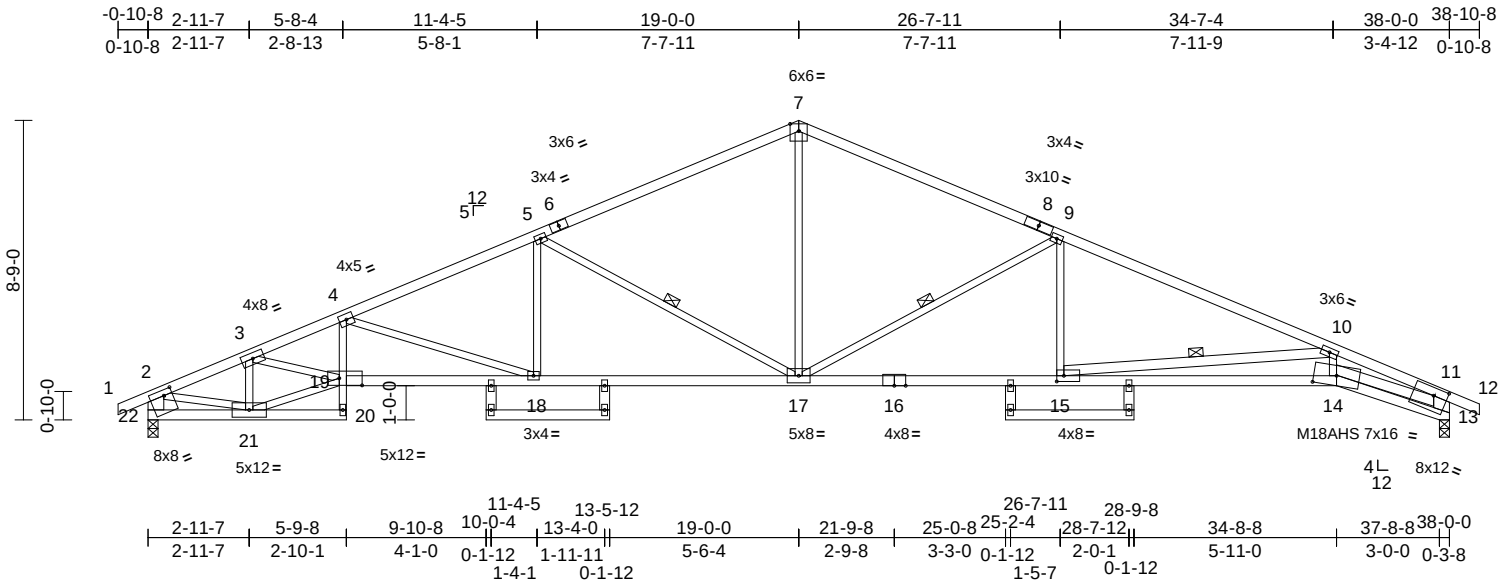


Scale = 1:67.3

Plate Offsets (X, Y): [13:0-4-12,0-2-12], [14:0-8-0,0-3-7], [15:0-2-8,0-2-0], [19:0-8-0,0-2-8], [22:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.33	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.68	14-15	>666	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.38	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	14-15	>999	240	Weight: 160 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 20-4:2x3 SPF No.2, 19-16,16-14:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 22-2,13-11:2x6 SPF No.2, 14-11:2x4 SPF 2100F 1.8E, 15-10,23-25,24-26,27-29,28-30:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-14 oc bracing.
WEBS 1 Row at midpt 5-17, 9-17, 10-15

REACTIONS (size) 13=0-3-8, 22=0-3-8
Max Horiz 22=125 (LC 12)
Max Uplift 13=-242 (LC 9), 22=-242 (LC 8)
Max Grav 13=1767 (LC 1), 22=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-2615/331, 3-4=-4441/614, 4-5=-3512/452, 5-7=-2451/301, 7-9=-2457/320, 9-10=-3566/416, 10-11=-5687/733, 11-12=0/30, 2-22=-1695/250, 11-13=-1790/245
BOT CHORD 21-22=-161/345, 20-21=-31/149, 19-20=0/71, 4-19=-34/415, 18-19=-615/4118, 17-18=-390/3189, 15-17=-244/3230, 14-15=-647/5117, 13-14=-10/337
WEBS 10-14=0/741, 11-14=-642/4908, 3-21=-1288/233, 3-19=-229/1796, 19-21=-383/2344, 2-21=-235/2058, 4-18=-980/238, 5-18=0/504, 5-17=-1178/317, 7-17=-85/1320, 9-17=-1225/311, 9-15=0/495, 10-15=-1900/406

NOTES

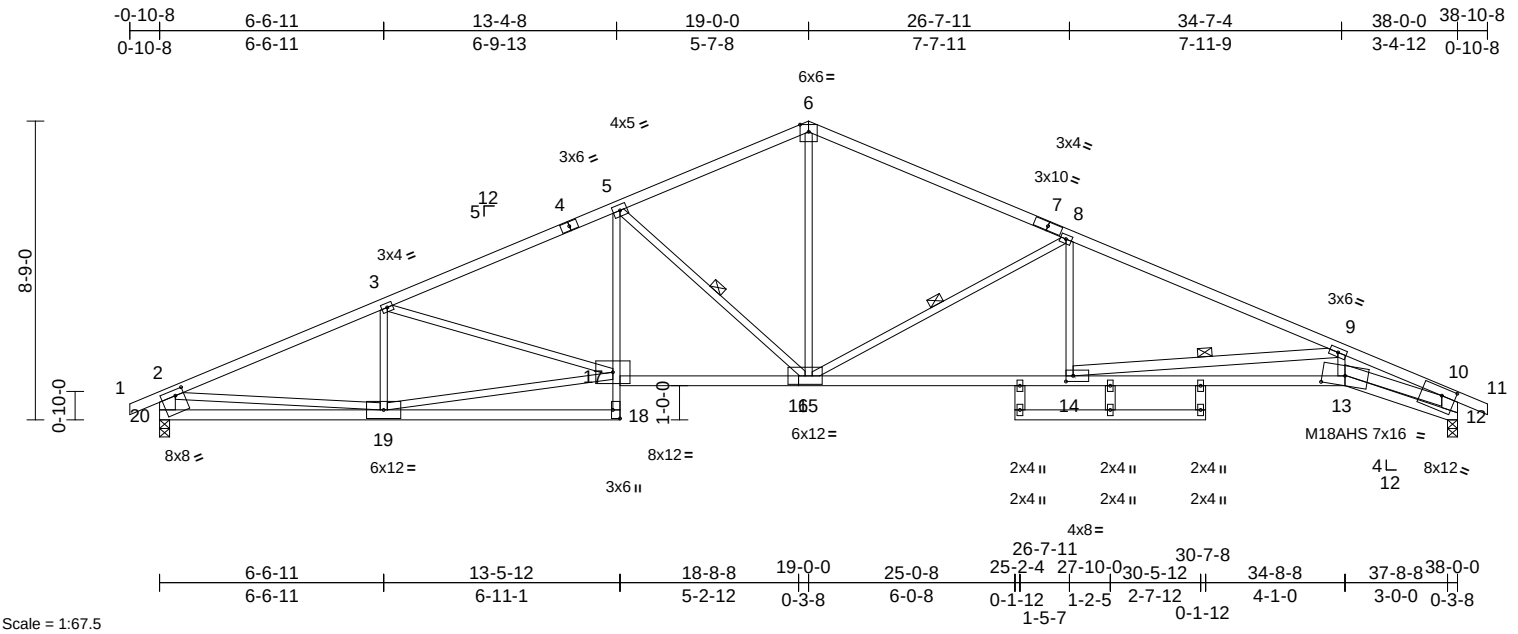
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 2x4 MT20 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) All bearings are assumed to be SPF No.2 .
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 22 and 242 lb uplift at joint 13.
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

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B3	Roof Special	1	1	Job Reference (optional)	I64627069

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35 Page: 1
ID:Iz3DGJ5Up10aJLHIJPEk?Pzymdv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.5

Plate Offsets (X, Y): [12:0-4-12,0-2-12], [13:0-8-0,0-3-7], [14:0-2-8,0-2-0], [18:Edge,0-2-8], [20:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.33	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.67	13-14	>674	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.34	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.23	13-14	>999	240	Weight: 161 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 18-5:2x3 SPF No.2, 16-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 14-9,21-23,22-24,25-26:2x4 SPF No.2, 20-2,12-10:2x6 SPF No.2, 13-10:2x4 SPF 2100F 1.8E

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.
WEBS 1 Row at midpt 5-15, 8-15, 9-14

REACTIONS (size) 12=0-3-8, 20=0-3-8
Max Horiz 20=125 (LC 12)
Max Uplift 12=-242 (LC 9), 20=-242 (LC 8)
Max Grav 12=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-3110/386, 3-5=-3279/419, 5-6=-2414/306, 6-8=-2452/319, 8-9=-3569/416, 9-10=-5682/733, 10-11=0/30, 2-20=-1694/272, 10-12=-1790/246
BOT CHORD 19-20=-250/617, 18-19=-7/128, 17-18=0/126, 5-17=-41/594, 15-17=-324/2951, 14-15=-244/3234, 13-14=-647/5112, 12-13=-10/339
WEBS 3-19=-549/178, 17-19=-406/2695, 3-17=-7/237, 5-15=-1076/286, 6-15=-124/1391, 8-15=-1238/311, 8-14=0/500, 9-14=-1891/406, 9-13=0/740, 2-19=-158/2178, 10-13=-642/4901

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 20 and 242 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

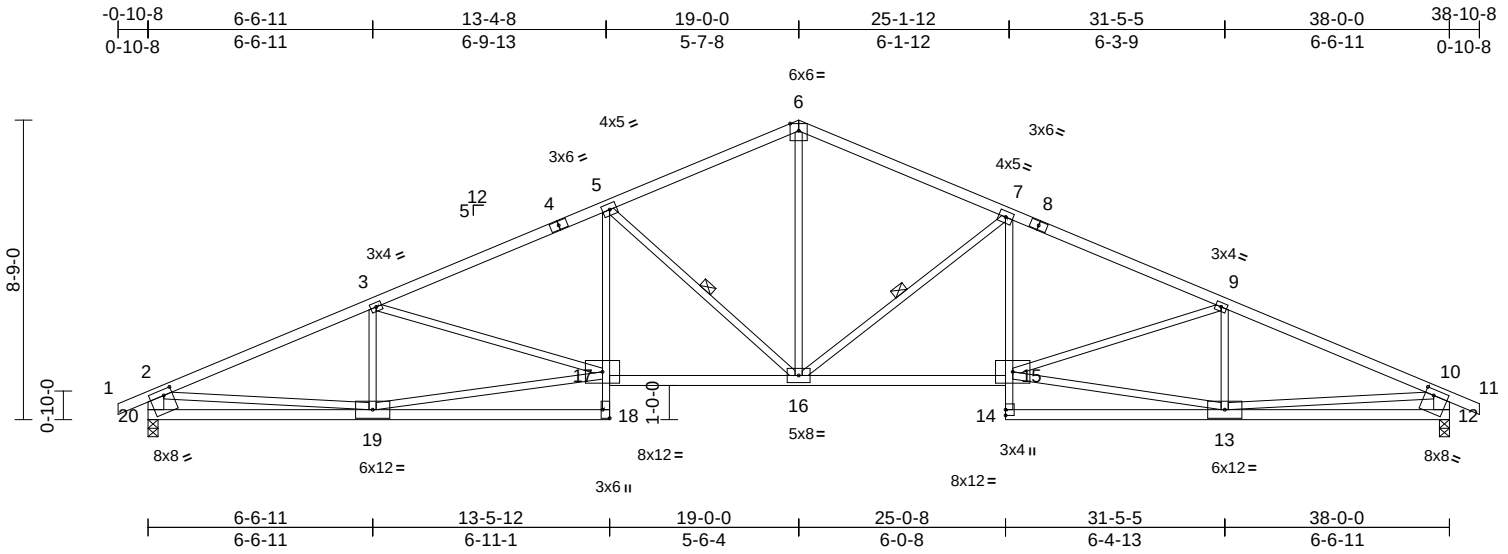
LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B4	Roof Special	2	1	Job Reference (optional)	I64627070

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35 ID:erlP2mLzfg4WFgzB7gbzy7zymeu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.3

Plate Offsets (X, Y): [12:0-3-0,0-2-0], [18:Edge,0-2-8], [20:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.29	16-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.55	15-16	>821	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.21	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.19	16-17	>999	240	Weight: 157 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 18-5,7-14:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 20-2,12-10:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

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

WEBS 1 Row at midpt 5-16, 7-16

REACTIONS (size) 12=0-3-8, 20=0-3-8
Max Horiz 20=125 (LC 12)
Max Uplift 12=-242 (LC 9), 20=-242 (LC 8)
Max Grav 12=1767 (LC 1), 20=1767 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-3110/386, 3-5=-3280/419, 5-6=-2417/307, 6-7=-2423/322, 7-9=-3355/399, 9-10=-3099/384, 10-11=0/30, 2-20=-1693/272, 10-12=-1692/273

BOT CHORD 19-20=-252/588, 18-19=-8/131, 17-18=0/127, 5-17=-41/589, 16-17=-325/2952, 15-16=-189/3035, 14-15=0/116, 7-15=-22/594, 13-14=-11/119, 12-13=-144/611

WEBS 3-19=-553/178, 17-19=-406/2693, 3-17=-9/238, 5-16=-1077/287, 6-16=-132/1428, 7-16=-1124/279, 13-15=-273/2699, 9-15=-33/286, 9-13=-594/153, 2-19=-157/2209, 10-13=-136/2173

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SPF No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 20 and 242 lb uplift at joint 12.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B5A	Roof Special	5	1	Job Reference (optional)	I64627071

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35
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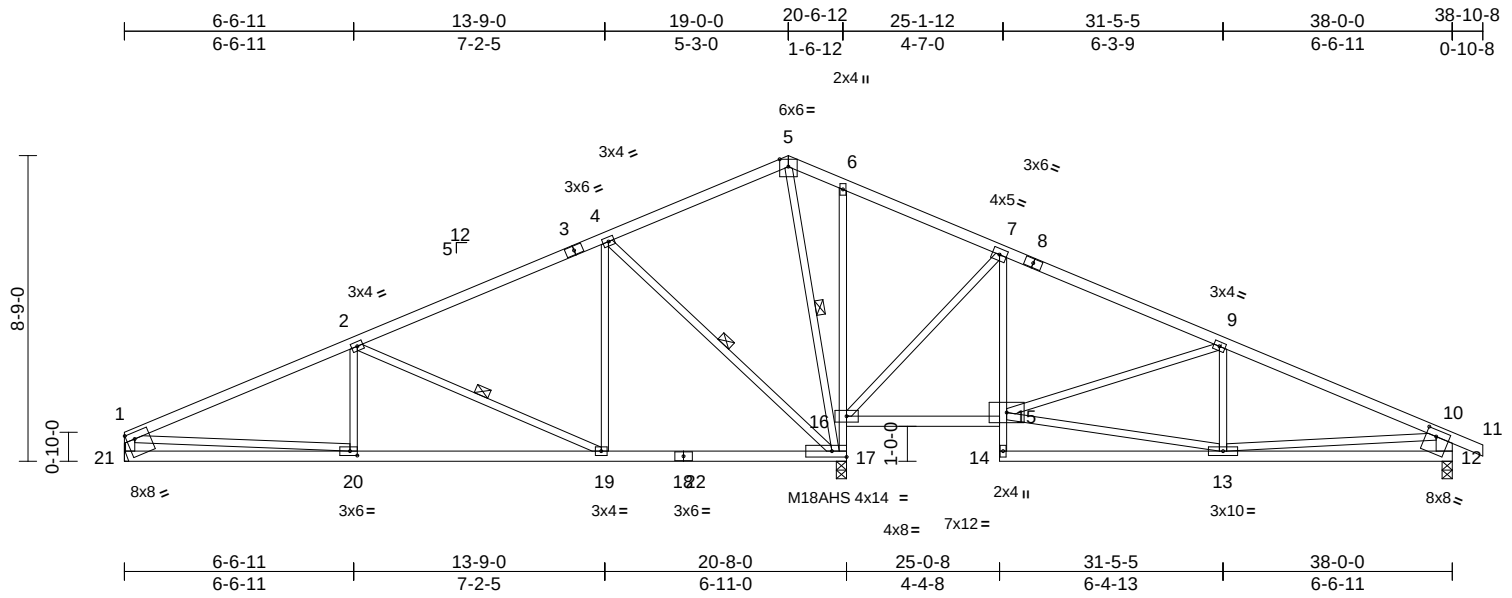

Scale = 1:65.9

Plate Offsets (X, Y): [12:0-3-8,0-2-4], [20:0-2-8,0-1-8], [21:0-2-12,0-2-4]

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	0.53	Vert(LL)	-0.08	17-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.14	17-19	>999	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.02	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	19-20	>999	240	Weight: 159 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 17-6,7-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-1:2x4 SPF No.2, 12-10:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied 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 2-19, 4-17, 5-17

REACTIONS (size) 12=0-3-8, 17=0-3-8, 21= Mechanical
Max Horiz 21=-133 (LC 9)
Max Uplift 12=-191 (LC 9), 17=-132 (LC 8), 21=-157 (LC 8)
Max Grav 12=748 (LC 24), 17=2019 (LC 2), 21=862 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1385/272, 2-4=-699/204, 4-5=0/376, 5-6=0/402, 6-7=0/421, 7-9=-407/248, 9-10=-987/280, 10-11=0/30, 1-21=-774/190, 10-12=-686/223
BOT CHORD 20-21=-181/382, 19-20=-308/1220, 17-19=-120/571, 16-17=-928/266, 6-16=-251/116, 15-16=-44/295, 14-15=0/108, 7-15=-16/498, 13-14=-5/53, 12-13=-127/377
WEBS 2-20=0/230, 2-19=-720/206, 4-19=0/609, 4-17=-1011/242, 5-17=-384/0, 7-16=-810/216, 13-15=-182/807, 9-15=-598/146, 9-13=-52/160, 1-20=-128/894, 10-13=-57/479

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 21, 191 lb uplift at joint 12 and 132 lb uplift at joint 17.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B6A	Roof Special	2	1	Job Reference (optional)	I64627072

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:35 Page: 1
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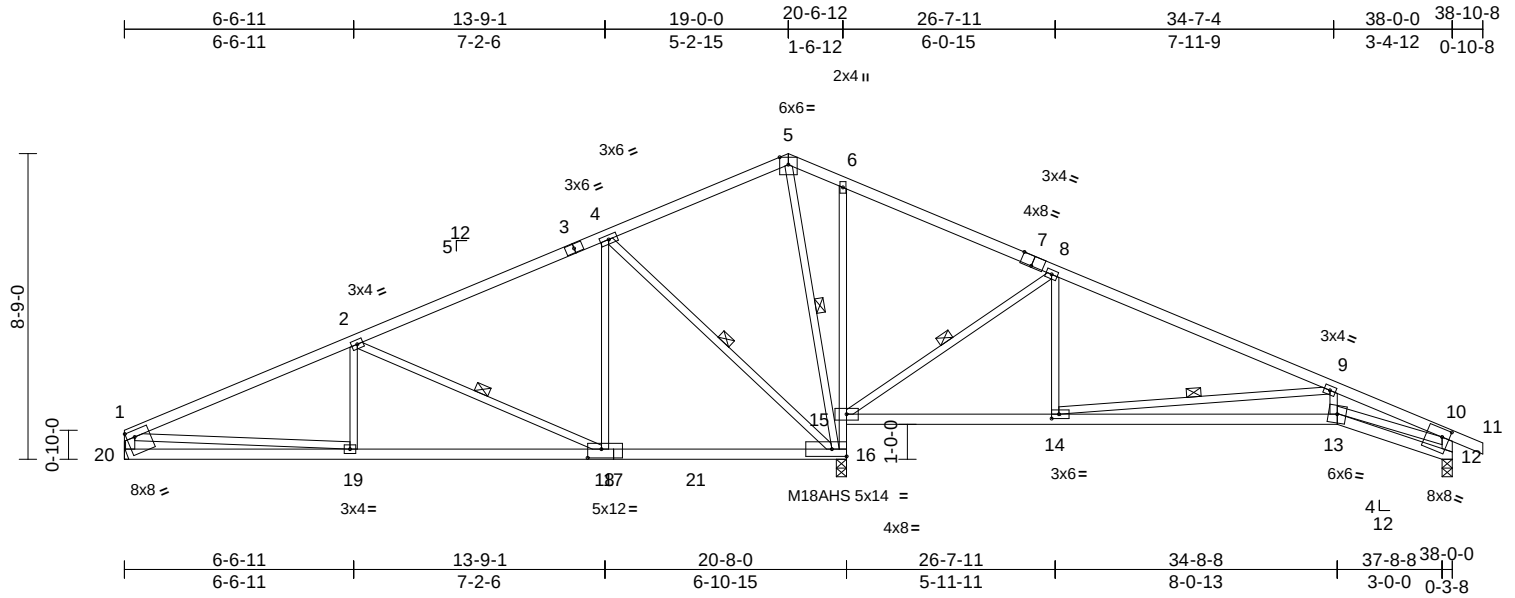

Scale = 1:65.9

Plate Offsets (X, Y): [7:0-4-0,Edge], [12:0-2-8,0-2-12], [14:0-2-8,0-1-8], [17:0-4-12,0-3-0], [20:0-2-12,0-2-4]

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	0.72	Vert(LL)	-0.20	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.39	13-14	>531	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.02	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	13-14	>999	240	Weight: 150 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 16-6:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-1,12-10:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-18, 4-16, 5-16, 8-15, 9-14

REACTIONS (size) 12=0-3-8, 16=0-3-8, 20= Mechanical
Max Horiz 20=-133 (LC 9)
Max Uplift 12=-172 (LC 9), 16=-136 (LC 8), 20=-156 (LC 8)
Max Grav 12=689 (LC 24), 16=2126 (LC 2), 20=837 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1331/269, 2-4=-652/200, 4-5=0/450, 5-6=0/485, 6-8=0/539, 8-9=-519/215, 9-10=-2015/517, 10-11=0/27, 1-20=-756/188, 10-12=-668/176
BOT CHORD 19-20=-180/377, 18-19=-304/1170, 16-18=-116/517, 15-16=-1006/297, 6-15=-343/159, 14-15=-55/404, 13-14=-453/1789, 12-13=-7/147
WEBS 2-19=0/234, 2-18=-729/206, 4-18=0/623, 4-16=-1028/243, 5-16=-426/0, 8-15=-979/241, 8-14=0/445, 9-14=-1395/400, 9-13=0/434, 1-19=-125/848, 10-13=-447/1726

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) All bearings are assumed to be SPF No.2 .
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 20, 172 lb uplift at joint 12 and 136 lb uplift at joint 16.
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

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	B8	Common Girder	1	1	Job Reference (optional)	I64627073

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:36 Page: 1
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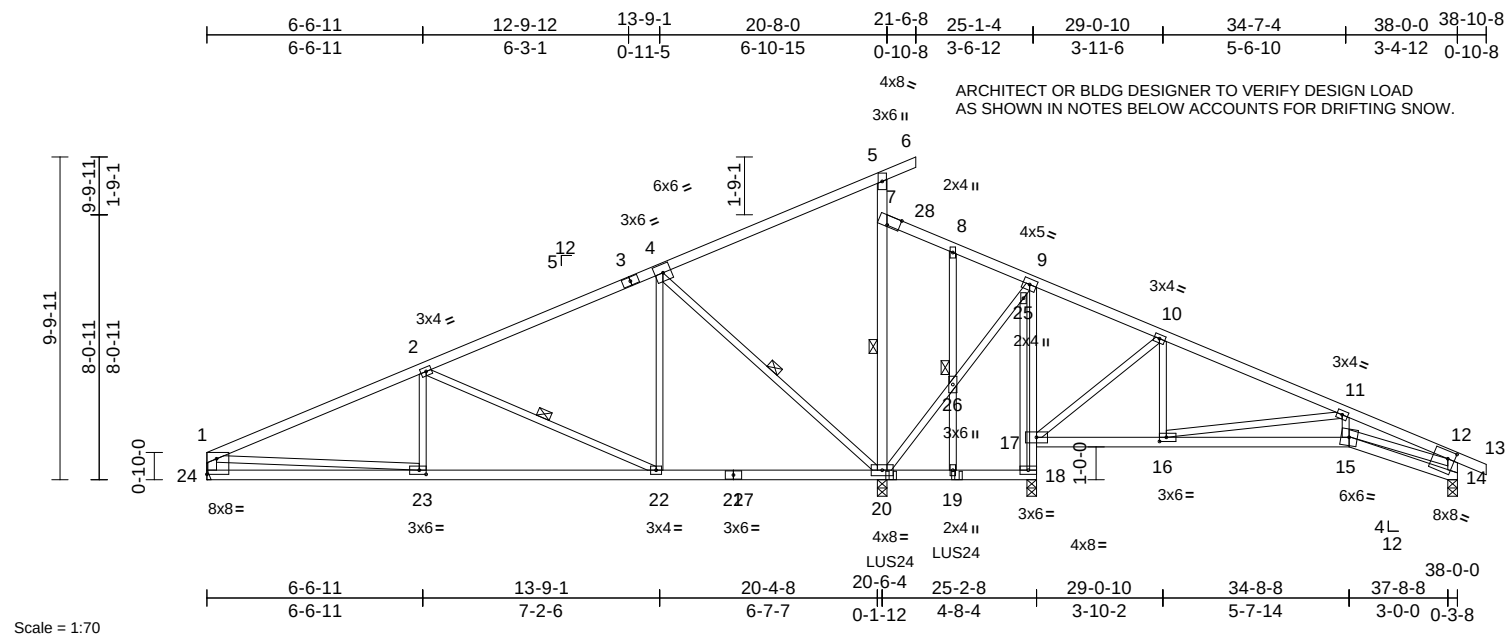

Scale = 1:70

Plate Offsets (X, Y): [7:0-4-7,Edge], [14:0-2-8,0-2-12], [16:0-2-8,0-1-8], [23:0-2-8,0-1-8], [24:Edge,0-5-11]

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	0.65	Vert(LL)	-0.08	22-23	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.16	22-23	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.77	Horz(CT)	0.04	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	15-16	>999	240	Weight: 164 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 18-9:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 5-20,24-1,14-12:2x4 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals.
Except:
1 Row at midpt 7-20
6-0-0 oc bracing: 5-7
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 19-20,18-19.
WEBS 1 Row at midpt 2-22, 4-20
JOINTS 1 Brace at Jt(s): 26

REACTIONS (size) 14=0-3-8, 18=0-3-8, 20=0-3-8, 24=Mechanical
Max Horiz 24=217 (LC 8)
Max Uplift 14=-137 (LC 9), 18=-135 (LC 9), 20=-439 (LC 8), 24=-106 (LC 27)
Max Grav 14=545 (LC 22), 18=1429 (LC 1), 20=1600 (LC 23), 24=905 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1476/163, 2-4=-800/87, 4-5=-50/188, 5-6=-27/0, 7-20=-523/119, 5-7=-314/124, 1-24=-820/139, 12-14=-538/155, 7-8=0/212, 8-9=0/133, 9-10=0/324, 10-11=-355/155, 11-12=-1339/339, 12-13=0/27
BOT CHORD 23-24=-275/366, 22-23=-314/1303, 20-22=-120/692, 19-20=-234/107, 18-19=-234/107, 17-18=-889/101, 9-17=-415/0, 16-17=-24/268, 15-16=-279/1167, 14-15=-27/154
WEBS 2-23=0/231, 2-22=-703/216, 4-22=-5/565, 4-20=-1013/268, 20-26=0/260, 25-26=0/297, 9-25=-18/198, 10-17=-670/163, 10-16=0/345, 11-16=-912/258, 11-15=0/311, 1-23=-39/970, 12-15=-256/1073, 18-25=-186/9, 8-26=-27/147, 19-26=-28/185

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SPF No.2 .
9) Refer to girder(s) for truss to truss connections.
10) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 439 lb uplift at joint 20, 106 lb uplift at joint 24, 137 lb uplift at joint 14 and 135 lb uplift at joint 18.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 20-9-8 from the left end to 22-9-8 to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 300 lb down and 83 lb up at 25-1-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
16) 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: 1-5=-70, 5-6=-70, 18-24=-20, 15-17=-20, 14-15=-20, 7-28=-20, 12-28=-70, 12-13=-70
Concentrated Loads (lb)
Vert: 20=-300 (F), 19=-300 (F), 18=-300 (F)

STATE OF MISSOURI JUAN GARCIA NUMBER E-2000162101 PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED 16952 KANSAS PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	E1	Monopitch	3	1	Job Reference (optional)	I64627074

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:36 Page: 1
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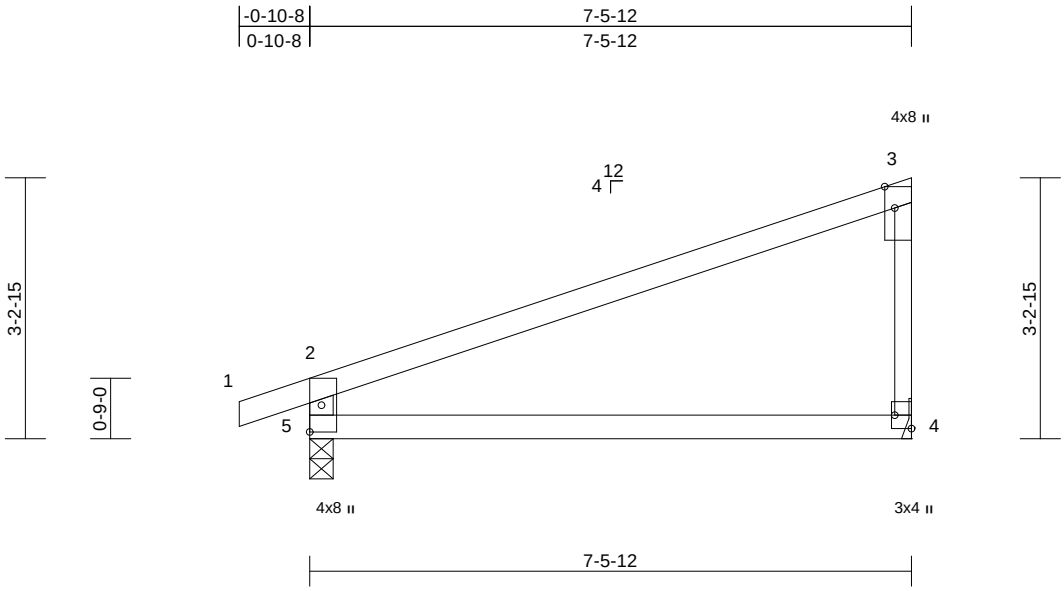

Scale = 1:28.6

Plate Offsets (X, Y): [3:0-3-3,Edge], [4: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	0.75	Vert(LL)	-0.11	4-5	>805	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.23	4-5	>374	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	4-5	>999	240	Weight: 21 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 5-2:2x4 SPF No.2

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=134 (LC 5)
Max Uplift 4=-71 (LC 8), 5=-96 (LC 4)
Max Grav 4=320 (LC 1), 5=402 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-164/17, 3-4=-227/101, 2-5=-351/152
BOT CHORD 4-5=-34/70

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 4 and 96 lb uplift at joint 5.
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
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
04/22/2024 8:36:13

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	G1	Hip Girder	1	1	Job Reference (optional)	I64627075

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:36
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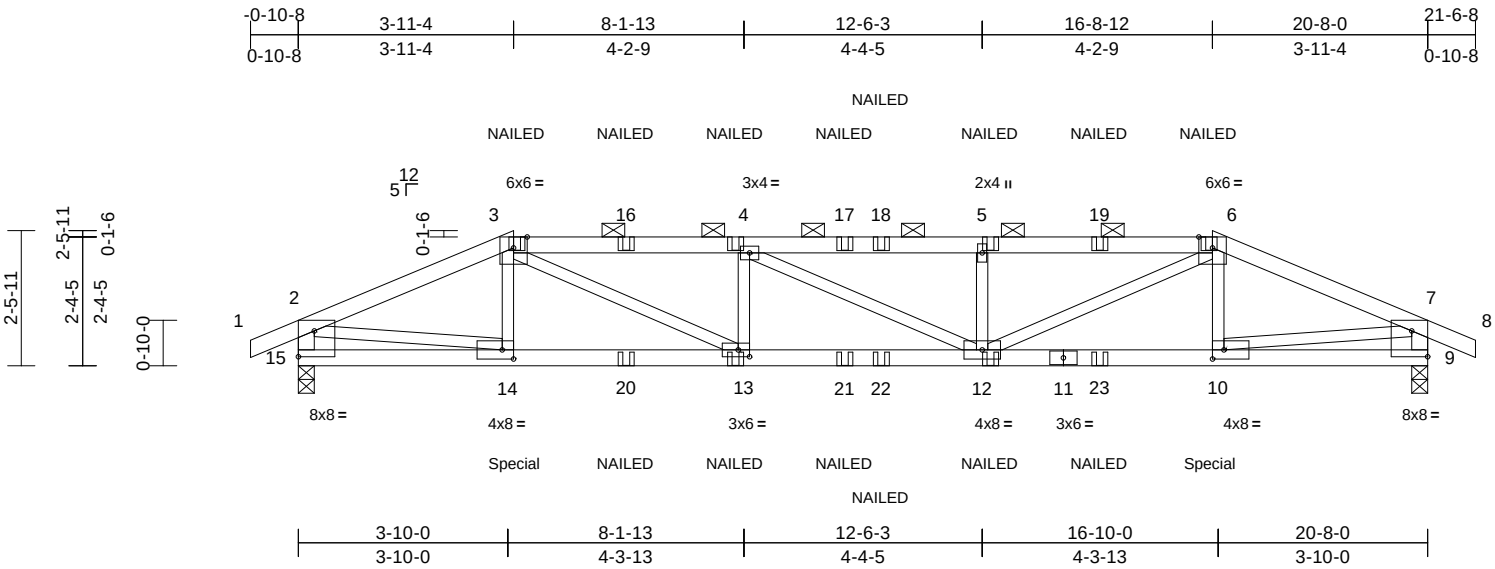

Scale = 1:42.2

Plate Offsets (X, Y): [9:Edge,0-5-11], [10:0-2-8,0-2-0], [13:0-2-8,0-1-8], [14:0-2-8,0-2-0], [15:Edge,0-5-11]

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	0.69	Vert(LL)	-0.18	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.33	12-13	>732	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	12-13	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-11 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-8 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 6-9-14 oc bracing.

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Horiz 15=-18 (LC 6)
Max Uplift 9=-319 (LC 5), 15=-319 (LC 4)
Max Grav 9=1451 (LC 1), 15=1451 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-2384/537, 3-4=-3397/806, 4-5=-3392/803, 5-6=-3395/804, 6-7=-2384/537, 7-8=0/27, 2-15=-1399/332, 7-9=-1399/332
BOT CHORD 14-15=-93/303, 13-14=-459/2155, 12-13=-753/3394, 10-12=-461/2155, 9-10=-79/303
WEBS 3-14=-10/97, 6-10=-10/97, 2-14=-408/1875, 7-10=-409/1875, 3-13=-328/1421, 6-12=-327/1418, 4-13=-489/226, 4-12=-28/23, 5-12=-478/225

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 319 lb uplift at joint 15 and 319 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 214 lb down and 55 lb up at 3-11-4, and 214 lb down and 55 lb up at 16-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-6=-70, 6-7=-70, 7-8=-70, 9-15=-20
Concentrated Loads (lb)
Vert: 3=-45 (F), 6=-45 (F), 14=-214 (F), 10=-214 (F), 13=-23 (F), 12=-23 (F), 4=-45 (F), 5=-45 (F), 16=-45 (F), 17=-45 (F), 18=-45 (F), 19=-45 (F), 20=-23 (F), 21=-23 (F), 22=-23 (F), 23=-23 (F)

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	G2	Hip	1	1	Job Reference (optional)	I64627076

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:36
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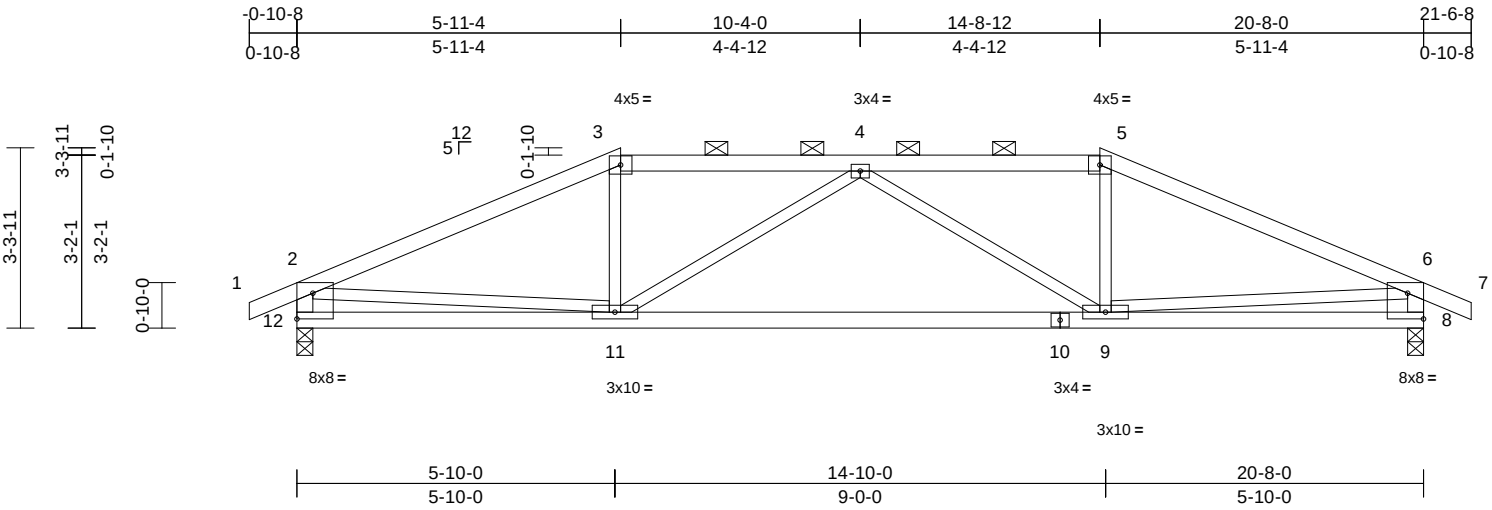

Scale = 1:42.3

Plate Offsets (X, Y): [8:Edge,0-5-11], [12:Edge,0-5-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.15	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.34	9-11	>723	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9-11	>999	240	Weight: 73 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-7 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-15 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-29 (LC 13)
Max Uplift 8=-135 (LC 5), 12=-135 (LC 4)
Max Grav 8=988 (LC 1), 12=988 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1533/188, 3-4=-1333/194, 4-5=-1333/194, 5-6=-1533/188, 6-7=0/27, 2-12=-943/157, 6-8=-943/157
BOT CHORD 11-12=-163/422, 9-11=-226/1613, 8-9=-136/422
WEBS 3-11=0/310, 4-11=-427/136, 4-9=-427/136, 5-9=0/310, 2-11=-38/932, 6-9=-38/932

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 12 and 135 lb uplift at joint 8.
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.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	G3	Hip	1	1	Job Reference (optional)	I64627077

Wheeler Lumber, Waverly, KS - 66871,

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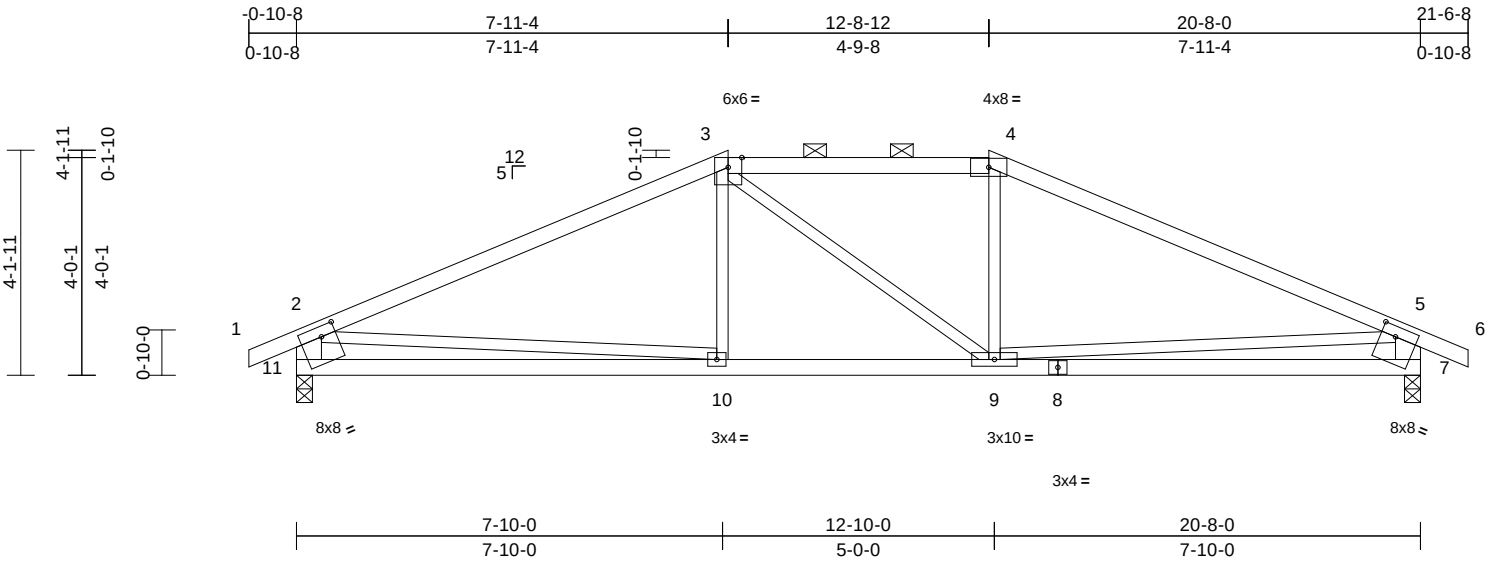

Scale = 1:42.4

Plate Offsets (X, Y): [7:0-3-4,0-2-4], [11:0-3-4,0-2-4]

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	0.80	Vert(LL)	-0.10	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.20	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	9-10	>999	240	Weight: 75 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-5:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-10 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=42 (LC 8)
Max Uplift 7=-122 (LC 9), 11=-122 (LC 8)
Max Grav 7=987 (LC 1), 11=987 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-1404/152, 3-4=-1189/169, 4-5=-1405/152, 5-6=0/30, 2-11=-911/168, 5-7=-912/167
BOT CHORD 10-11=-276/731, 9-10=-62/1189, 7-9=-237/730
WEBS 3-10=0/221, 3-9=-150/150, 4-9=0/221, 2-10=0/619, 5-9=0/620

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) All bearings are assumed to be SPF No.2 .
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 11 and 122 lb uplift at joint 7.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) 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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	G4	Hip Girder	1	2	Job Reference (optional)	I64627078

Wheeler Lumber, Waverly, KS - 66871,

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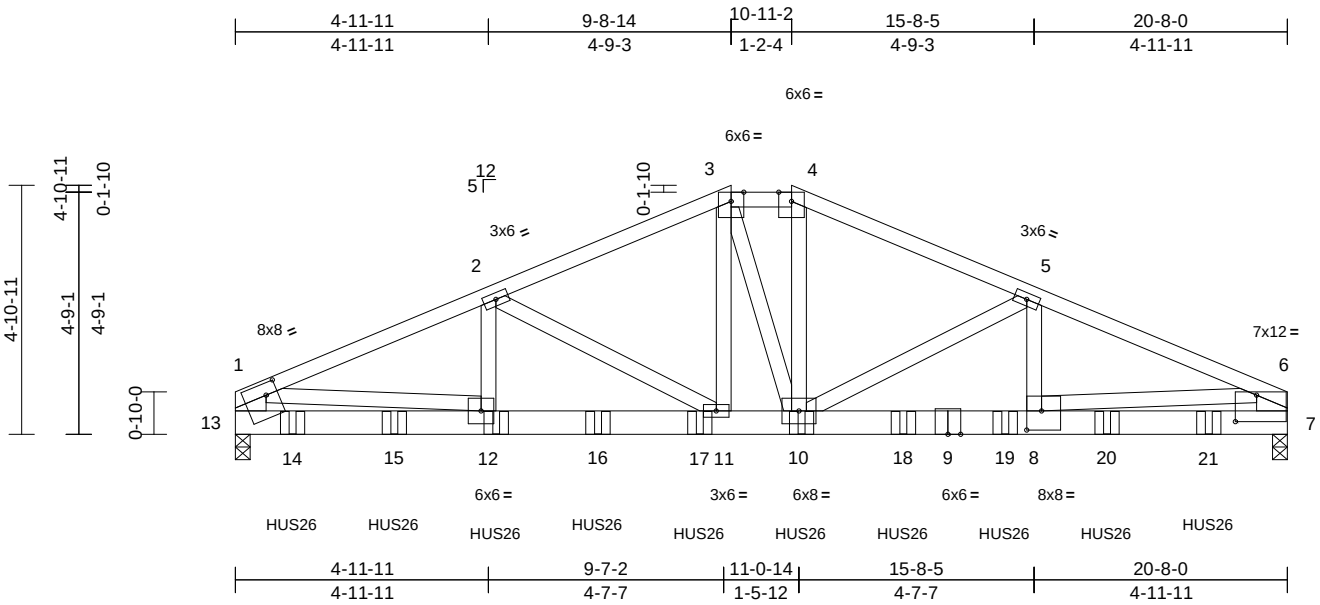

Scale = 1:45.3

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

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	0.51	Vert(LL)	-0.13	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.22	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.67	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	11-12	>999	240	Weight: 224 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 9-7:2x6 SPF No.2
WEBS 2x4 SPF No.2 *Except* 13-1,7-6:2x8 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-12 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-1 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, (req. 0-4-2), 13=0-3-8, (req. 0-4-2)
Max Horiz 13=-49 (LC 9)
Max Uplift 7=-833 (LC 9), 13=-953 (LC 8)
Max Grav 7=5220 (LC 17), 13=5284 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8241/1475, 2-3=-6515/1154, 3-4=-5979/1088, 4-5=-6574/1156, 5-6=-8381/1379, 1-13=-3938/738, 6-7=-4036/702
BOT CHORD 12-13=-468/2307, 11-12=-1370/7595, 10-11=-982/5984, 8-10=-1233/7691, 7-8=-327/2065
WEBS 2-12=-202/1379, 2-11=-1755/426, 3-11=-399/2148, 3-10=-68/324, 4-10=-404/2288, 5-10=-1834/323, 5-8=-115/1460, 1-12=-909/5332, 6-8=-912/5670

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 0-6-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) WARNING: Required bearing size at joint(s) 13, 7 greater than input bearing size.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 953 lb uplift at joint 13 and 833 lb uplift at joint 7.
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.
13) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-1-8 from the left end to 19-1-8 to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.

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, 4-6=-70, 7-13=-20
Concentrated Loads (lb)
Vert: 12=-818 (B), 10=-800 (B), 14=-818 (B), 15=-818 (B), 16=-818 (B), 17=-818 (B), 18=-800 (B), 19=-863 (B), 20=-888 (B), 21=-888 (B)

STATE OF MISSOURI JUAN GARCIA NUMBER E-2000162101 PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED 16952 KANSAS PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	H1	Monopitch Supported Gable	1	1	Job Reference (optional)	I64627079

Wheeler Lumber, Waverly, KS - 66871,

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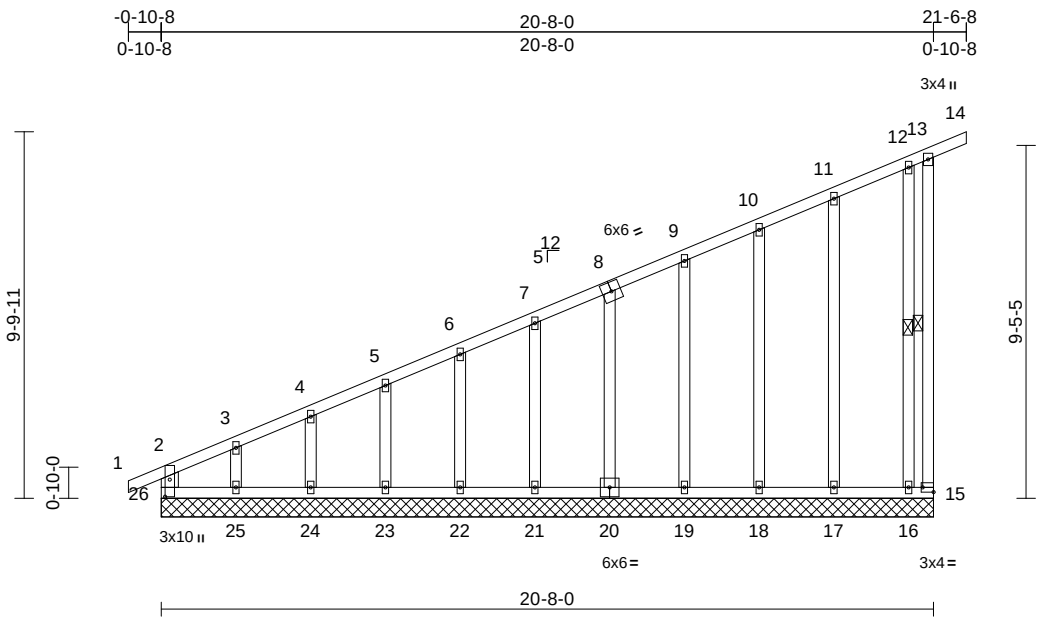

Scale = 1:61.6

Plate Offsets (X, Y): [15:Edge,0-1-8], [26:0-5-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 118 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 13-15:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 13-15, 12-16

REACTIONS (size) 15=20-8-0, 16=20-8-0, 17=20-8-0, 18=20-8-0, 19=20-8-0, 20=20-8-0, 21=20-8-0, 22=20-8-0, 23=20-8-0, 24=20-8-0, 25=20-8-0, 26=20-8-0
Max Horiz 26=420 (LC 5)
Max Uplift 15=-170 (LC 7), 16=-102 (LC 8), 17=-34 (LC 5), 18=-56 (LC 8), 19=-46 (LC 8), 20=-48 (LC 8), 21=-48 (LC 8), 22=-46 (LC 8), 23=-55 (LC 8), 24=-17 (LC 8), 25=-190 (LC 5)
Max Grav 15=102 (LC 1), 16=182 (LC 16), 17=179 (LC 1), 18=181 (LC 1), 19=180 (LC 1), 20=180 (LC 1), 21=179 (LC 1), 22=180 (LC 1), 23=178 (LC 1), 24=186 (LC 1), 25=153 (LC 1), 26=281 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-26=-227/0, 1-2=0/30, 2-3=-375/36, 3-4=-311/30, 4-5=-295/28, 5-6=-269/27, 6-7=-245/27, 7-9=-222/27, 9-10=-194/27, 10-11=-183/54, 11-12=-159/73, 12-13=-88/41, 13-14=-27/0, 13-15=-147/130
BOT CHORD 25-26=-130/98, 24-25=-130/98, 23-24=-130/98, 22-23=-130/98, 21-22=-130/98, 19-21=-130/98, 18-19=-130/98, 17-18=-130/98, 16-17=-130/98, 15-16=-130/98
WEBS 3-25=-119/153, 4-24=-145/54, 5-23=-139/76, 6-22=-140/71, 7-21=-140/72, 8-20=-140/72, 9-19=-140/71, 10-18=-141/77, 11-17=-138/52, 12-16=-90/143

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 170 lb uplift at joint 15, 190 lb uplift at joint 25, 17 lb uplift at joint 24, 55 lb uplift at joint 23, 46 lb uplift at joint 22, 48 lb uplift at joint 21, 48 lb uplift at joint 20, 46 lb uplift at joint 19, 56 lb uplift at joint 18, 34 lb uplift at joint 17 and 102 lb uplift at joint 16.
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.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	H2	Monopitch	1	1	Job Reference (optional)	I64627080

Wheeler Lumber, Waverly, KS - 66871,

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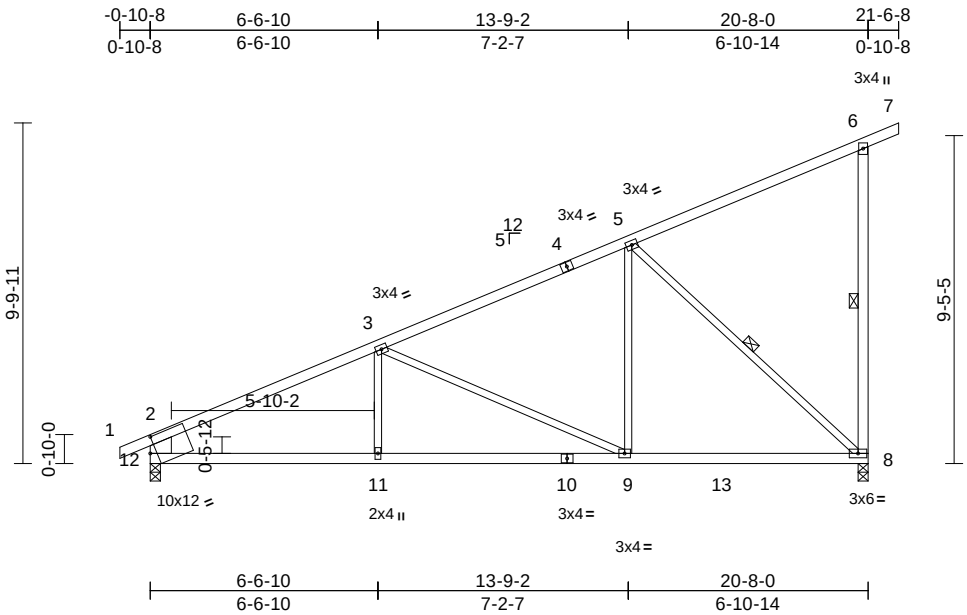

Scale = 1:66.3

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

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	0.69	Vert(LL)	-0.15	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.28	9-11	>853	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	9-11	>999	240	Weight: 84 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 6-8:2x4 SPF No.2, 12-2:2x8 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-8, 5-8

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=421 (LC 5)
Max Uplift 8=-242 (LC 8), 12=-148 (LC 8)
Max Grav 8=1023 (LC 2), 12=1014 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-1487/189, 3-5=-935/121, 5-6=-220/68, 6-7=-27/0, 6-8=-266/116, 2-12=-893/179
BOT CHORD 11-12=-288/1277, 9-11=-288/1277, 8-9=-145/770
WEBS 3-11=0/238, 3-9=-556/199, 5-9=-2/553, 5-8=-1035/262

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) All bearings are assumed to be SPF No.2 .
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 8 and 148 lb uplift at joint 12.
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
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	H3	Monopitch	2	1	Job Reference (optional)	I64627081

Wheeler Lumber, Waverly, KS - 66871,

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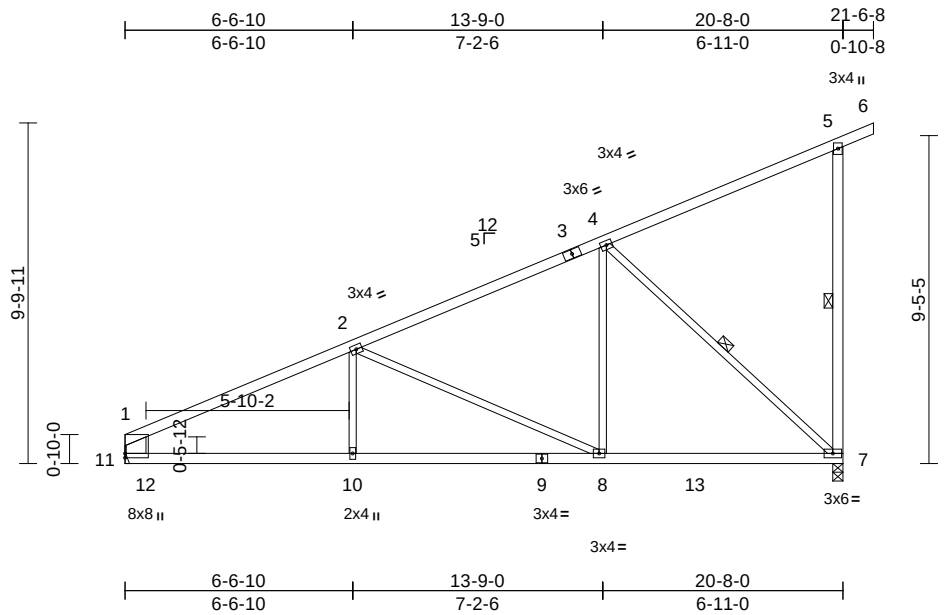

Scale = 1:66.3

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	0.70	Vert(LL)	-0.20	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.36	8-10	>676	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	8-10	>999	240	Weight: 83 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 9-7:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 5-7:2x4 SPF No.2, 11-1:2x8 SP 2400F 2.0E

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

REACTIONS (size) 7=0-3-8, 11= Mechanical
Max Horiz 11=410 (LC 5)
Max Uplift 7=-243 (LC 8), 11=-120 (LC 8)
Max Grav 7=1025 (LC 2), 11=940 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1469/187, 2-4=-958/123, 4-5=-220/68, 5-6=-27/0, 5-7=-266/116, 1-11=-765/147
BOT CHORD 10-11=-288/1277, 8-10=-288/1277, 7-8=-146/774
WEBS 2-10=0/203, 2-8=-551/197, 4-8=-4/565, 4-7=-1040/265

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 243 lb uplift at joint 7 and 120 lb uplift at joint 11.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J1	Diagonal Hip Girder	1	1	Job Reference (optional)	I64627082

Wheeler Lumber, Waverly, KS - 66871,

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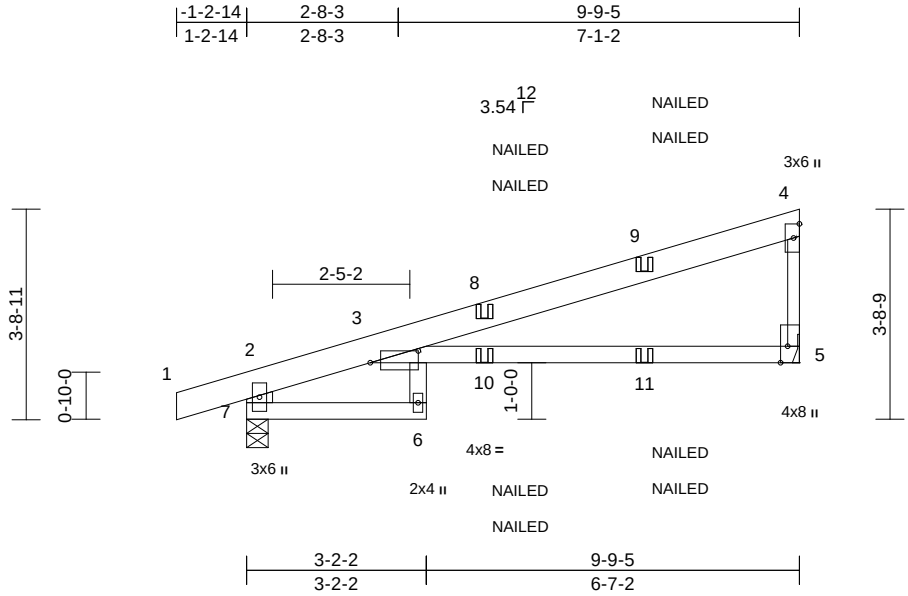

Scale = 1:40.7

Plate Offsets (X, Y): [3:0-10-3,0-2-8], [5:0-3-8,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	0.59	Vert(LL)	-0.20	6	>572	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.46	3-5	>248	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.14	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.18	6	>631	240	Weight: 42 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 4-5:2x3 SPF No.2, 6-3:2x4 SPF No.2

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

REACTIONS (size) 5= Mechanical, 7=0-4-9
Max Horiz 7=134 (LC 5)
Max Uplift 5=-98 (LC 8), 7=-127 (LC 4)
Max Grav 5=557 (LC 1), 7=617 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-592/147, 1-2=0/29, 2-3=-177/16, 3-4=-186/24, 4-5=-401/153
BOT CHORD 6-7=-47/0, 3-5=-19/106
WEBS 3-6=0/72

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 7 and 98 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
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: 1-2=-70, 2-4=-70, 6-7=-20, 3-5=-20
Concentrated Loads (lb)
Vert: 9=-80 (F=-40, B=-40), 10=-37 (F=-18, B=-18), 11=-87 (F=-43, B=-43)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN
240616	J2	Jack-Open	2	1	I64627083
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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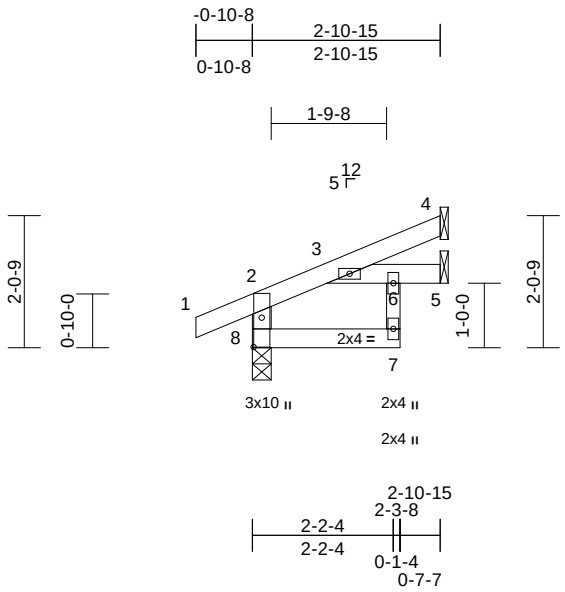

Scale = 1:35.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	3	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	3-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.01	3	>999	240	Weight: 10 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=53 (LC 8)
Max Uplift 4=-34 (LC 8), 8=-24 (LC 8)
Max Grav 4=73 (LC 1), 5=65 (LC 3), 8=216 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-197/45, 1-2=0/27, 2-3=-52/0, 3-4=-20/24
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=0/42

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 8 and 34 lb uplift at joint 4.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J3	Jack-Open	2	1	Job Reference (optional)	I64627084

Wheeler Lumber, Waverly, KS - 66871,

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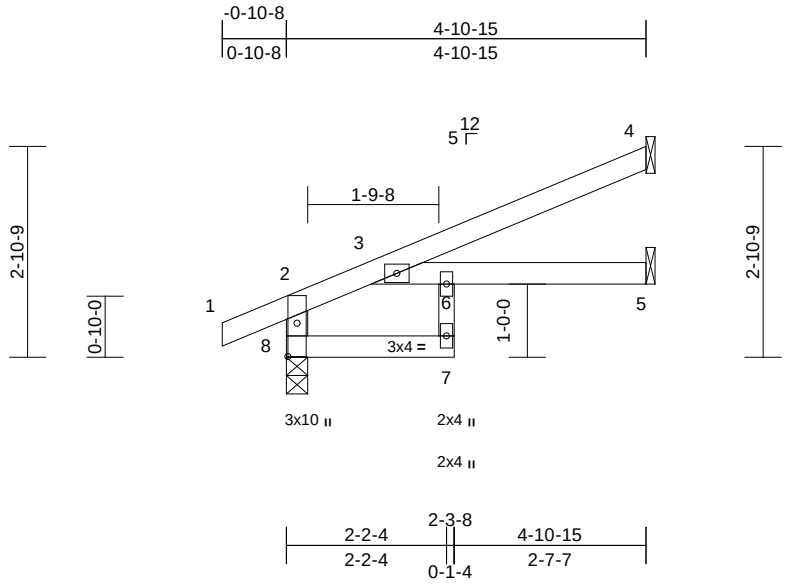

Scale = 1:31.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.03	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	5-6	>885	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	7	>999	240	Weight: 15 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 8=0-3-8
Max Horiz 8=87 (LC 8)
Max Uplift 4=-64 (LC 8), 8=-30 (LC 8)
Max Grav 4=139 (LC 1), 5=93 (LC 3), 8=305 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-297/59, 1-2=0/27, 2-3=-93/0, 3-4=-48/44
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=-5/48

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 8 and 64 lb uplift at joint 4.
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
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J4	Jack-Closed	3	1	Job Reference (optional)	I64627085

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:37 Page: 1
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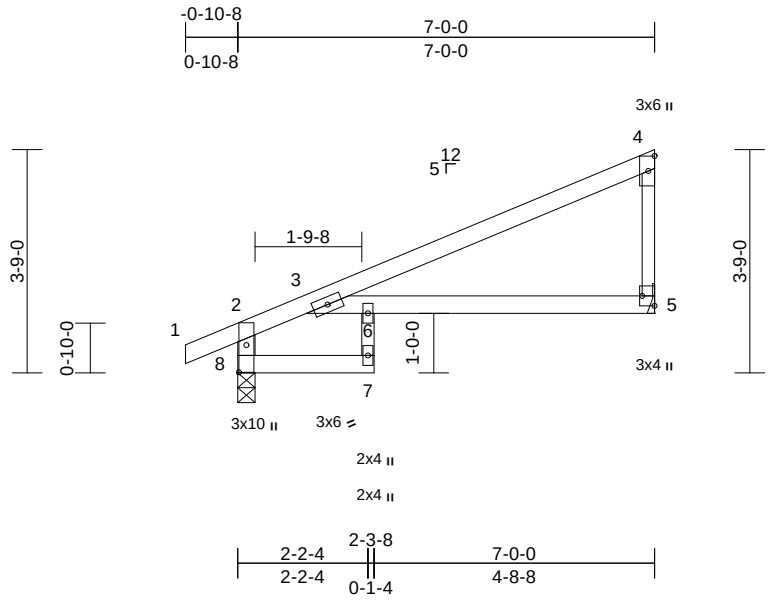

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Plate Offsets (X, Y): [5:Edge,0-2-8], [8:0-5-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.11	5-6	>768	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.21	5-6	>386	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.11	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.11	5-6	>709	240	Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 SPF No.2

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

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Horiz 8=138 (LC 5)
Max Uplift 5=-74 (LC 8), 8=-63 (LC 8)
Max Grav 5=298 (LC 1), 8=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-384/96, 1-2=0/27, 2-3=-165/0, 3-4=-136/13, 4-5=-192/84
BOT CHORD 7-8=0/0, 3-6=-31/66, 5-6=-31/66
WEBS 6-7=-13/50

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 8 and 74 lb uplift at joint 5.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	I64627086
240616	J5	Jack-Closed	10	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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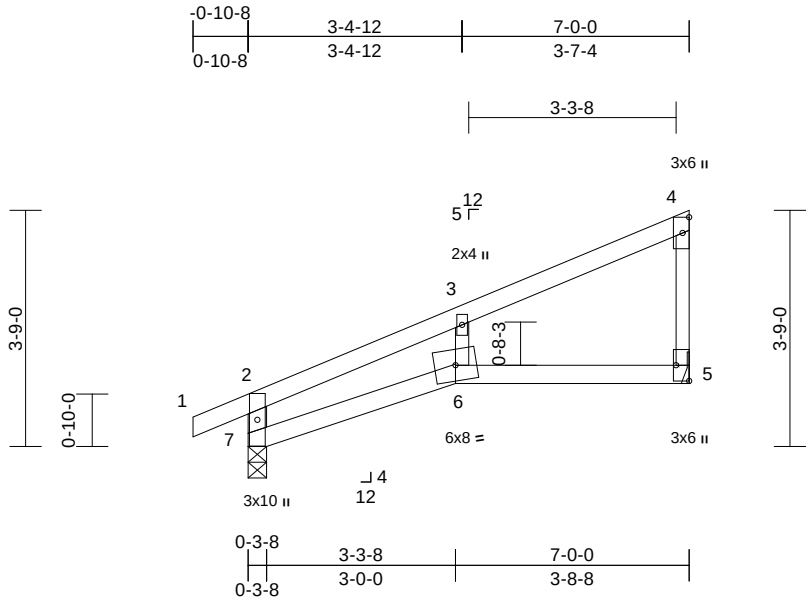

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Plate Offsets (X, Y): [5:Edge,0-2-8]

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	0.54	Vert(LL)	-0.15	6	>536	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.27	6	>302	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.09	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.16	6	>511	240	Weight: 21 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 SPF No.2

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=139 (LC 5)
Max Uplift 5=-74 (LC 8), 7=-63 (LC 8)
Max Grav 5=298 (LC 1), 7=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-324/71, 1-2=0/27, 2-3=-178/0, 3-4=-105/23, 4-5=-190/71
BOT CHORD 6-7=-40/82, 5-6=-38/87
WEBS 3-6=-31/83

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 7 and 74 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	I64627087
240616	J6	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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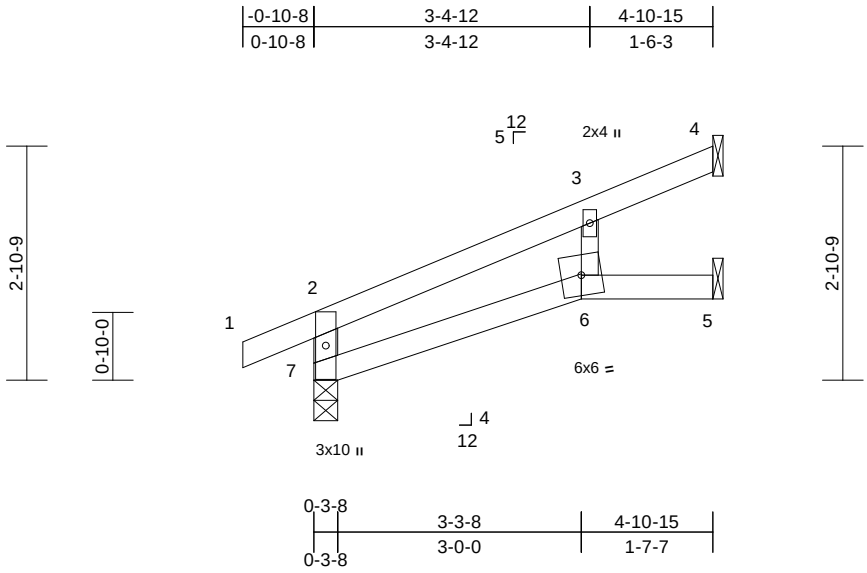

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.03	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	6-7	>923	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.03	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.04	6-7	>999	240	Weight: 14 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-6:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 7=0-3-8
Max Horiz 7=86 (LC 8)
Max Uplift 4=-42 (LC 8), 5=-23 (LC 8), 7=-37 (LC 8)
Max Grav 4=114 (LC 1), 5=89 (LC 1), 7=291 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-225/53, 1-2=0/27, 2-3=-75/26, 3-4=-22/40
BOT CHORD 6-7=-25/14, 5-6=0/0
WEBS 3-6=-62/64

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 7, 42 lb uplift at joint 4 and 23 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN
240616	J7	Jack-Open	2	1	I64627088
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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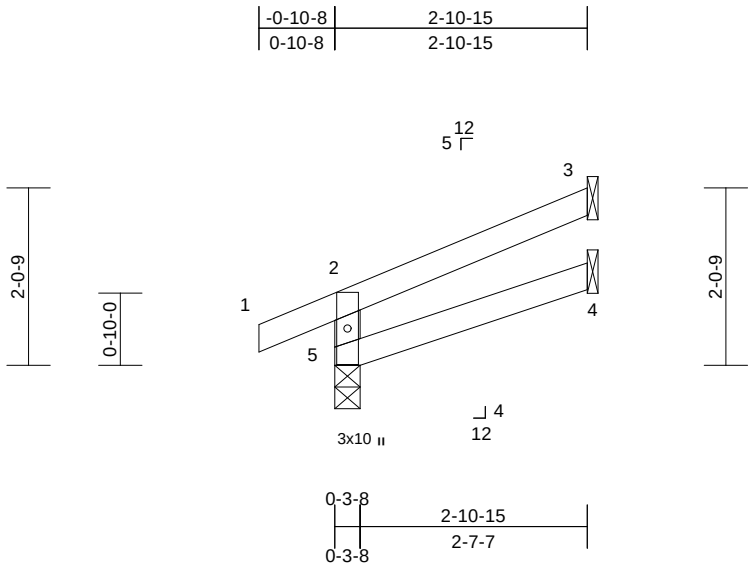

Scale = 1:26.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=53 (LC 5)
Max Uplift 3=-45 (LC 8), 5=-29 (LC 8)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-181/56, 1-2=0/27, 2-3=-46/23
BOT CHORD 4-5=-18/12

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 5 and 45 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J8	Diagonal Hip Girder	1	1	Job Reference (optional)	I64627089

Wheeler Lumber, Waverly, KS - 66871,

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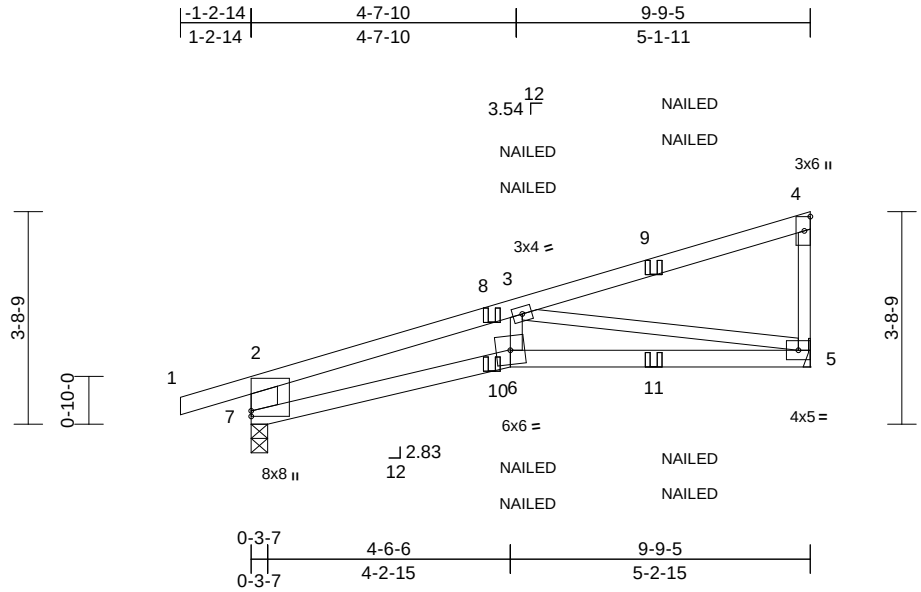

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.16	5-6	>720	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.28	5-6	>398	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.08	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	5-6	>749	240	Weight: 32 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x6 SP 2400F 2.0E

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-4-12 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-7
Max Horiz 7=138 (LC 5)
Max Uplift 5=-152 (LC 8), 7=-160 (LC 4)
Max Grav 5=536 (LC 1), 7=584 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-745/246, 1-2=0/29, 2-3=-1267/325, 3-4=-135/26, 4-5=-217/76
BOT CHORD 6-7=-384/1159, 5-6=-366/1092
WEBS 3-6=-50/345, 3-5=-1043/341

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 7 and 152 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 6-7=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 9=-40 (F=-20, B=-20), 10=-5 (F=-3, B=-3), 11=-122 (F=-61, B=-61)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

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LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J9	Jack-Open	4	1	Job Reference (optional)	I64627090

Wheeler Lumber, Waverly, KS - 66871,

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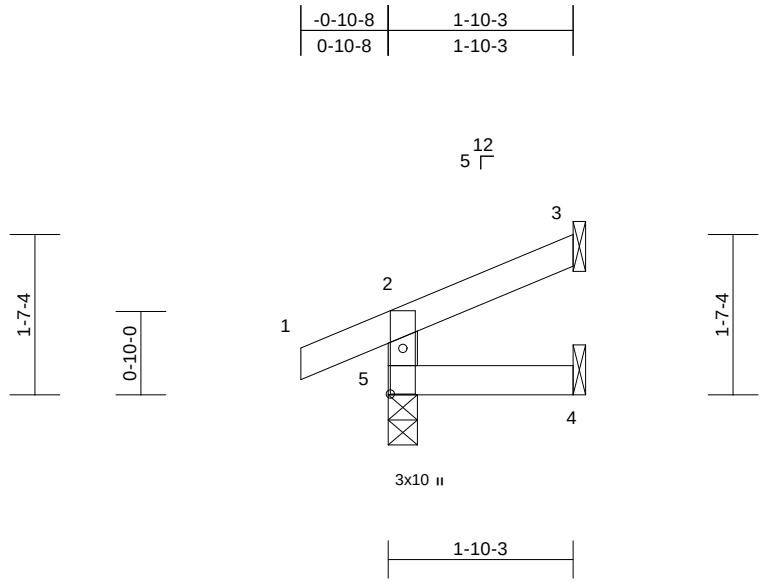

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Plate Offsets (X, Y): [5:0-5-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-3 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=41 (LC 5)
Max Uplift 3=-28 (LC 8), 5=-32 (LC 4)
Max Grav 3=41 (LC 1), 4=30 (LC 3), 5=169 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-148/46, 1-2=0/27, 2-3=-31/11
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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5 and 28 lb uplift at joint 3.
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 3,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J11	Diagonal Hip Girder	2	1	Job Reference (optional)	I64627091

Wheeler Lumber, Waverly, KS - 66871,

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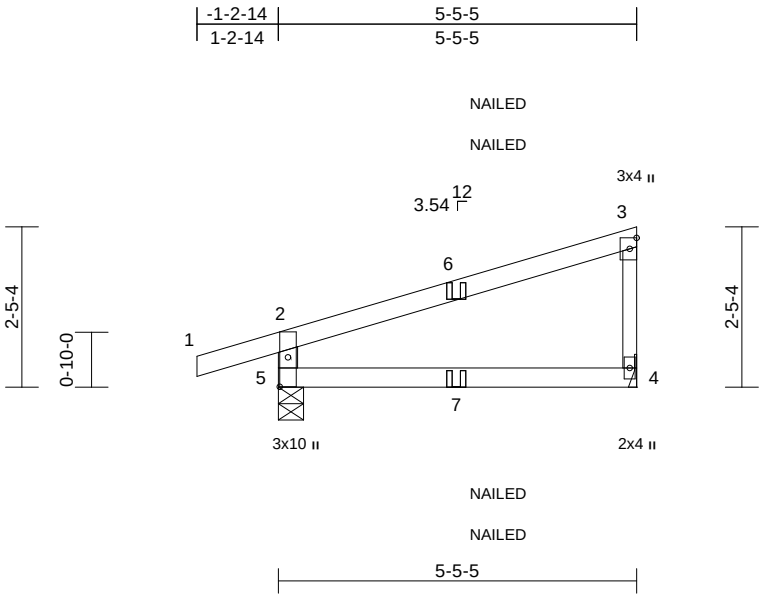

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Plate Offsets (X, Y): [5:0-5-6,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

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

REACTIONS (size) 4= Mechanical, 5=0-4-9
Max Horiz 5=98 (LC 7)
Max Uplift 4=-48 (LC 8), 5=-102 (LC 4)
Max Grav 4=219 (LC 1), 5=342 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-302/140, 1-2=0/27, 2-3=-126/14, 3-4=-158/71
BOT CHORD 4-5=-26/49

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 5 and 48 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
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: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=4 (F=2, B=2)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	J12	Jack-Open	8	1	Job Reference (optional)	I64627092

Wheeler Lumber, Waverly, KS - 66871,

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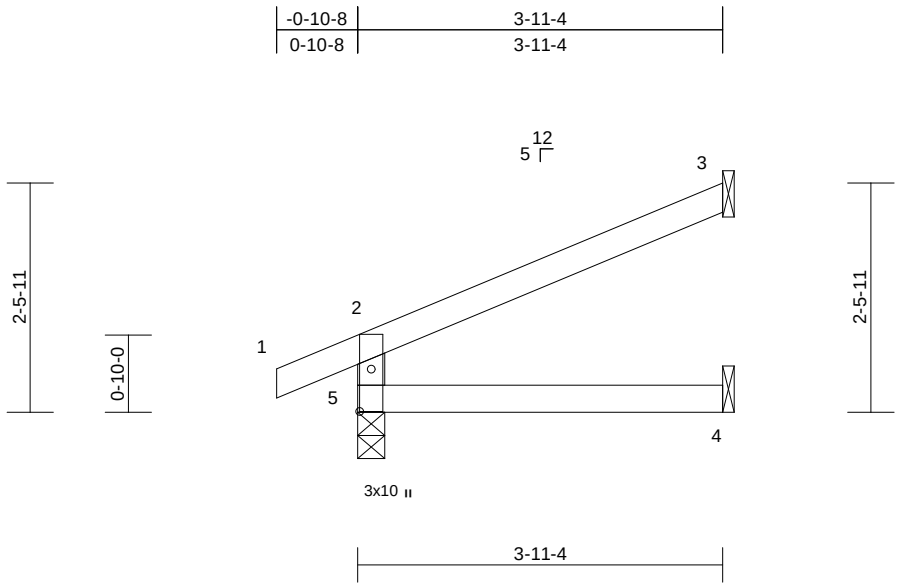

Scale = 1:24.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals.
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=70 (LC 8)
Max Uplift 3=-61 (LC 8), 5=-34 (LC 8)
Max Grav 3=115 (LC 1), 4=70 (LC 3), 5=249 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-218/70, 1-2=0/27, 2-3=-63/34
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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 61 lb uplift at joint 3.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	K1	Monopitch Structural Gable	1	1	Job Reference (optional)	I64627093

Wheeler Lumber, Waverly, KS - 66871,

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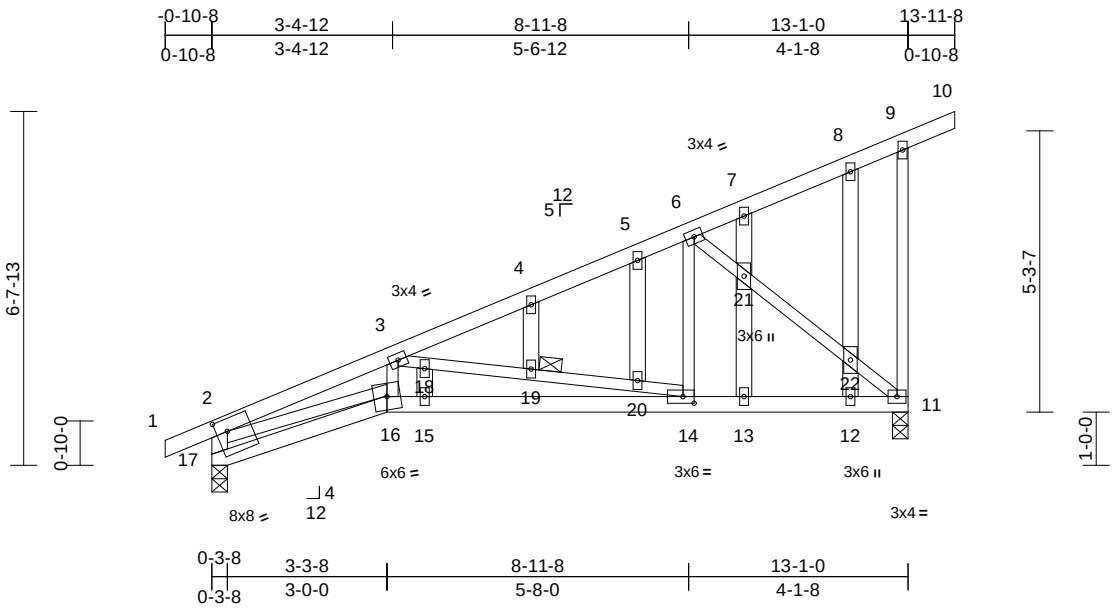

Scale = 1:43.3

Plate Offsets (X, Y): [14:0-2-8,0-1-8], [17:0-2-8,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.08	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.16	14-15	>977	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.06	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	14-15	>999	240	Weight: 65 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-2:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-13 oc bracing.
JOINTS 1 Brace at Jt(s): 19

REACTIONS (size) 11=0-3-8, 17=0-3-8
Max Horiz 17=266 (LC 5)
Max Uplift 11=-167 (LC 8), 17=-95 (LC 8)
Max Grav 11=646 (LC 1), 17=649 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1652/337, 3-4=-625/55, 4-5=-579/79, 5-6=-580/102, 6-7=-118/15, 7-8=-110/25, 8-9=-74/30, 9-10=-26/0, 9-11=-142/65, 2-17=-660/165
BOT CHORD 16-17=-271/194, 15-16=-399/1434, 14-15=-399/1434, 13-14=-98/537, 12-13=-98/537, 11-12=-98/537
WEBS 3-16=-106/369, 6-21=-692/185, 21-22=-679/183, 11-22=-709/190, 2-16=-246/1303, 6-14=-65/470, 3-18=-915/320, 18-19=-901/304, 19-20=-906/308, 14-20=-941/319, 15-18=-98/87, 4-19=-44/35, 5-20=-150/47, 7-21=-19/8, 13-21=-40/12, 8-22=-61/54, 12-22=-14/67

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 2x4 MT20 unless otherwise indicated.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 167 lb uplift at joint 11 and 95 lb uplift at joint 17.
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.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	K2	Monopitch	3	1	Job Reference (optional)	I64627094

Wheeler Lumber, Waverly, KS - 66871,

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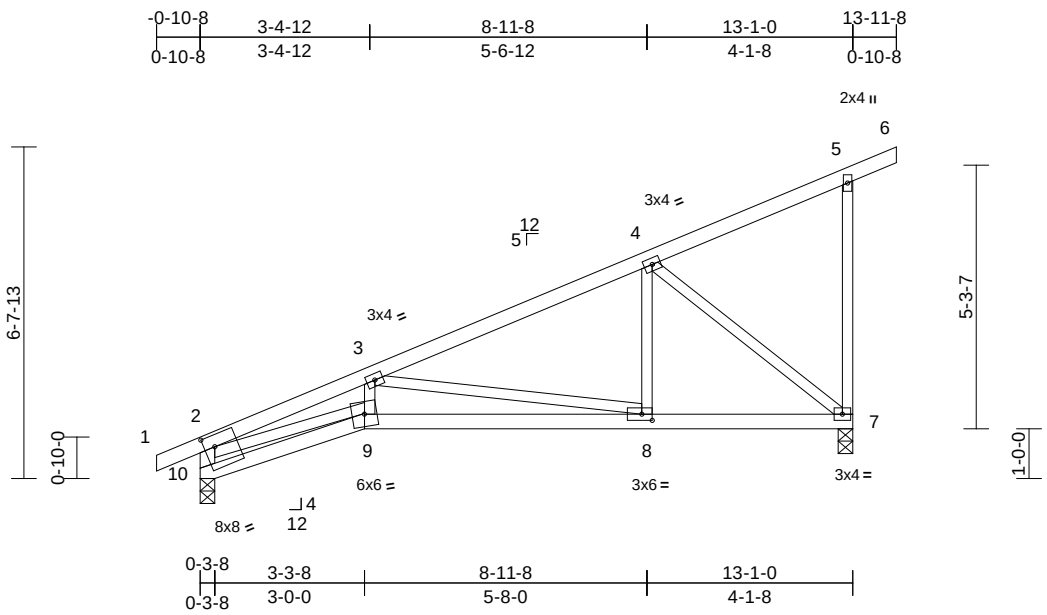

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Plate Offsets (X, Y): [8:0-2-8,0-1-8], [10:0-2-8,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.07	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.14	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	8-9	>999	240	Weight: 52 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-1-1 oc bracing.

REACTIONS (size) 7=0-3-8, 10=0-3-8
Max Horiz 10=266 (LC 5)
Max Uplift 7=-167 (LC 8), 10=-95 (LC 8)
Max Grav 7=646 (LC 1), 10=649 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1686/346, 3-4=-668/87, 4-5=-127/38, 5-6=-26/0, 5-7=-171/78, 2-10=-649/157
BOT CHORD 9-10=-266/173, 8-9=-420/1482, 7-8=-102/556
WEBS 3-9=-37/309, 4-7=-714/193, 2-9=-266/1361, 4-8=0/341, 3-8=-939/323

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) All bearings are assumed to be SPF No.2 .
5) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 167 lb uplift at joint 7 and 95 lb uplift at joint 10.
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 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	LAY1	Lay-In Gable	2	1	Job Reference (optional)	I64627095

Wheeler Lumber, Waverly, KS - 66871,

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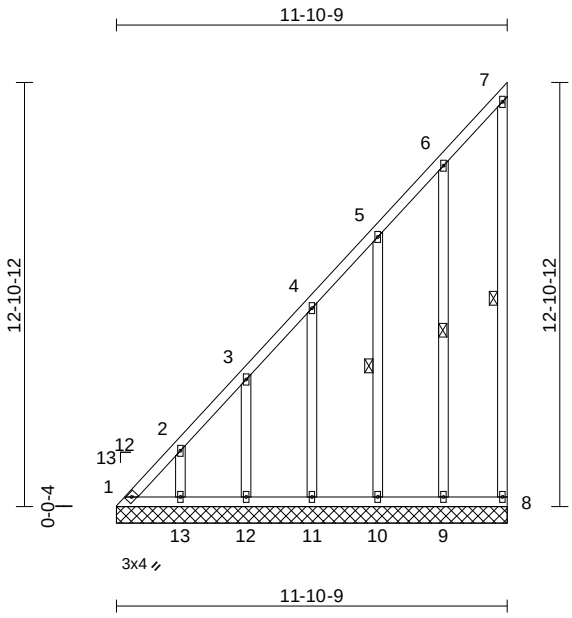

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 81 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-8, 5-10, 6-9

REACTIONS (size) 1=11-10-9, 8=11-10-9, 9=11-10-9, 10=11-10-9, 11=11-10-9, 12=11-10-9, 13=11-10-9
Max Horiz 1=505 (LC 8)
Max Uplift 1=-161 (LC 6), 8=-49 (LC 8), 9=-130 (LC 8), 10=-131 (LC 8), 11=-129 (LC 8), 12=-129 (LC 8), 13=-130 (LC 8)
Max Grav 1=507 (LC 8), 8=75 (LC 15), 9=210 (LC 15), 10=206 (LC 15), 11=205 (LC 15), 12=205 (LC 15), 13=207 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-705/278, 2-3=-582/231, 3-4=-451/181, 4-5=-321/132, 5-6=-190/93, 6-7=-70/37, 7-8=-61/57
BOT CHORD 1-13=0/0, 12-13=0/0, 11-12=0/0, 10-11=0/0, 9-10=0/0, 8-9=0/0
WEBS 2-13=-162/147, 3-12=-166/155, 4-11=-165/153, 5-10=-166/154, 6-9=-169/156

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; 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 2x4 MT20 unless otherwise indicated.
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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 1, 49 lb uplift at joint 8, 130 lb uplift at joint 13, 129 lb uplift at joint 12, 129 lb uplift at joint 11, 131 lb uplift at joint 10 and 130 lb uplift at joint 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	LAY2	Lay-In Gable	1	1	Job Reference (optional)	I64627096

Wheeler Lumber, Waverly, KS - 66871,

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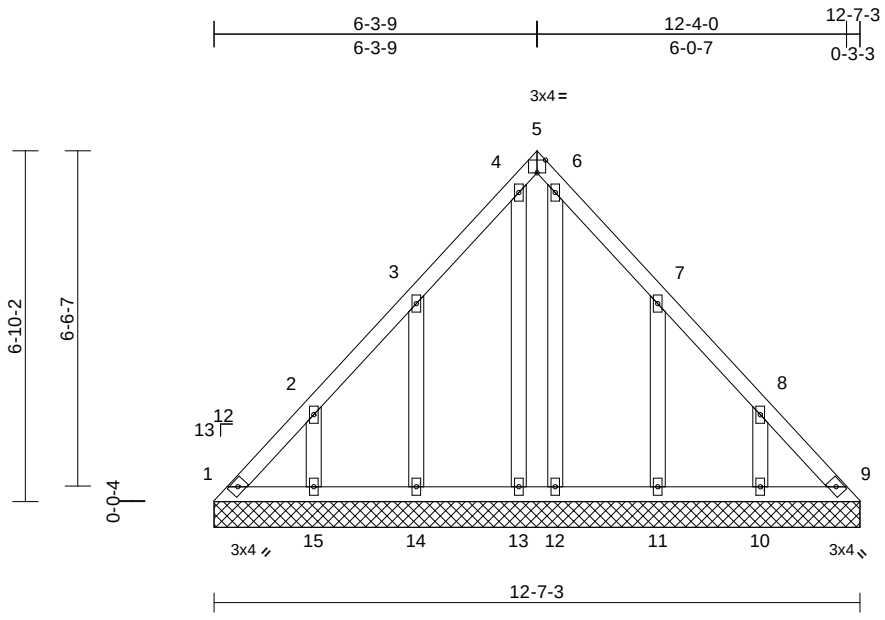

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Plate Offsets (X, Y): [5:Edge,0-3-0]

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 lb	FT = 10%

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

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

REACTIONS (size) 1=12-7-3, 9=12-7-3, 10=12-7-3, 11=12-7-3, 12=12-7-3, 13=12-7-3, 14=12-7-3, 15=12-7-3
Max Horiz 1=173 (LC 5)
Max Uplift 1=-68 (LC 6), 9=-37 (LC 7), 10=-129 (LC 9), 11=-141 (LC 9), 13=-21 (LC 5), 14=-140 (LC 8), 15=-129 (LC 8)
Max Grav 1=152 (LC 8), 9=132 (LC 9), 10=205 (LC 16), 11=217 (LC 16), 12=112 (LC 17), 13=131 (LC 15), 14=216 (LC 15), 15=205 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-223/152, 2-3=-122/106, 3-4=-97/117, 4-5=-27/70, 5-6=-33/74, 6-7=-71/91, 7-8=-93/71, 8-9=-195/111
BOT CHORD 1-15=-76/159, 14-15=-76/159, 13-14=-76/159, 12-13=-76/159, 11-12=-76/159, 10-11=-76/159, 9-10=-76/159
WEBS 2-15=-160/147, 3-14=-175/166, 4-13=-105/36, 8-10=-160/147, 7-11=-176/167, 6-12=-86/4

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SPF No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 1, 37 lb uplift at joint 9, 129 lb uplift at joint 15, 140 lb uplift at joint 14, 21 lb uplift at joint 13, 129 lb uplift at joint 10 and 141 lb uplift at joint 11.
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.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED 16952 KANSAS PROFESSIONAL ENGINEER

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	V1	Valley	1	1	Job Reference (optional)	I64627097

Wheeler Lumber, Waverly, KS - 66871,

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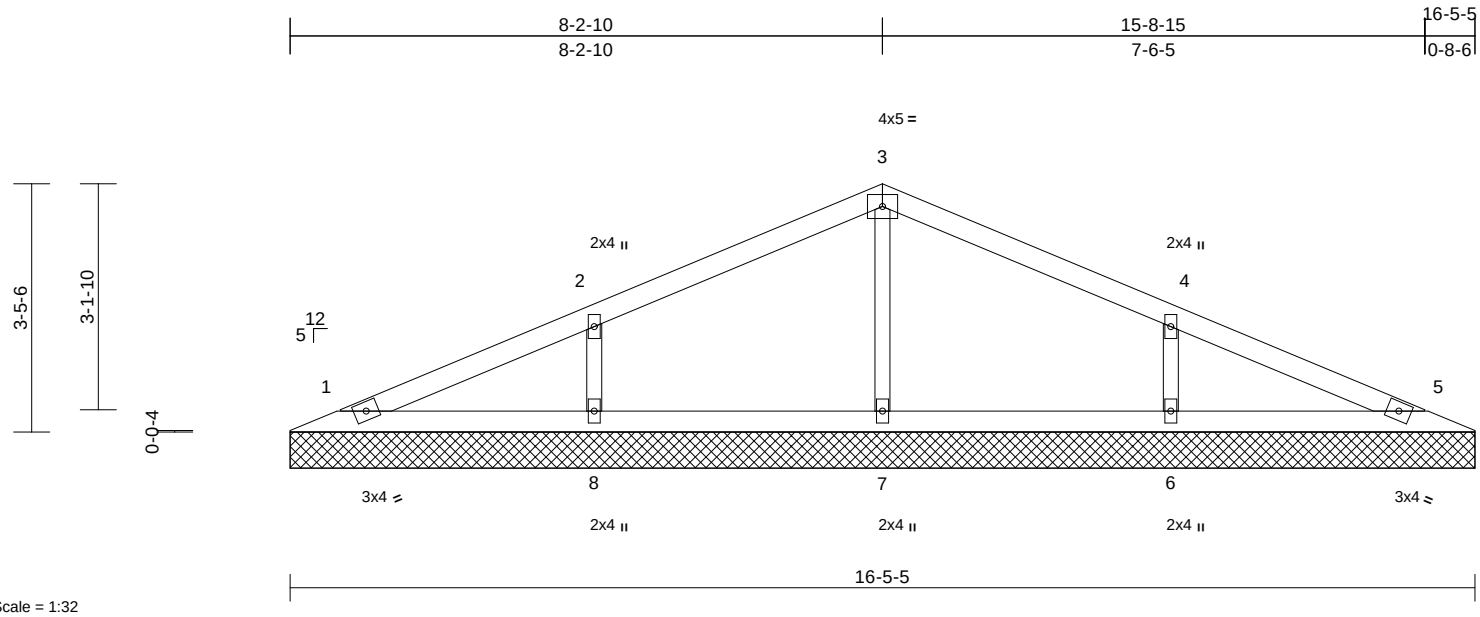

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 42 lb	FT = 10%

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

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

REACTIONS (size) 1=16-5-5, 5=16-5-5, 6=16-5-5, 7=16-5-5, 8=16-5-5
Max Horiz 1=55 (LC 12)
Max Uplift 1=-10 (LC 9), 5=-13 (LC 9), 6=-112 (LC 9), 8=-112 (LC 8)
Max Grav 1=129 (LC 1), 5=129 (LC 1), 6=402 (LC 22), 7=304 (LC 1), 8=402 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-74/52, 2-3=-87/83, 3-4=-87/70, 4-5=-56/41
BOT CHORD 1-8=0/43, 7-8=0/43, 6-7=0/43, 5-6=0/43
WEBS 3-7=-228/38, 2-8=-313/157, 4-6=-313/157

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 13 lb uplift at joint 5, 112 lb uplift at joint 8 and 112 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 3,2024

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	V2	Valley	1	1	Job Reference (optional)	I64627098

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Mar 21 2024 Print: 8.730 S Mar 21 2024 MiTek Industries, Inc. Tue Apr 02 08:22:38
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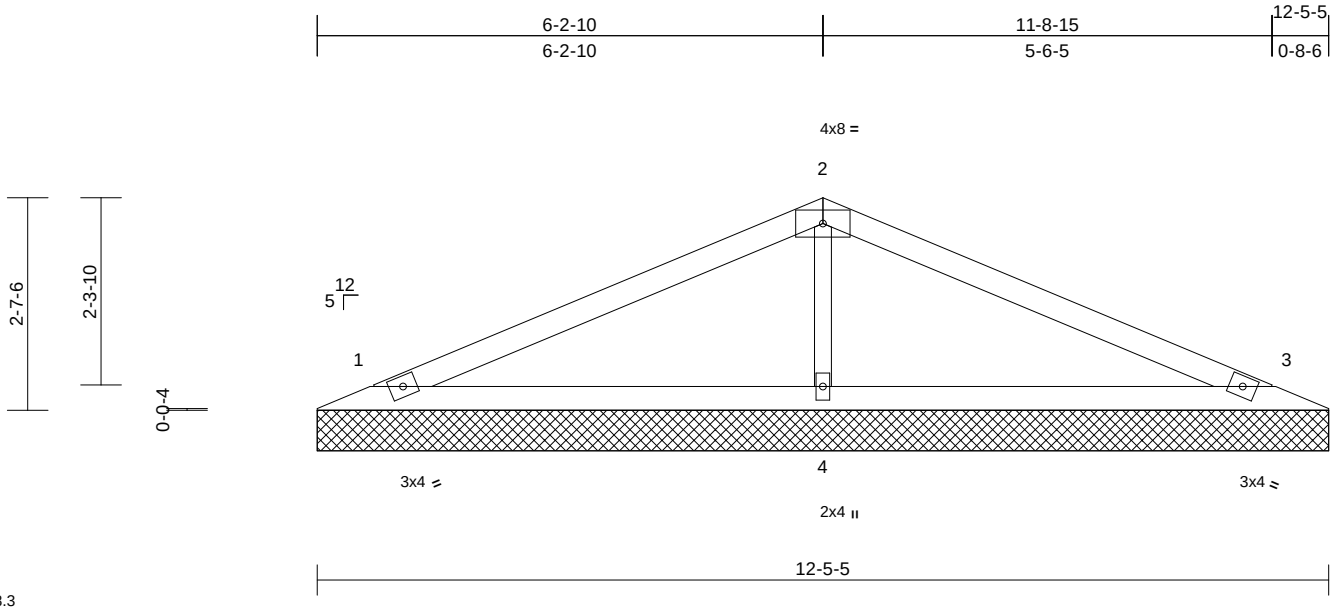

Scale = 1:28.3

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 29 lb	FT = 10%

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

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

REACTIONS (size) 1=12-5-5, 3=12-5-5, 4=12-5-5
Max Horiz 1=-41 (LC 9)
Max Uplift 1=-47 (LC 8), 3=-54 (LC 9), 4=-34 (LC 8)
Max Grav 1=228 (LC 21), 3=228 (LC 22), 4=546 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-116/60, 2-3=-116/46
BOT CHORD 1-4=-2/46, 3-4=-2/46
WEBS 2-4=-380/101

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1, 54 lb uplift at joint 3 and 34 lb uplift at joint 4.
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

April 3,2024

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

Job	Truss	Truss Type	Qty	Ply	Lot 133 MN	
240616	V3	Valley	1	1	Job Reference (optional)	I64627099

Wheeler Lumber, Waverly, KS - 66871,

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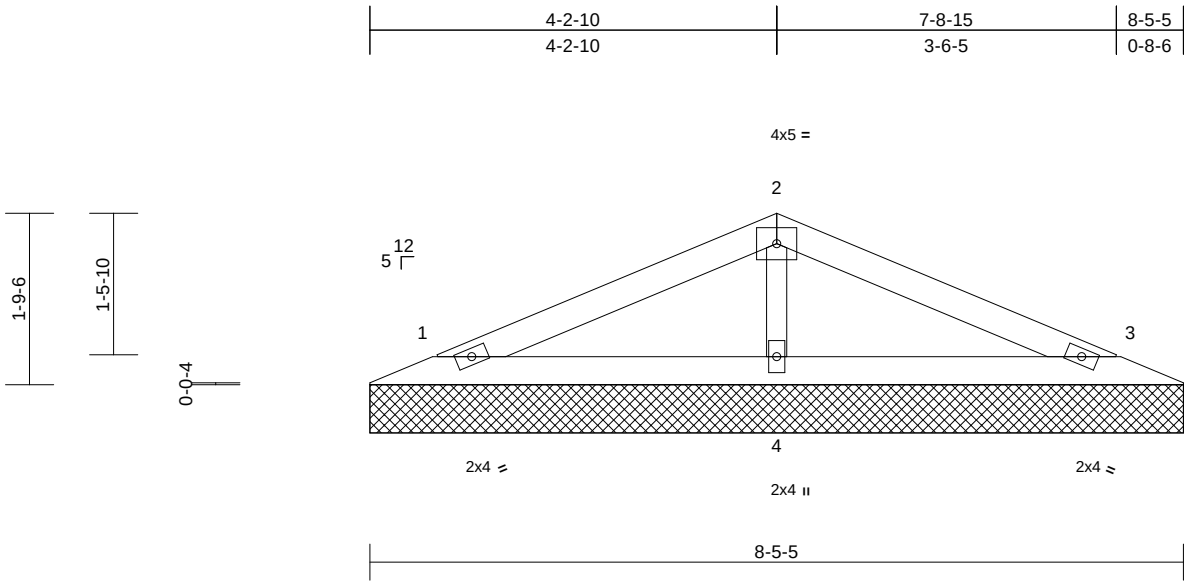
Page: 1



Scale = 1:23.9

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 10%

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

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

REACTIONS (size) 1=8-5-5, 3=8-5-5, 4=8-5-5
Max Horiz 1=26 (LC 12)
Max Uplift 1=-37 (LC 8), 3=-41 (LC 9), 4=-8 (LC 8)
Max Grav 1=160 (LC 1), 3=160 (LC 1), 4=314 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-65/37, 2-3=-65/26
BOT CHORD 1-4=-1/27, 3-4=-1/27
WEBS 2-4=-226/61

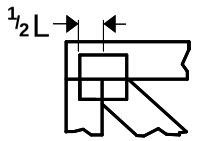
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SPF No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 1, 41 lb uplift at joint 3 and 8 lb uplift at joint 4.
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

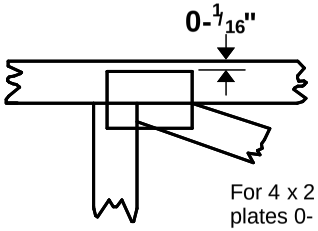
April 3,2024

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

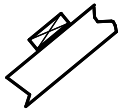
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

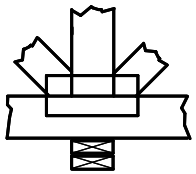
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

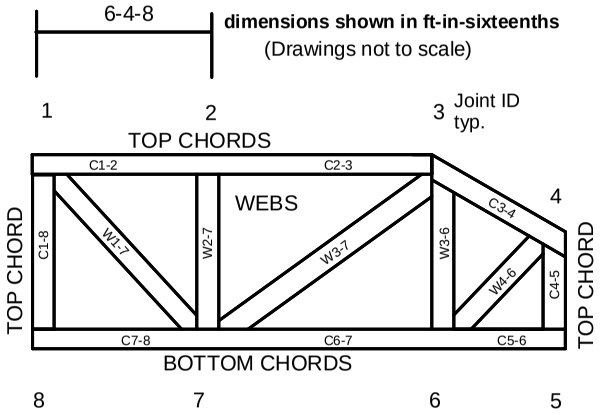


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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.