ENGINEERING BY TRENCO
A MiTek Affiliate

Lumber design values are in accordance with ANSI/TPI 1-2007 section 6.3
These truss designs rely on lumber values established by others.

RE: 4111088 - 4983 Ray Rd. Spring Lake, NC

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Project Customer: Carolina Construction Project Name:
Lot/Block: 4983 Subdivision: RAY ROAD
Address: 4983 RAY ROAD
City: SPRING LAKE State: NC

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: License #:
Address:
City, County: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 30 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Job ID#	Truss Name	Date	No.	Seal#	Job ID#	Truss Name	Date
1	I66896559	4111088	A01	7/18/24		I66896582	4111088	V08	7/18/24
2	I66896560	4111088	A02	7/18/24	25	I66896583	4111088	V09	7/18/24
3	I66896561	4111088	A03	7/18/24	26	I66896584	4111088	V10	7/18/24
4	I66896562	4111088	A04	7/18/24	27	I66896585	4111088	V11	7/18/24
5	I66896563	4111088		7/18/24	28	I66896586	4111088	V12	7/18/24
6	I66896564	4111088	A06	7/18/24	29	I66896587	4111088	V13	7/18/24
7	I66896565	4111088	A07	7/18/24	30	I66896588	4111088	V14	7/18/24
8	I66896566	4111088	A07P	7/18/24					
9	I66896567	4111088	A08	7/18/24					
10	I66896568	4111088	B01	7/18/24					
11	I66896569	4111088	B02	7/18/24					
12	I66896570	4111088	B03	7/18/24					
13	I66896571	4111088		7/18/24					
14	I66896572	4111088	G01	7/18/24					
	I66896573	4111088	G02	7/18/24					
16	I66896574	4111088	G03	7/18/24					
17	I66896575	4111088	V01	7/18/24					
18	I66896576	4111088	V02	7/18/24					
19	I66896577	4111088	V03	7/18/24					
20	I66896578	4111088	V04	7/18/24					
21	I66896579	4111088	V05	7/18/24					
22	I66896580	4111088	V06	7/18/24					
23	I66896581	4111088	V07	7/18/24					

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Sumter,SC.

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2024.

July 18,2024
Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	A01	Common Supported Gable	1	1	I66896559 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:46 Page: 1
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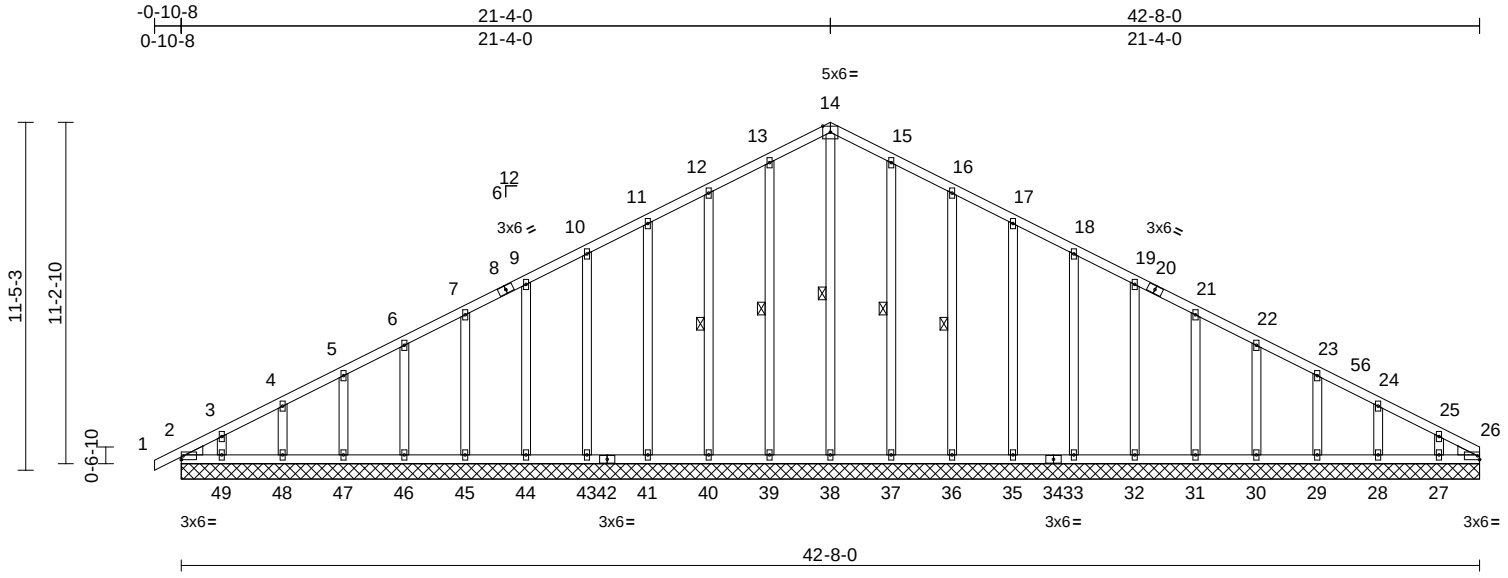

Scale = 1:75.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	26	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 308 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 14-38, 13-39, 12-40, 15-37, 16-36

REACTIONS (size) 2=42-8-0, 26=42-8-0, 27=42-8-0, 28=42-8-0, 29=42-8-0, 30=42-8-0, 31=42-8-0, 32=42-8-0, 33=42-8-0, 35=42-8-0, 36=42-8-0, 37=42-8-0, 38=42-8-0, 39=42-8-0, 40=42-8-0, 41=42-8-0, 43=42-8-0, 44=42-8-0, 45=42-8-0, 46=42-8-0, 47=42-8-0, 48=42-8-0, 49=42-8-0, 50=42-8-0
Max Horiz 2=260 (LC 12), 50=260 (LC 12)
Max Uplift 2=-88 (LC 17), 28=-170 (LC 13), 29=-60 (LC 13), 30=-88 (LC 13), 31=-81 (LC 13), 32=-83 (LC 13), 33=-82 (LC 13), 35=-81 (LC 13), 36=-92 (LC 13), 37=-59 (LC 13), 39=-69 (LC 12), 40=-89 (LC 12), 41=-81 (LC 12), 43=-83 (LC 12), 44=-82 (LC 12), 45=-83 (LC 12), 46=-82 (LC 12), 47=-84 (LC 12), 48=-74 (LC 12), 49=-136 (LC 12), 50=-88 (LC 17)
Max Grav 2=166 (LC 21), 27=202 (LC 1), 28=135 (LC 26), 29=167 (LC 1), 30=158 (LC 26), 31=160 (LC 1), 32=160 (LC 26), 33=160 (LC 26), 35=160 (LC 1), 36=159 (LC 26), 37=167 (LC 26), 38=321 (LC 13), 39=166 (LC 25), 40=159 (LC 25), 41=160 (LC 1), 43=160 (LC 25), 44=160 (LC 1), 45=160 (LC 1), 46=160 (LC 25), 47=158 (LC 1), 48=167 (LC 25), 49=136 (LC 19), 50=166 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-318/167, 3-4=-257/176, 4-5=-199/193, 5-6=-153/214, 6-7=-112/247, 7-9=-82/281, 9-10=-84/314, 10-11=-107/347, 11-12=-129/406, 12-13=-153/474, 13-14=-172/526, 14-15=-172/526, 15-16=-153/474, 16-17=-129/406, 17-18=-107/342, 18-19=-84/278, 19-21=-62/213, 21-22=-40/149, 22-23=-17/84, 23-24=-40/50, 24-25=-116/48, 25-26=-152/65
BOT CHORD 2-49=-170/188, 48-49=-56/165, 47-48=-56/165, 46-47=-56/165, 45-46=-56/165, 44-45=-56/165, 43-44=-56/165, 41-43=-56/165, 40-41=-56/165, 39-40=-56/165, 38-39=-56/165, 37-38=-56/165, 36-37=-56/165, 35-36=-56/165, 33-35=-56/165, 32-33=-56/165, 31-32=-56/165, 30-31=-56/165, 29-30=-56/165, 28-29=-56/165, 27-28=-56/165, 26-27=-56/165
WEBS 14-38=-342/58, 13-39=-126/93, 12-40=-119/132, 11-41=-120/118, 10-43=-120/120, 9-44=-120/120, 7-45=-120/120, 6-46=-120/121, 5-47=-119/119, 4-48=-125/155, 3-49=-97/171, 15-37=-127/91, 16-36=-119/132, 17-35=-120/118, 18-33=-120/120, 19-32=-120/120, 21-31=-120/120, 22-30=-119/122, 23-29=-123/113, 24-28=-110/219, 25-27=-133/110

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 3-4-0, Exterior(2N) 3-4-0 to 21-4-0, Corner(3R) 21-4-0 to 25-4-0, Exterior (2N) 25-4-0 to 42-8-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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818 Soundside Road
Edenton, NC 27932

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 2, 69 lb uplift at joint 39, 89 lb uplift at joint 40, 81 lb uplift at joint 41, 83 lb uplift at joint 43, 82 lb uplift at joint 44, 83 lb uplift at joint 45, 82 lb uplift at joint 46, 84 lb uplift at joint 47, 74 lb uplift at joint 48, 136 lb uplift at joint 49, 59 lb uplift at joint 37, 92 lb uplift at joint 36, 81 lb uplift at joint 35, 82 lb uplift at joint 33, 83 lb uplift at joint 32, 81 lb uplift at joint 31, 88 lb uplift at joint 30, 60 lb uplift at joint 29, 170 lb uplift at joint 28 and 88 lb uplift at joint 2.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896560
4111088	A02	Common	5	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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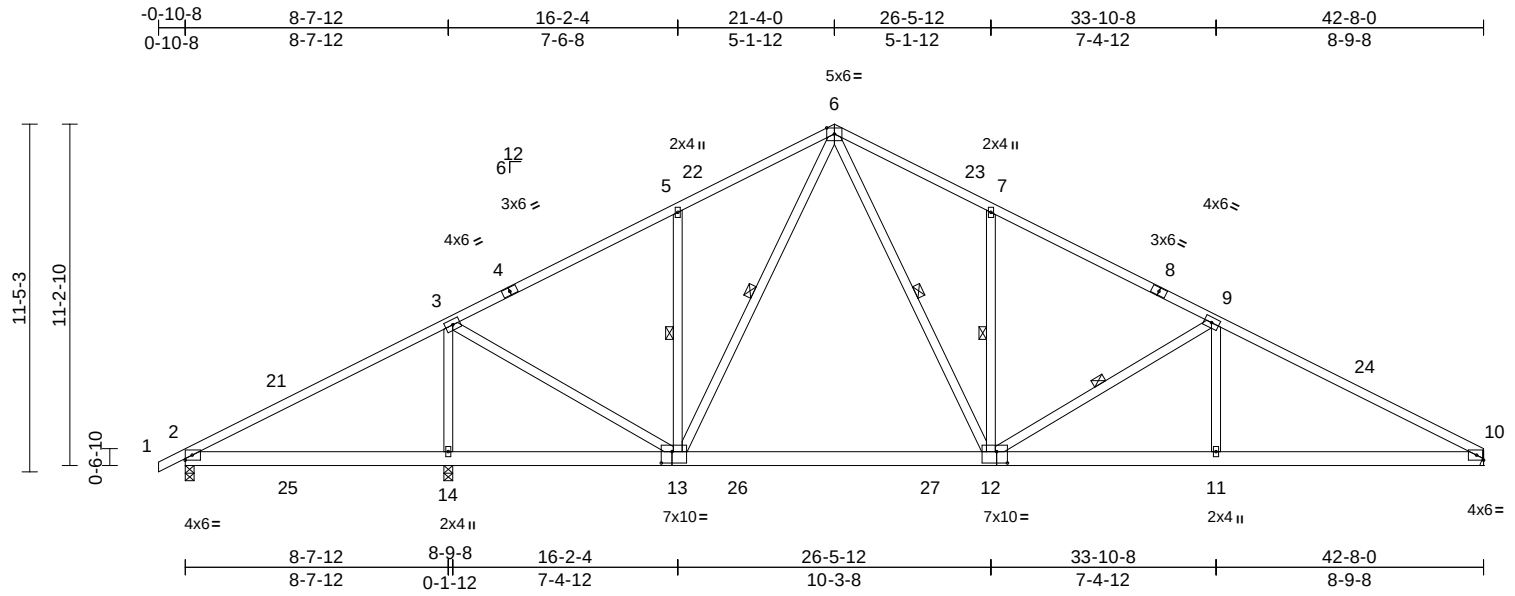

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Plate Offsets (X, Y): [12:0-4-4,0-4-8], [13:0-4-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.18	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.31	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.17	14-17	>614	240	Weight: 268 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-13, 6-13, 6-12, 7-12, 9-12

REACTIONS (size) 2=0-3-8, 10= Mechanical, 14=0-3-8
Max Horiz 2=260 (LC 12)
Max Uplift 2=-138 (LC 9), 10=-383 (LC 13), 14=-518 (LC 12)
Max Grav 2=293 (LC 25), 10=1428 (LC 2), 14=2134 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-292/444, 3-5=-1173/407, 5-6=-1143/538, 6-7=-1751/689, 7-9=-1777/537, 9-10=-2468/660
BOT CHORD 2-14=-364/305, 11-14=-452/2129, 10-11=-452/2129
WEBS 3-14=-1782/555, 3-13=-202/1421, 5-13=-385/346, 6-13=-260/110, 6-12=-482/1197, 7-12=-383/340, 9-12=-734/407, 9-11=0/315

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-4-11, Interior (1) 3-4-11 to 21-4-0, Exterior(2R) 21-4-0 to 25-7-3, Interior (1) 25-7-3 to 42-8-0 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 2, 518 lb uplift at joint 14 and 383 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.
8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896561
4111088	A03	Common	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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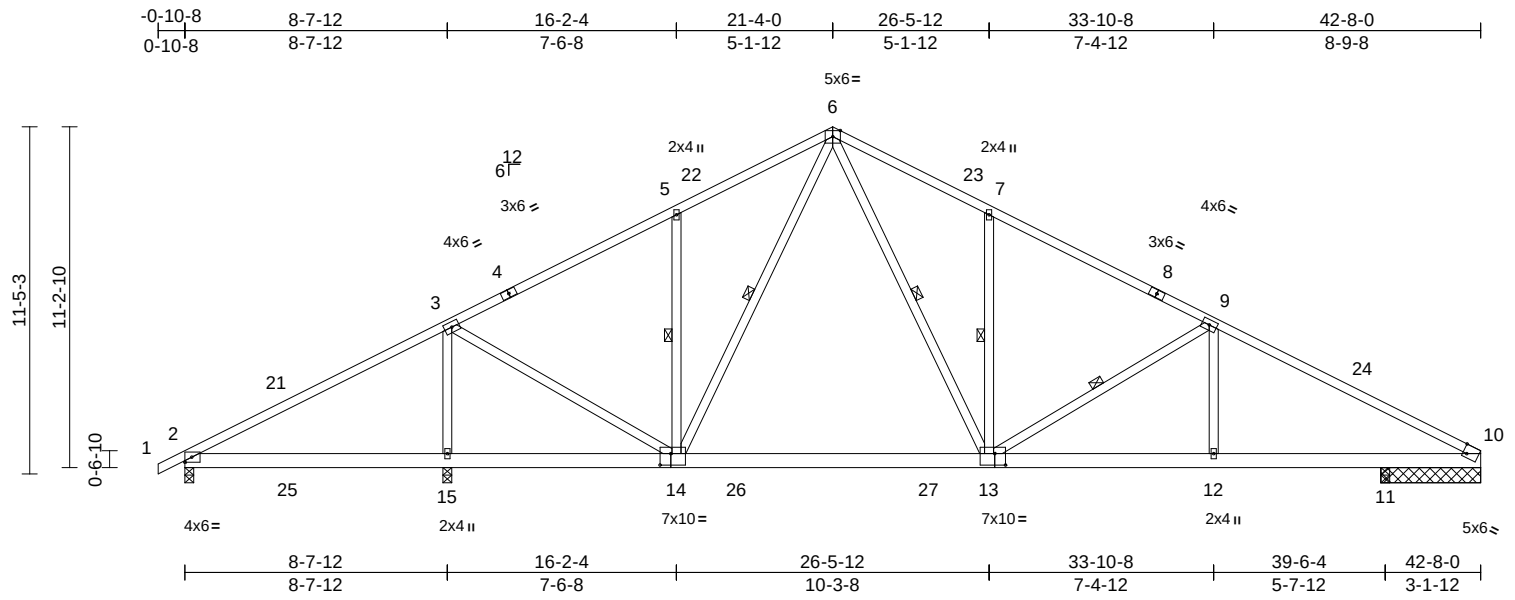

Scale = 1:75.9

Plate Offsets (X, Y): [10:0-1-9,Edge], [13:0-4-4,0-4-8], [14:0-4-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.17	13-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.29	13-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.17	15-18	>615	240	Weight: 268 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-14, 6-14, 6-13, 7-13, 9-13

REACTIONS (size) 2=0-3-8, 10=3-3-8, 11=0-3-8, 15=0-3-8
Max Horiz 2=257 (LC 16)
Max Uplift 2=-138 (LC 9), 10=-278 (LC 13), 11=-116 (LC 13), 15=-514 (LC 12)
Max Grav 2=294 (LC 25), 10=1076 (LC 2), 11=380 (LC 2), 15=2097 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-291/442, 3-5=-1136/401, 5-6=-1106/533, 6-7=-1677/668, 7-9=-1699/518, 9-10=-2192/577
BOT CHORD 2-15=-361/308, 12-15=-367/1872, 11-12=-367/1872, 10-11=-367/1872
WEBS 3-15=-1742/551, 3-14=-186/1380, 5-14=-385/346, 6-14=-248/116, 6-13=-462/1132, 7-13=-392/343, 9-13=-535/340, 9-12=0/175

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-4-11, Interior (1) 3-4-11 to 21-4-0, Exterior(2R) 21-4-0 to 25-7-3, Interior (1) 25-7-3 to 42-8-0 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 2, 278 lb uplift at joint 10, 514 lb uplift at joint 15 and 116 lb uplift at joint 11.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	A04	Roof Special	1	1	I66896562 Job Reference (optional)

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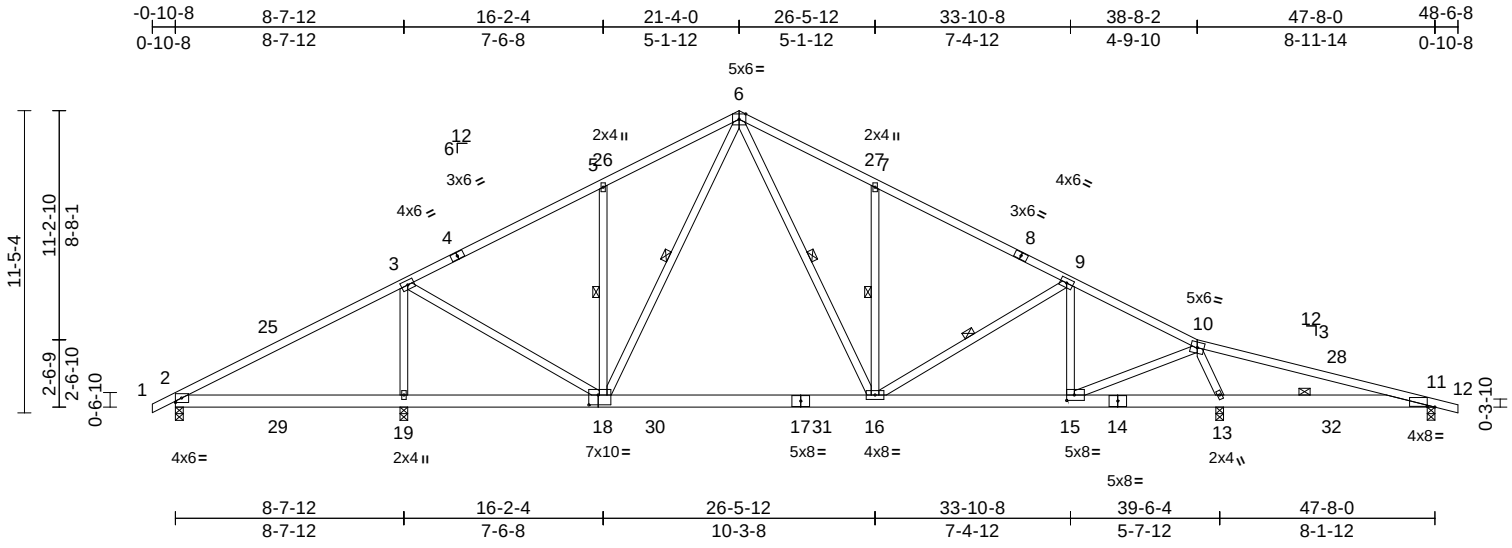


Scale = 1:87.2

Plate Offsets (X, Y): [11:0-3-7,0-0-6], [15:0-3-8,0-2-8], [18:0-4-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.15	16-18	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.25	16-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.02	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.19	19-22	>550	240	Weight: 298 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied. Except:
6-0-0 oc bracing: 11-13
WEBS 1 Row at midpt 5-18, 6-18, 6-16, 7-16, 9-16

REACTIONS (size) 2=0-3-8, 11=0-3-8, 13=0-3-8, 19=0-3-8
Max Horiz 2=-253 (LC 13)
Max Uplift 2=-151 (LC 9), 11=-246 (LC 9), 13=-516 (LC 13), 19=-473 (LC 12)
Max Grav 2=368 (LC 25), 11=227 (LC 26), 13=1900 (LC 2), 19=1785 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-278/279, 3-5=-1115/489, 5-6=-1085/651, 6-7=-1411/738, 7-9=-1424/549, 9-10=-1335/379, 10-11=-305/630, 11-12=0/15
BOT CHORD 2-19=-103/262, 16-19=-98/889, 15-16=-146/1192, 13-15=0/128, 11-13=-568/373
WEBS 10-13=-1632/635, 3-19=-1440/511, 3-18=-108/1082, 5-18=-386/346, 6-18=-204/241, 6-16=-385/828, 7-16=-419/378, 9-16=-66/168, 9-15=-382/302, 10-15=-269/1168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 2, 516 lb uplift at joint 13, 246 lb uplift at joint 11 and 473 lb uplift at joint 19.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

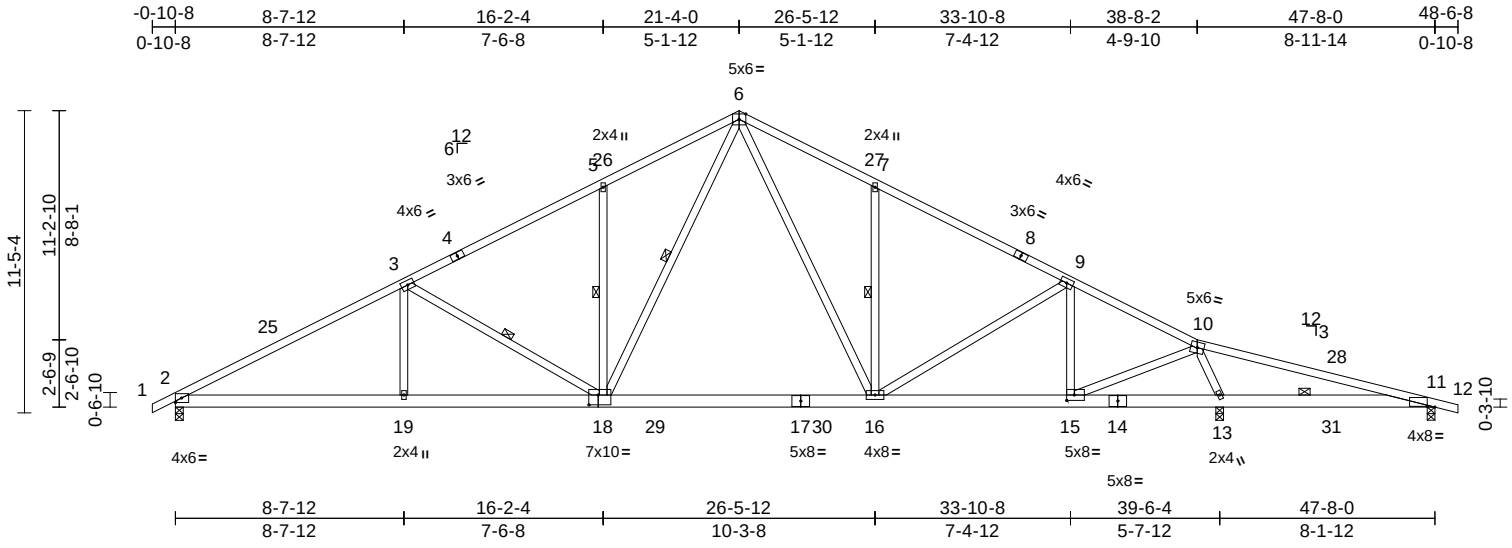
July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	A05	Roof Special	1	1	I66896563 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:47
ID:Ln4EhovKJjAo45N2Y0nZ1byzX?K-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.2

Plate Offsets (X, Y): [11:0-3-7,0-0-6], [15:0-3-8,0-2-8], [18:0-4-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.22	16-18	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.39	16-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.07	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.14	18	>999	240	Weight: 298 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied. Except:
6-0-0 oc bracing: 11-13
WEBS 1 Row at midpt 3-18, 5-18, 6-18, 7-16

REACTIONS (size) 2=0-3-8, 11=0-3-8, 13=0-3-8
Max Horiz 2=-253 (LC 13)
Max Uplift 2=-448 (LC 12), 11=-242 (LC 9), 13=-586 (LC 13)
Max Grav 2=1712 (LC 2), 11=159 (LC 26), 13=2428 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-2984/937, 3-5=-2302/808, 5-6=-2277/978, 6-7=-2020/890, 7-9=-2033/703, 9-10=-1690/464, 10-11=-451/1100, 11-12=0/15
BOT CHORD 2-19=-751/2605, 16-19=-751/2605, 15-16=-215/1483, 13-15=-169/194, 11-13=-1024/514
WEBS 10-15=-439/1761, 10-13=-2199/794, 3-19=0/305, 3-18=-720/402, 5-18=-393/360, 6-18=-483/1188, 6-16=-363/705, 7-16=-418/379, 9-16=-69/377, 9-15=-619/368

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 448 lb uplift at joint 2, 586 lb uplift at joint 13 and 242 lb uplift at joint 11.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

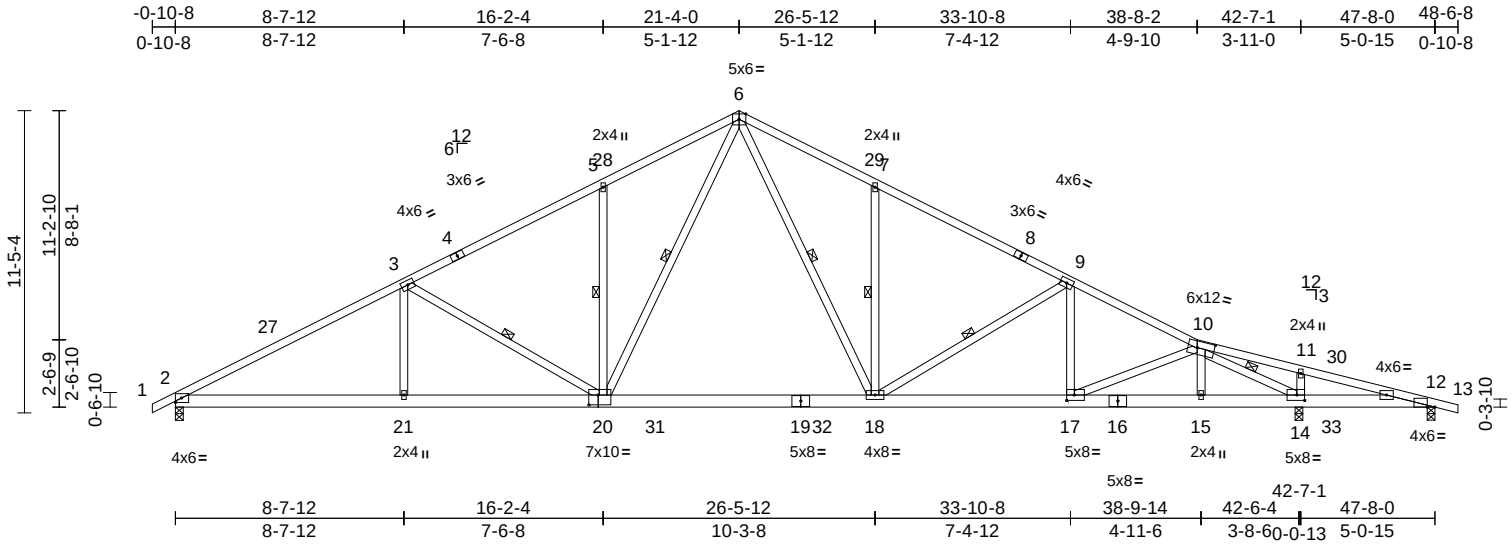
July 18,2024

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896564
4111088	A06	Roof Special	5	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:47 Page: 1

ID:MltwxkAdHAkG0q9_?odQ61yzWyP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:87.2

Plate Offsets (X, Y): [10:0-7-12,0-3-0], [12:0-3-7,Edge], [14:0-3-8,0-2-8], [17:0-3-8,0-2-8], [20:0-4-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.29	18-20	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.51	18-20	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.11	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.18	18-20	>999	240	Weight: 305 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 10-14, 3-20, 5-20, 6-20, 6-18, 7-18, 9-18

REACTIONS (size) 2=0-3-8, 12=0-3-8, 14=0-3-8
Max Horiz 2=-253 (LC 13)
Max Uplift 2=-470 (LC 12), 12=-207 (LC 20), 14=-617 (LC 13)
Max Grav 2=1859 (LC 2), 12=40 (LC 12), 14=2473 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-3295/1049, 3-5=-2625/924, 5-6=-2599/1095, 6-7=-2540/1074, 7-9=-2557/891, 9-10=-2908/926, 10-11=-357/1103, 11-12=-416/1125, 12-13=0/15

BOT CHORD 2-21=-793/2867, 18-21=-793/2867, 17-18=-638/2581, 15-17=-498/2214, 14-15=-488/2212, 12-14=-1062/454

WEBS 10-17=-157/403, 10-15=-91/151, 10-14=-3743/1066, 11-14=-297/214, 3-21=0/298, 3-20=-710/400, 5-20=-393/359, 6-20=-483/1187, 6-18=-456/1077, 7-18=-409/372, 9-18=-484/313, 9-17=0/146

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-10-11, Interior (1) 3-10-11 to 21-4-0, Exterior(2R) 21-4-0 to 26-1-3, Interior (1) 26-1-3 to 48-6-8 zone; end vertical left and right exposed; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 470 lb uplift at joint 2, 617 lb uplift at joint 14 and 207 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.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896565
4111088	A07	Common	5	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:47
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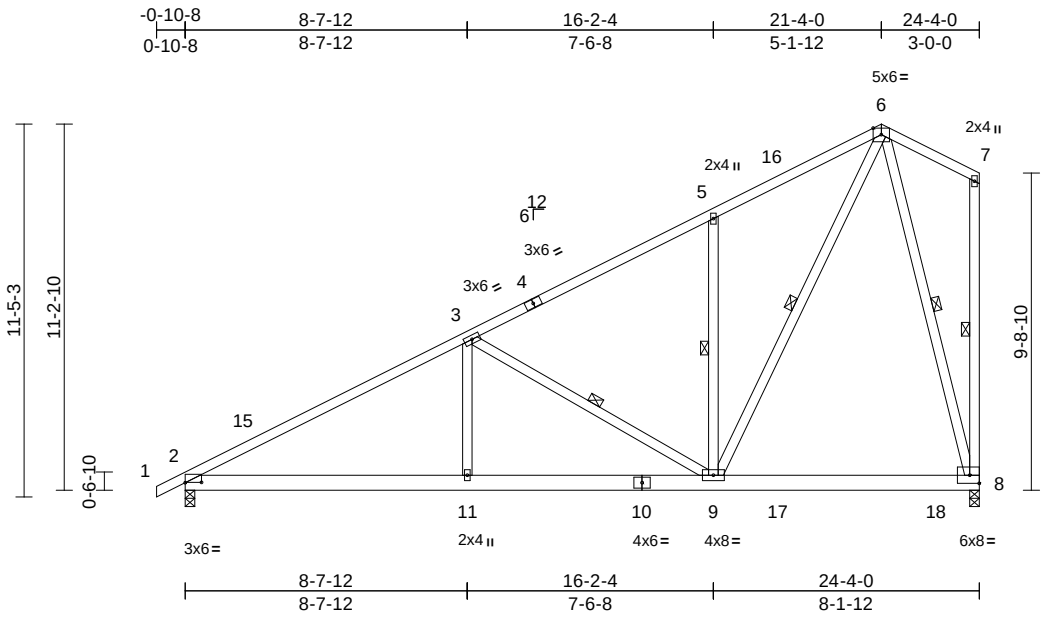

Scale = 1:70.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.08	11-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.15	11-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.09	11-14	>999	240	Weight: 176 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 8-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-9, 3-9, 7-8, 6-8, 5-9

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=533 (LC 12)
Max Uplift 2=-257 (LC 12), 8=-388 (LC 12)
Max Grav 2=1083 (LC 2), 8=1089 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1652/329, 3-5=-913/170, 5-6=-889/354, 6-7=-41/48, 7-8=-83/66
BOT CHORD 2-11=-673/1402, 9-11=-673/1402, 8-9=-106/236
WEBS 6-9=-493/1165, 3-9=-776/414, 6-8=-894/417, 5-9=-394/349, 3-11=0/340

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 21-4-0, Exterior(2E) 21-4-0 to 24-2-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 257 lb uplift at joint 2 and 388 lb uplift at joint 8.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896566
4111088	A07P	Common	6	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:48 Page: 1
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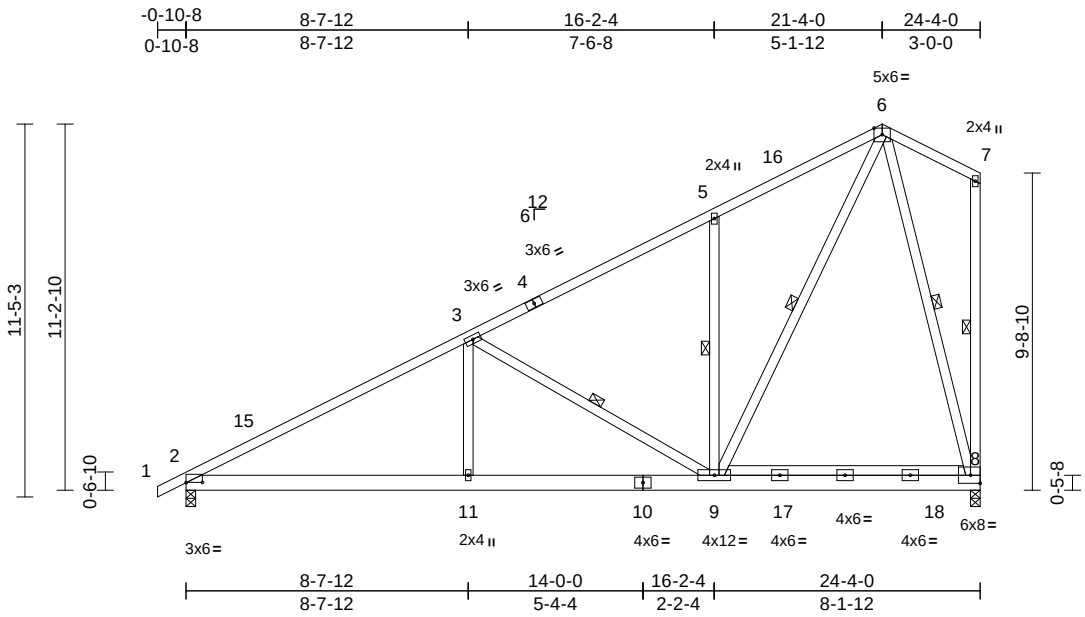


Scale = 1:70.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.08	11-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.15	11-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.09	11-14	>999	240	Weight: 187 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 9-8:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-9, 5-9, 3-9, 7-8, 6-8

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=533 (LC 12)
Max Uplift 2=-257 (LC 12), 8=-388 (LC 12)
Max Grav 2=1083 (LC 2), 8=1087 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1655/329, 3-5=-904/170, 5-6=-880/353, 6-7=-40/52, 7-8=-82/67
BOT CHORD 2-11=-673/1404, 9-11=-673/1404, 8-9=-109/237
WEBS 6-9=-490/1149, 5-9=-394/349, 3-9=-788/414, 3-11=0/347, 6-8=-887/414

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 21-4-0, Exterior(2E) 21-4-0 to 24-2-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 257 lb uplift at joint 2 and 388 lb uplift at joint 8.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

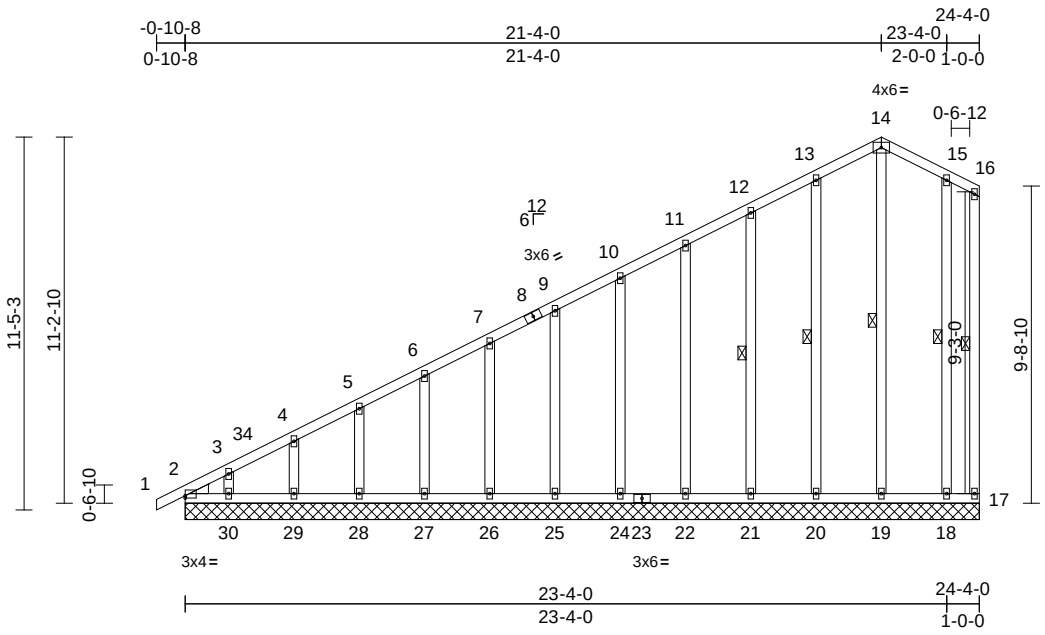
July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	A08	Common Supported Gable	1	1	I66896567 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:48 Page: 1

ID:RJbKBfuK_Da4xG1tpoZOBbyzXMb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.6

Plate Offsets (X, Y): [2:Edge,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 200 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 15-18:2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 16-17, 14-19, 13-20, 12-21, 15-18

REACTIONS (size) 2=24-4-0, 17=24-4-0, 18=24-4-0, 19=24-4-0, 20=24-4-0, 21=24-4-0, 22=24-4-0, 24=24-4-0, 25=24-4-0, 26=24-4-0, 27=24-4-0, 28=24-4-0, 29=24-4-0, 30=24-4-0, 31=24-4-0

Max Horiz 2=533 (LC 12), 31=533 (LC 12)

Max Uplift 17=-18 (LC 13), 18=-56 (LC 13), 19=-13 (LC 12), 20=-84 (LC 12), 21=-83 (LC 12), 22=-82 (LC 12), 24=-82 (LC 12), 25=-82 (LC 12), 26=-83 (LC 12), 27=-81 (LC 12), 28=-87 (LC 12), 29=-65 (LC 12), 30=-194 (LC 12)

Max Grav 2=313 (LC 12), 17=19 (LC 1), 18=129 (LC 26), 19=161 (LC 1), 20=166 (LC 25), 21=160 (LC 25), 22=160 (LC 1), 24=160 (LC 25), 25=160 (LC 1), 26=160 (LC 25), 27=160 (LC 1), 28=158 (LC 25), 29=167 (LC 1), 30=124 (LC 25), 31=313 (LC 12)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-582/216, 3-4=-509/189, 4-5=-454/167, 5-6=-395/145, 6-7=-337/122, 7-9=-278/100, 9-10=-220/77, 10-11=-162/55, 11-12=-103/41, 12-13=-51/49, 13-14=-30/103, 14-15=-29/89, 15-16=-7/19, 16-17=-15/30

BOT CHORD 2-30=-362/128, 29-30=-1/0, 28-29=-1/0, 27-28=-1/0, 26-27=-1/0, 25-26=-1/0, 24-25=-1/0, 22-24=-1/0, 21-22=-1/0, 20-21=-1/0, 19-20=-1/0, 18-19=-1/0, 17-18=-1/0

WEBS 14-19=-119/45, 13-20=-126/113, 12-21=-119/122, 11-22=-120/120, 10-24=-120/120, 9-25=-120/120, 7-26=-120/120, 6-27=-120/120, 5-28=-119/121, 4-29=-125/120, 3-30=-101/196, 15-18=-96/132

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 21-4-0, Corner(3E) 21-4-0 to 24-2-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 17, 13 lb uplift at joint 19, 84 lb uplift at joint 20, 83 lb uplift at joint 21, 82 lb uplift at joint 22, 82 lb uplift at joint 24, 82 lb uplift at joint 25, 83 lb uplift at joint 26, 81 lb uplift at joint 27, 87 lb uplift at joint 28, 65 lb uplift at joint 29, 194 lb uplift at joint 30 and 56 lb uplift at joint 18.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	B01	Common Supported Gable	1	1	I66896568 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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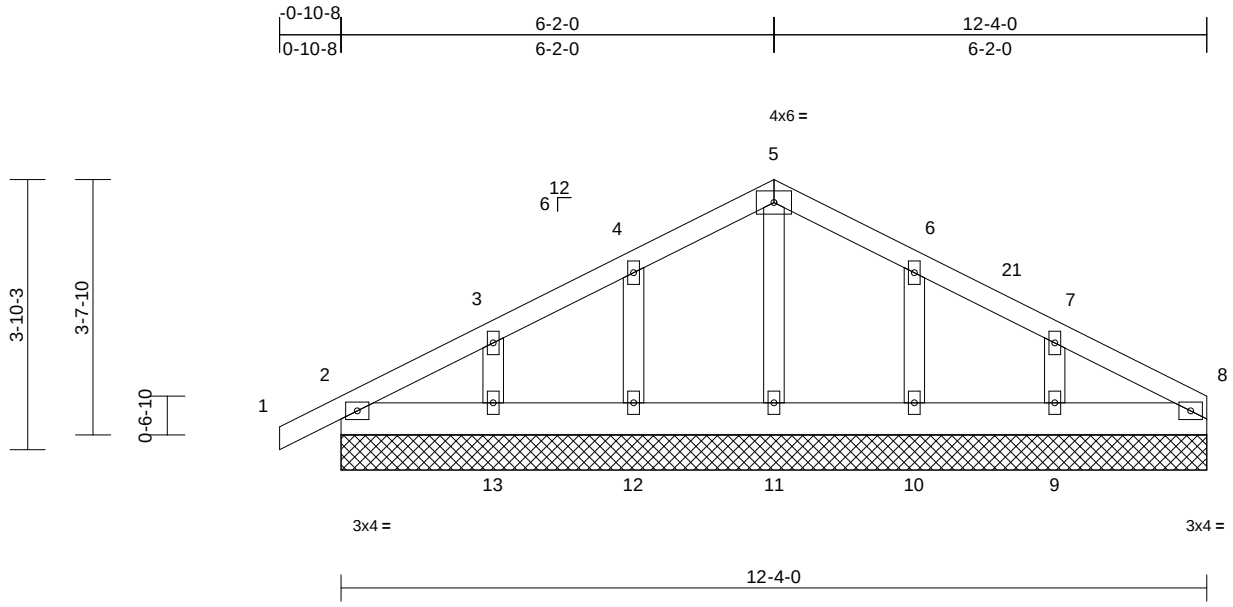

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 64 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size) 2=12-4-0, 8=12-4-0, 9=12-4-0, 10=12-4-0, 11=12-4-0, 12=12-4-0, 13=12-4-0, 14=12-4-0, 18=12-4-0
Max Horiz 2=89 (LC 16), 14=89 (LC 16)
Max Uplift 2=-23 (LC 13), 8=-1 (LC 12), 9=-106 (LC 13), 10=-79 (LC 13), 12=-82 (LC 12), 13=-98 (LC 12), 14=-23 (LC 13), 18=-1 (LC 12)
Max Grav 2=146 (LC 1), 8=80 (LC 1), 9=188 (LC 1), 10=159 (LC 26), 11=138 (LC 1), 12=163 (LC 25), 13=171 (LC 25), 14=146 (LC 1), 18=80 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-74/33, 3-4=-52/59, 4-5=-64/148, 5-6=-64/148, 6-7=-47/59, 7-8=-57/13
BOT CHORD 2-13=-17/83, 12-13=-17/83, 11-12=-17/83, 10-11=-17/83, 9-10=-17/83, 8-9=-17/83
WEBS 5-11=-95/5, 4-12=-128/177, 3-13=-116/173, 6-10=-127/176, 7-9=-120/181

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-2-0, Exterior(2N) 2-2-0 to 6-2-0, Corner(3R) 6-2-0 to 9-2-0, Exterior(2N) 9-2-0 to 12-4-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2, 1 lb uplift at joint 8, 82 lb uplift at joint 12, 98 lb uplift at joint 13, 79 lb uplift at joint 10, 106 lb uplift at joint 9, 23 lb uplift at joint 2 and 1 lb uplift at joint 8.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 8, 18.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896569
4111088	B02	Common	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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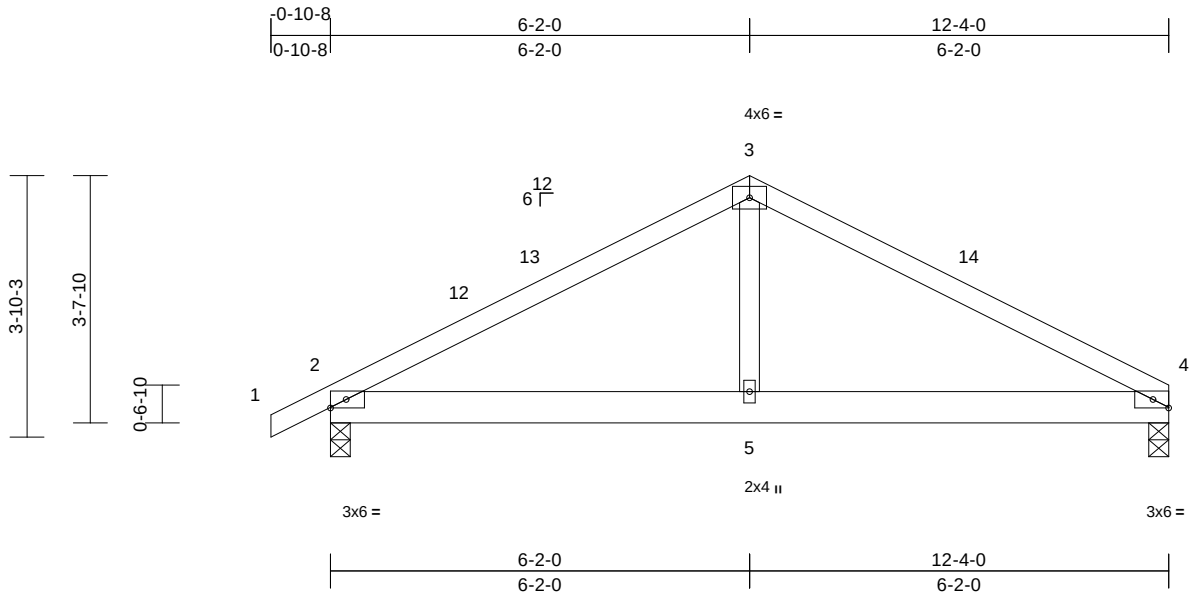

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.02	5-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.04	5-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.03	5-8	>999	240	Weight: 55 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

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

REACTIONS (size) 2=0-3-8, 4=0-3-8
Max Horiz 2=89 (LC 16)
Max Uplift 2=-159 (LC 12), 4=-129 (LC 13)
Max Grav 2=548 (LC 1), 4=491 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-686/387, 3-4=-686/395
BOT CHORD 2-5=-229/544, 4-5=-229/544
WEBS 3-5=-14/293

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-2-0, Exterior(2R) 6-2-0 to 9-2-0, Interior (1) 9-2-0 to 12-4-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 4 and 159 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896570
4111088	B03	Common	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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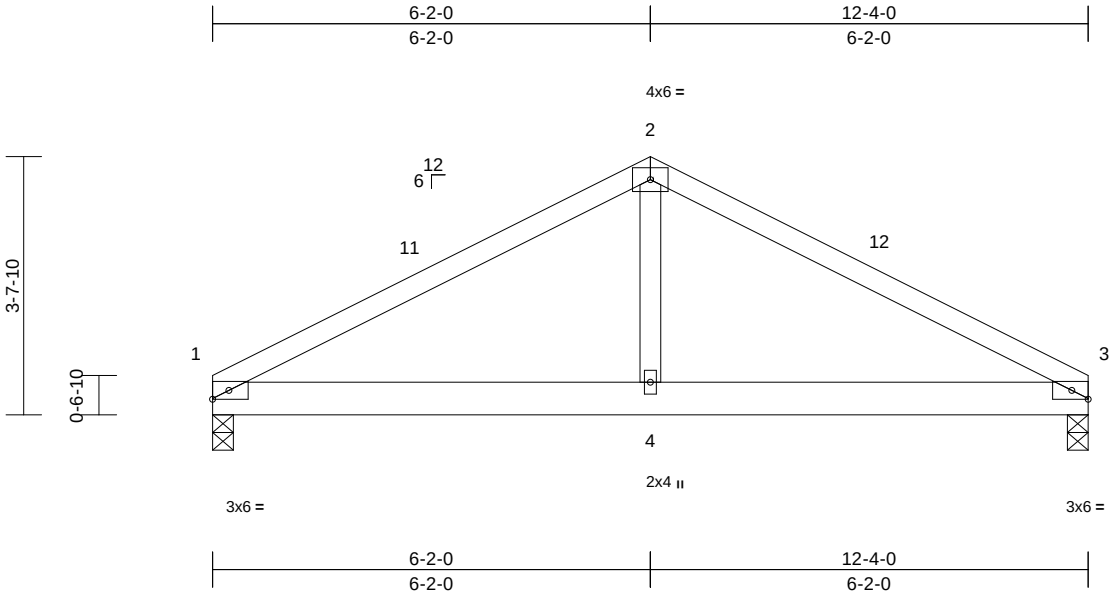

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.02	4-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.04	4-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.03	4-7	>999	240	Weight: 54 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

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

REACTIONS (size) 1=0-3-8, 3=0-3-8
Max Horiz 1=-69 (LC 13)
Max Uplift 1=-129 (LC 12), 3=-129 (LC 13)
Max Grav 1=493 (LC 1), 3=493 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-691/399, 2-3=-691/402
BOT CHORD 1-4=-236/550, 3-4=-236/550
WEBS 2-4=-18/294

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-2-0, Exterior(2R) 6-2-0 to 9-2-0, Interior (1) 9-2-0 to 12-4-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 1 and 129 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	B04	Common Girder	1	**2**	I66896571 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153, Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:48 Page: 1
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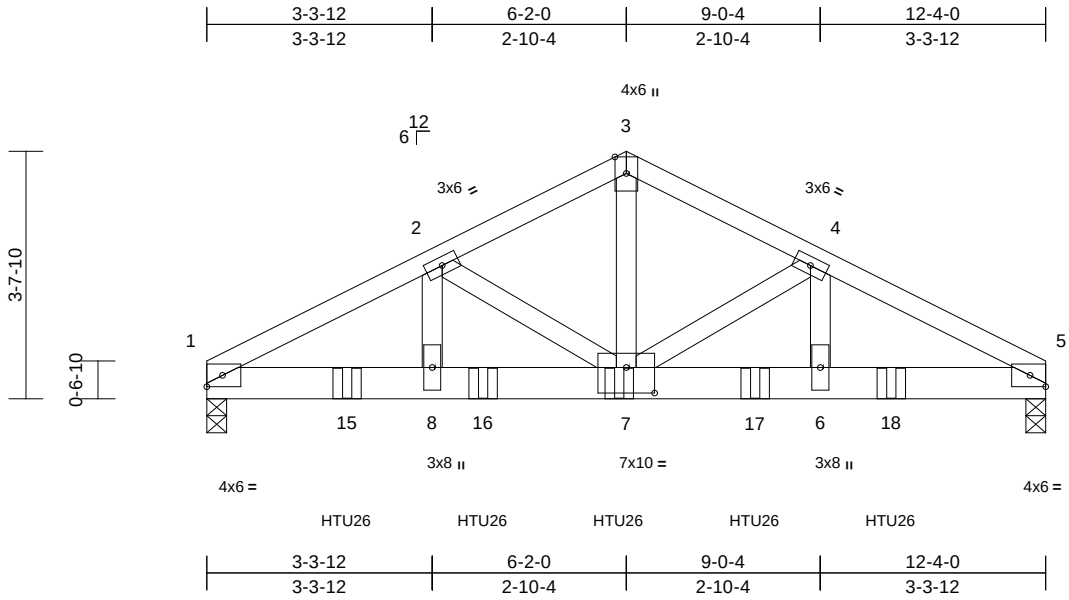

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Plate Offsets (X, Y): [7:0-5-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.06	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.12	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.54	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS		Wind(LL)	0.07	6-7	>999	240	Weight: 135 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-69 (LC 13)
Max Uplift 1=-1129 (LC 8), 5=-1102 (LC 9)
Max Grav 1=3999 (LC 2), 5=3904 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6864/1933, 2-3=-5184/1484, 3-4=-5184/1483, 4-5=-6860/1933
BOT CHORD 1-8=-1740/6088, 7-8=-1740/6088, 6-7=-1669/6080, 5-6=-1669/6080
WEBS 2-8=-418/1630, 2-7=-1735/573, 3-7=-1212/4379, 4-7=-1726/572, 4-6=-421/1635

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 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=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1129 lb uplift at joint 1 and 1102 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) Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 10-0-12 to connect truss(es) to back face of bottom chord.
10) 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=-60, 3-5=-60, 9-12=-20
Concentrated Loads (lb)
Vert: 7=-1293 (B), 15=-1293 (B), 16=-1293 (B), 17=-1293 (B), 18=-1293 (B)

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896572
4111088	G01	Common Supported Gable	1	1	Job Reference (optional)	

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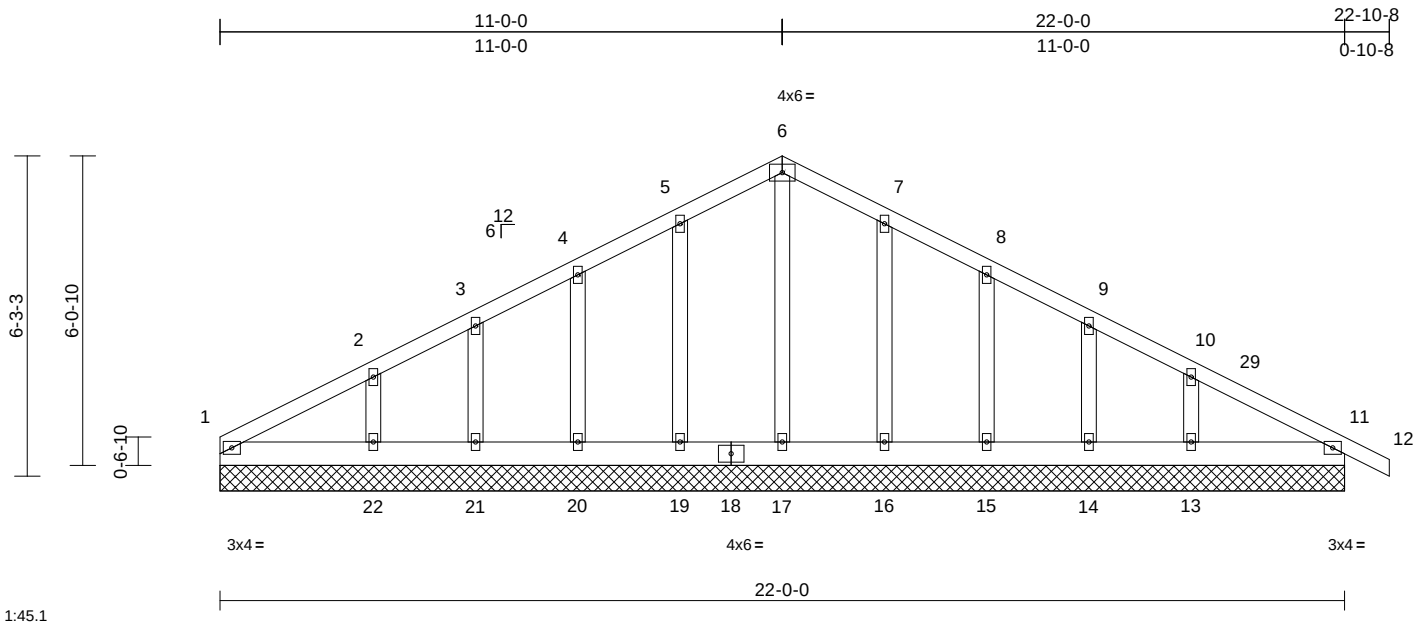

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 132 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size) 1=22-0-0, 11=22-0-0, 13=22-0-0, 14=22-0-0, 15=22-0-0, 16=22-0-0, 17=22-0-0, 19=22-0-0, 20=22-0-0, 21=22-0-0, 22=22-0-0, 23=22-0-0, 26=22-0-0
Max Horiz 1=-143 (LC 17), 23=-143 (LC 17)
Max Uplift 1=-17 (LC 13), 11=-15 (LC 13), 13=-131 (LC 13), 14=-65 (LC 13), 15=-88 (LC 13), 16=-80 (LC 13), 19=-81 (LC 12), 20=-89 (LC 12), 21=-60 (LC 12), 22=-143 (LC 12), 23=-17 (LC 13), 26=-15 (LC 13)
Max Grav 1=111 (LC 1), 11=173 (LC 1), 13=231 (LC 26), 14=135 (LC 1), 15=166 (LC 1), 16=165 (LC 26), 17=153 (LC 22), 19=164 (LC 25), 20=167 (LC 1), 21=130 (LC 1), 22=245 (LC 25), 23=111 (LC 1), 26=173 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-136/56, 2-3=-87/74, 3-4=-62/106, 4-5=-68/159, 5-6=-91/221, 6-7=-91/221, 7-8=-68/159, 8-9=-51/92, 9-10=-57/34, 10-11=-103/32, 11-12=0/23
BOT CHORD 1-22=-38/162, 21-22=-33/162, 20-21=-33/162, 19-20=-33/162, 17-19=-33/162, 16-17=-33/162, 15-16=-33/162, 14-15=-33/162, 13-14=-33/162, 11-13=-33/162
WEBS 6-17=-112/1, 5-19=-126/114, 4-20=-122/127, 3-21=-111/111, 2-22=-150/195, 7-16=-126/115, 8-15=-121/126, 9-14=-112/111, 10-13=-147/165

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 11-0-0, Corner(3R) 11-0-0 to 14-0-0, Exterior (2N) 14-0-0 to 22-10-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1, 15 lb uplift at joint 11, 81 lb uplift at joint 19, 89 lb uplift at joint 20, 60 lb uplift at joint 21, 143 lb uplift at joint 22, 80 lb uplift at joint 16, 88 lb uplift at joint 15, 65 lb uplift at joint 14, 131 lb uplift at joint 13, 17 lb uplift at joint 1 and 15 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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896573
4111088	G02	Common	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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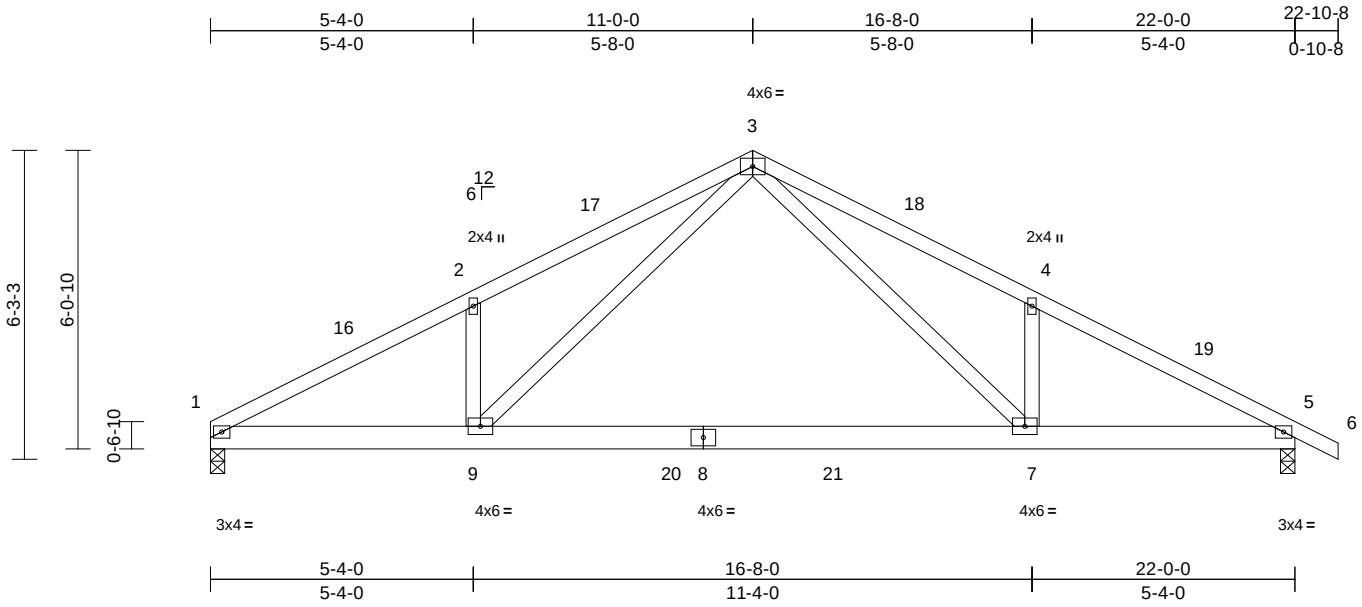

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.18	7-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.34	7-9	>773	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.07	7-9	>999	240	Weight: 120 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

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

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-143 (LC 17)
Max Uplift 1=-231 (LC 12), 5=-260 (LC 13)
Max Grav 1=959 (LC 2), 5=1004 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1759/476, 2-3=-1760/626, 3-4=-1755/619, 4-5=-1754/464, 5-6=0/23
BOT CHORD 1-9=-355/1521, 7-9=-158/907, 5-7=-323/1516
WEBS 3-7=-283/880, 4-7=-329/309, 3-9=-287/887, 2-9=-330/310

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 22-10-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 1 and 260 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896574
4111088	G03	Common	10	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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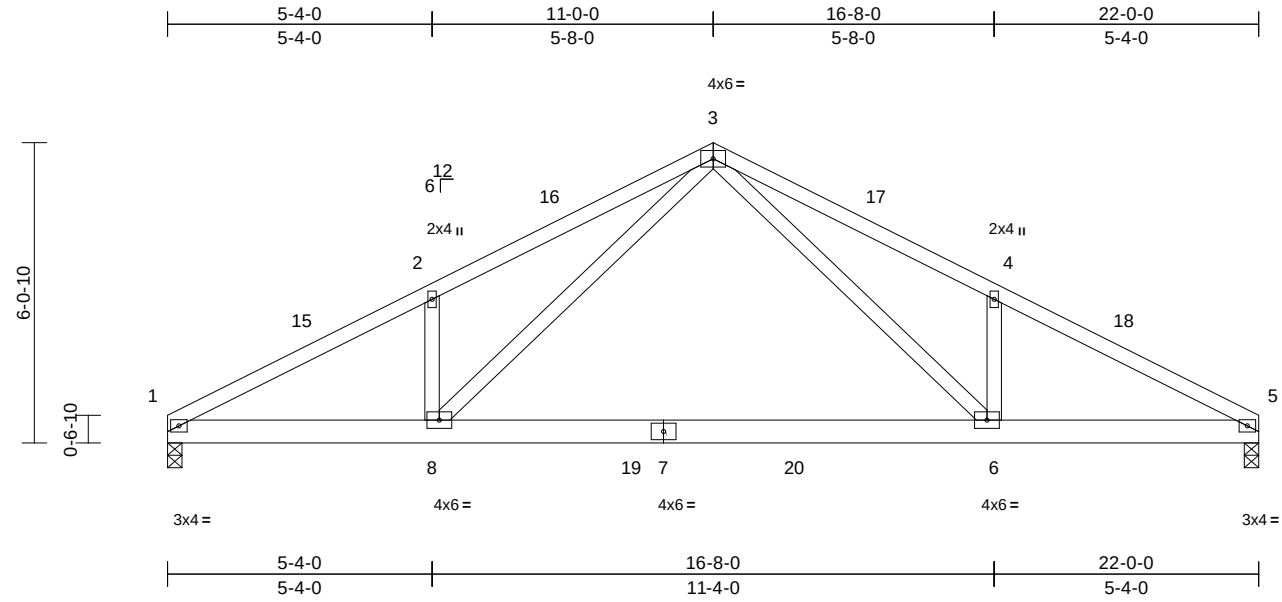

Scale = 1:46.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.18	6-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.34	6-8	>774	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS		Wind(LL)	0.07	6-8	>999	240	Weight: 119 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

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

REACTIONS (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=124 (LC 12)
Max Uplift 1=-231 (LC 12), 5=-231 (LC 13)
Max Grav 1=960 (LC 2), 5=960 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1760/477, 2-3=-1762/627, 3-4=-1762/627, 4-5=-1760/477
BOT CHORD 1-8=-365/1522, 6-8=-185/909, 5-6=-345/1522
WEBS 3-6=-287/886, 4-6=-330/310, 3-8=-287/886, 2-8=-330/310

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 22-0-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 1 and 231 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V01	Valley	1	1	Job Reference (optional)	I66896575

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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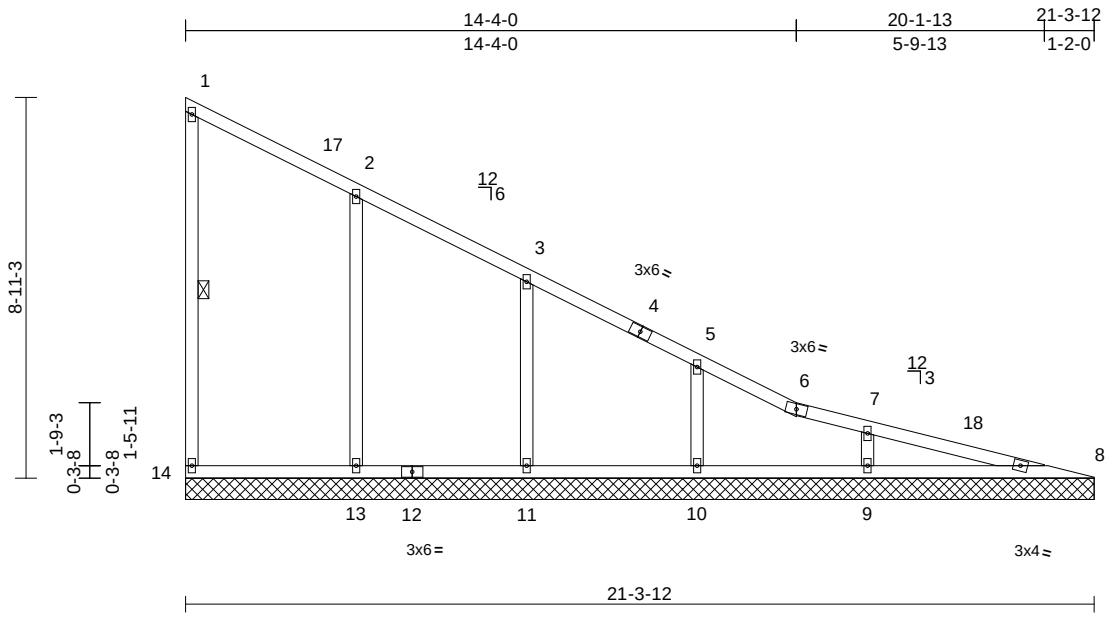

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.01	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 98 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 1-14

REACTIONS (size) 8=21-3-12, 9=21-3-12, 10=21-3-12, 11=21-3-12, 13=21-3-12, 14=21-3-12
Max Horiz 14=-453 (LC 13)
Max Uplift 8=-35 (LC 9), 9=-121 (LC 9), 10=-115 (LC 13), 11=-174 (LC 13), 13=-170 (LC 13), 14=-69 (LC 13)
Max Grav 8=175 (LC 1), 9=457 (LC 2), 10=311 (LC 20), 11=372 (LC 2), 13=431 (LC 2), 14=160 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-95/100, 1-2=-77/40, 2-3=-186/81, 3-5=-299/127, 5-6=-386/159, 6-7=-392/142, 7-8=-426/177
BOT CHORD 13-14=-171/451, 11-13=-171/451, 10-11=-171/451, 9-10=-171/451, 8-9=-171/451
WEBS 2-13=-257/228, 3-11=-240/219, 5-10=-224/168, 7-9=-294/139

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 21-3-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 14, 35 lb uplift at joint 8, 170 lb uplift at joint 13, 174 lb uplift at joint 11, 115 lb uplift at joint 10 and 121 lb uplift at joint 9.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896576
4111088	V02	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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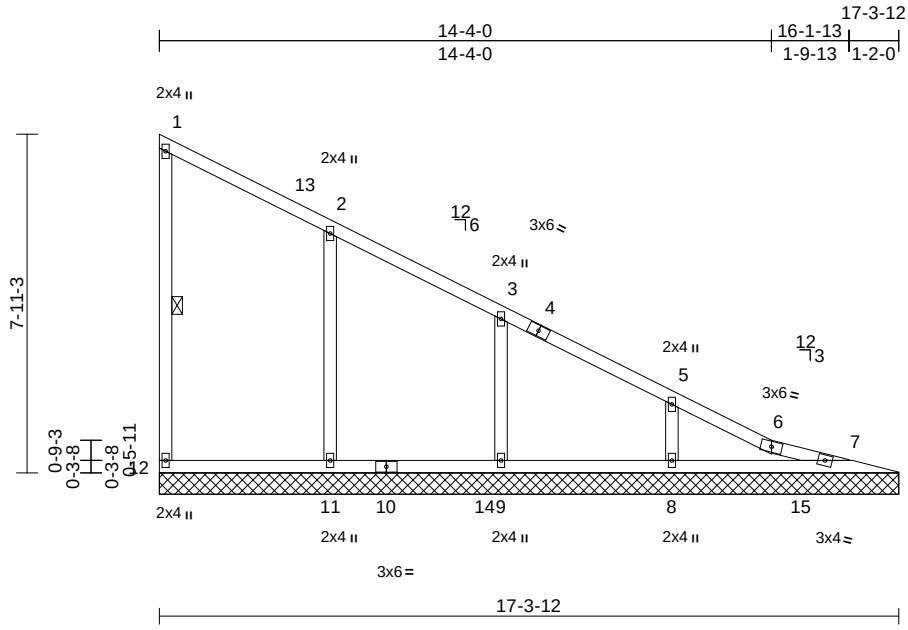

Scale = 1:53.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 79 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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 1-12

REACTIONS (size) 7=17-3-12, 8=17-3-12, 9=17-3-12, 11=17-3-12, 12=17-3-12
Max Horiz 12=-394 (LC 13)
Max Uplift 8=-126 (LC 13), 9=-171 (LC 13), 11=-173 (LC 13), 12=-67 (LC 13)
Max Grav 7=150 (LC 22), 8=395 (LC 2), 9=343 (LC 20), 11=441 (LC 2), 12=156 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-93/108, 1-2=-77/29, 2-3=-195/82, 3-5=-305/124, 5-6=-390/171, 6-7=-395/148
BOT CHORD 11-12=-149/392, 9-11=-149/392, 8-9=-149/392, 7-8=-149/392
WEBS 2-11=-263/239, 3-9=-223/216, 5-8=-275/179

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 16-1-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 12, 173 lb uplift at joint 11, 171 lb uplift at joint 9 and 126 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V03	Valley	1	1	Job Reference (optional)	I66896577

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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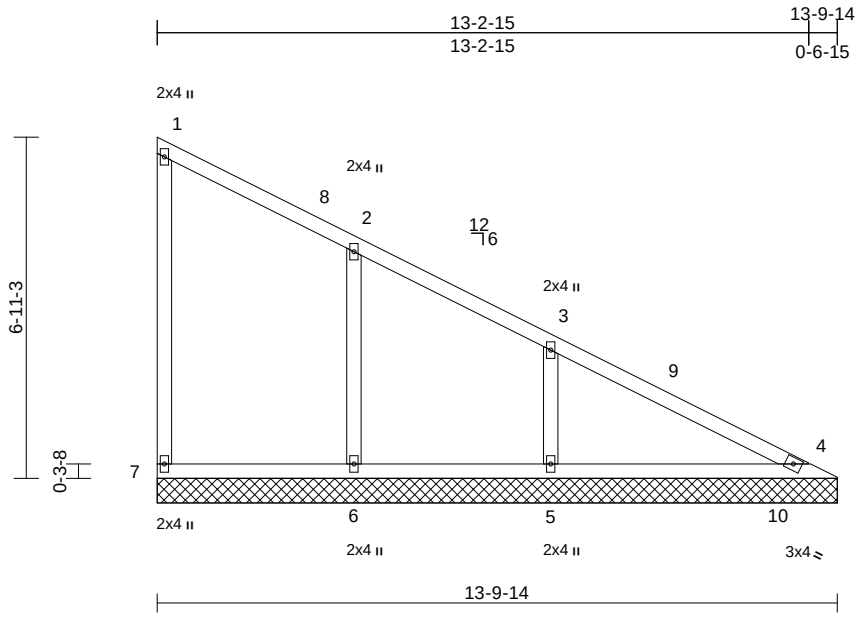

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 62 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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=13-9-14, 5=13-9-14, 6=13-9-14, 7=13-9-14
Max Horiz 7=-342 (LC 13)
Max Uplift 5=-225 (LC 13), 6=-155 (LC 13), 7=-70 (LC 13)
Max Grav 4=192 (LC 22), 5=457 (LC 2), 6=360 (LC 2), 7=169 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-7=-99/115, 1-2=-78/41, 2-3=-202/84, 3-4=-367/164
BOT CHORD 6-7=-149/385, 5-6=-149/385, 4-5=-149/385
WEBS 2-6=-233/249, 3-5=-316/321

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 13-2-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 7, 155 lb uplift at joint 6 and 225 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

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896578
4111088	V04	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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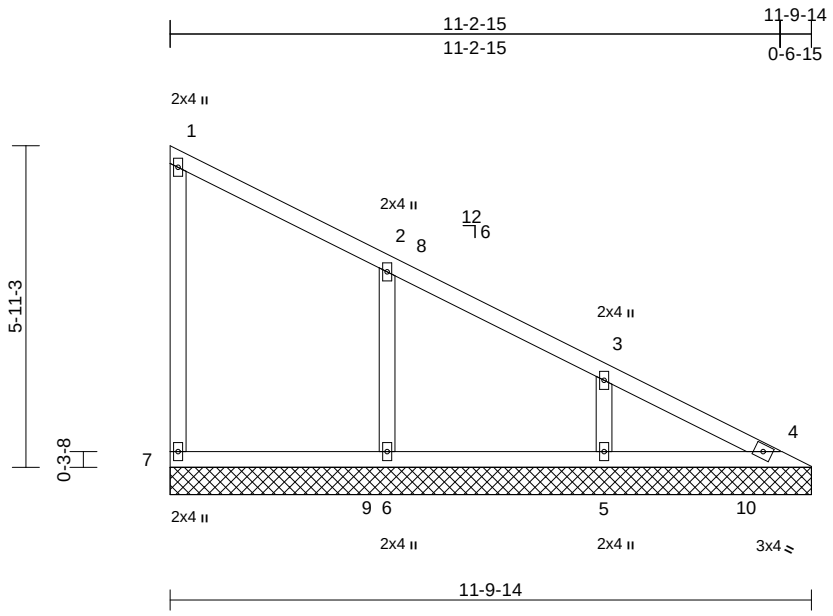

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 51 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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=11-9-14, 5=11-9-14, 6=11-9-14, 7=11-9-14
Max Horiz 7=-289 (LC 13)
Max Uplift 5=-164 (LC 13), 6=-175 (LC 13), 7=-66 (LC 13)
Max Grav 4=134 (LC 22), 5=329 (LC 2), 6=396 (LC 2), 7=161 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-7=-94/122, 1-2=-79/38, 2-3=-220/98, 3-4=-318/153
BOT CHORD 6-7=-138/311, 5-6=-138/311, 4-5=-138/311
WEBS 2-6=-260/284, 3-5=-232/237

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 11-2-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 7, 175 lb uplift at joint 6 and 164 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

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V05	Valley	1	1	Job Reference (optional)	I66896579

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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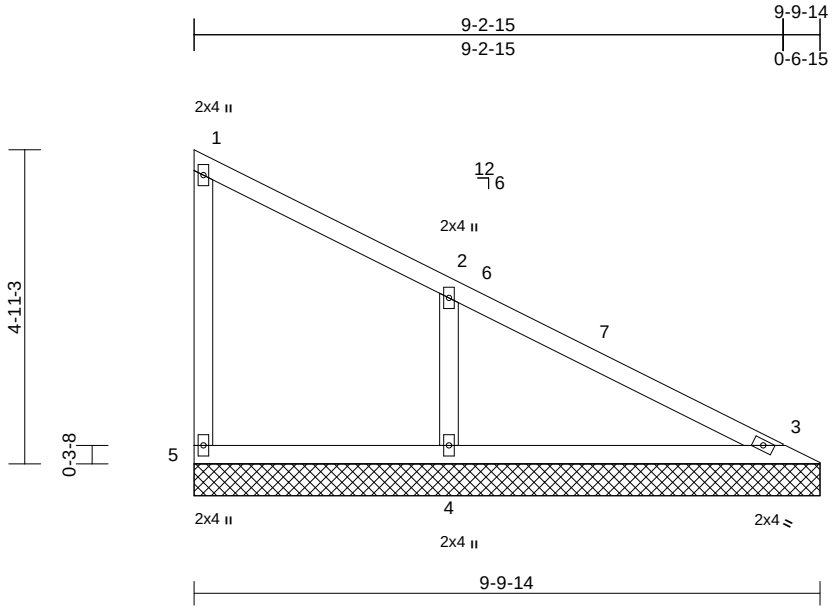

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 40 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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) 3=9-9-14, 4=9-9-14, 5=9-9-14
Max Horiz 5=-237 (LC 13)
Max Uplift 4=-235 (LC 13), 5=-52 (LC 13)
Max Grav 3=169 (LC 1), 4=458 (LC 1), 5=100 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-5=-77/119, 1-2=-79/25, 2-3=-262/132
BOT CHORD	4-5=-126/283, 3-4=-126/283
WEBS	2-4=-334/366

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 9-2-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 5 and 235 lb uplift at joint 4.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896580
4111088	V06	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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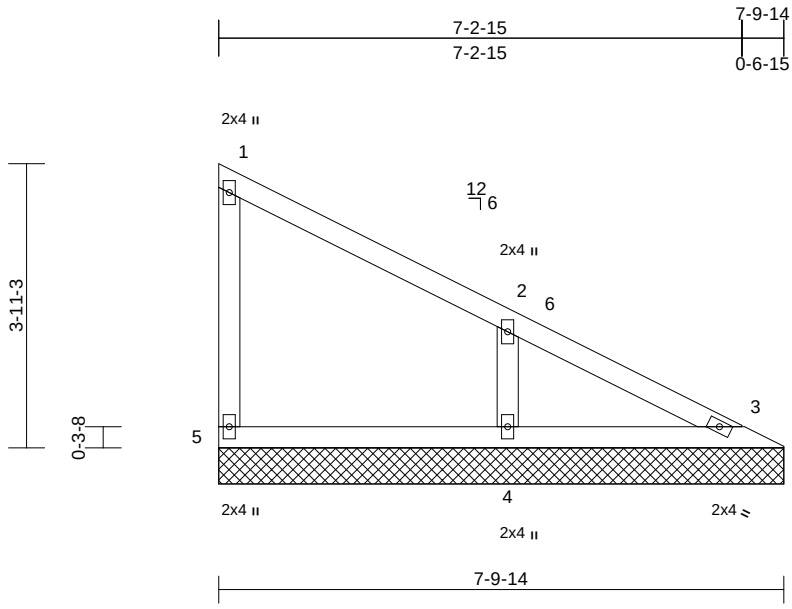

Scale = 1:31.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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) 3=7-9-14, 4=7-9-14, 5=7-9-14
Max Horiz 5=-185 (LC 13)
Max Uplift 4=-176 (LC 13), 5=-66 (LC 13)
Max Grav 3=97 (LC 1), 4=344 (LC 1), 5=127 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-94/146, 1-2=-79/34, 2-3=-244/112
BOT CHORD 4-5=-103/245, 3-4=-103/245
WEBS 2-4=-255/335

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 7-2-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 5 and 176 lb uplift at joint 4.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896581
4111088	V07	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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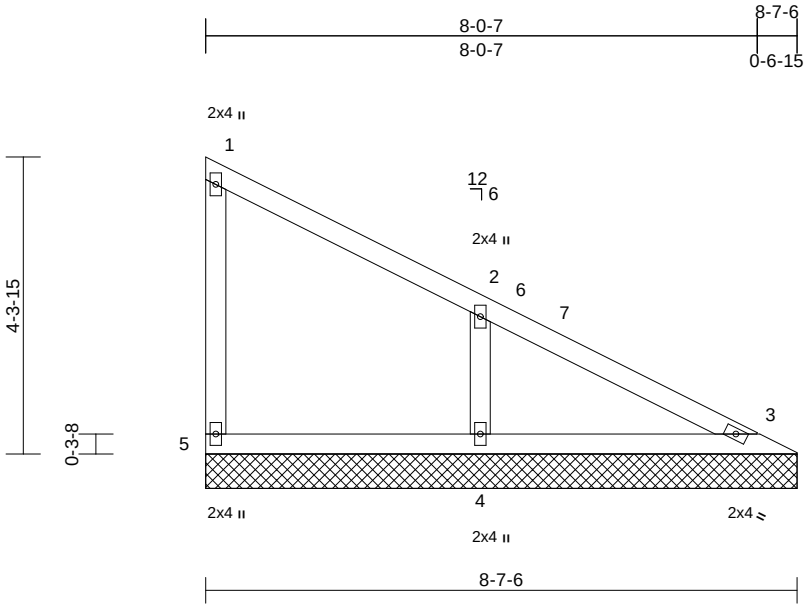

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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) 3=8-7-6, 4=8-7-6, 5=8-7-6
Max Horiz 5=-206 (LC 13)
Max Uplift 4=-197 (LC 13), 5=-62 (LC 13)
Max Grav 3=127 (LC 1), 4=384 (LC 1), 5=119 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-5=-89/137, 1-2=-79/34, 2-3=-250/120
BOT CHORD	4-5=-112/260, 3-4=-112/260
WEBS	2-4=-283/344

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 8-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 5 and 197 lb uplift at joint 4.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896582
4111088	V08	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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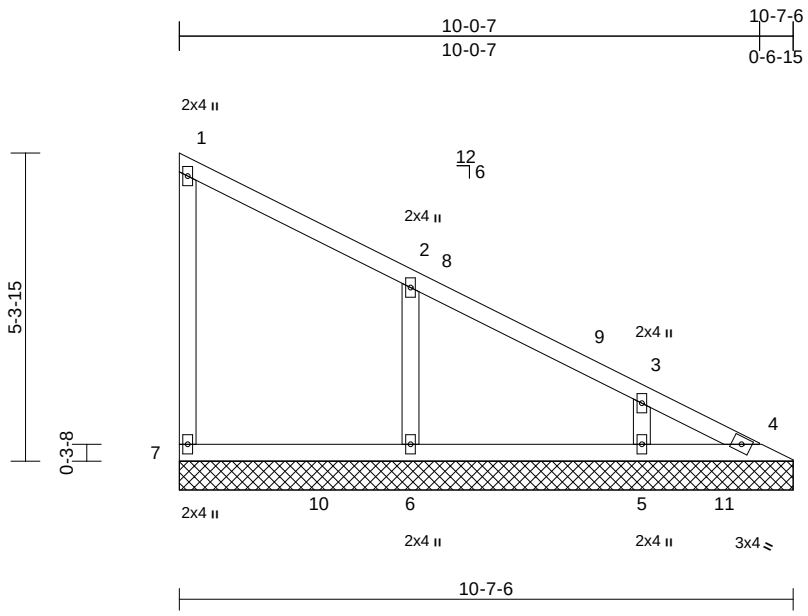

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 45 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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=10-7-6, 5=10-7-6, 6=10-7-6, 7=10-7-6

Max Horiz 7=-258 (LC 13)

Max Uplift 5=-139 (LC 13), 6=-180 (LC 13), 7=-65 (LC 13)

Max Grav 4=106 (LC 13), 5=278 (LC 2), 6=389 (LC 2), 7=156 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-7=-93/127, 1-2=-79/37, 2-3=-230/105, 3-4=-313/149
BOT CHORD	6-7=-129/294, 5-6=-129/294, 4-5=-129/294
WEBS	2-6=-265/304, 3-5=-200/230

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-4-11, Interior (1) 4-4-11 to 10-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 7, 180 lb uplift at joint 6 and 139 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

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V09	Valley	1	1	Job Reference (optional)	I66896583

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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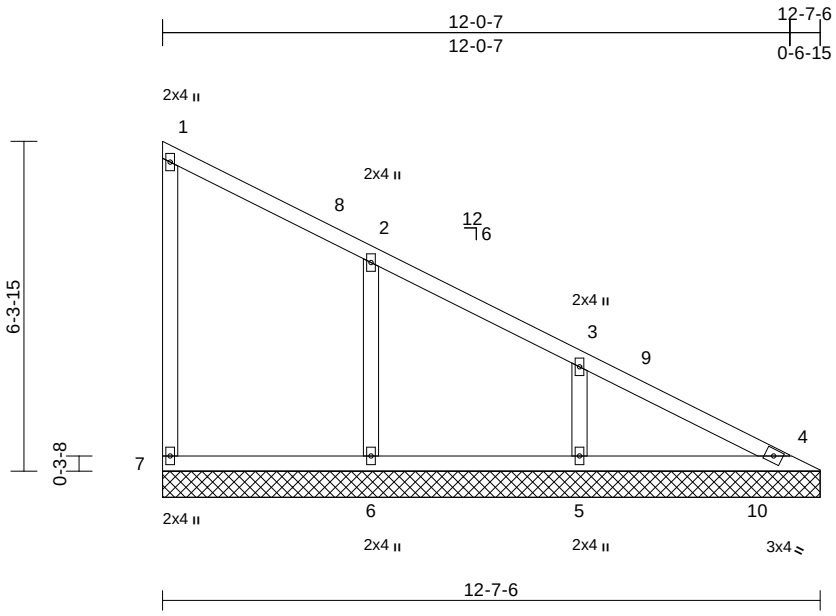

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 56 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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=12-7-6, 5=12-7-6, 6=12-7-6, 7=12-7-6
Max Horiz 7=-310 (LC 13)
Max Uplift 5=-186 (LC 13), 6=-169 (LC 13), 7=-67 (LC 13)
Max Grav 4=158 (LC 22), 5=375 (LC 2), 6=389 (LC 2), 7=163 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-7=-95/117, 1-2=-78/39, 2-3=-215/93, 3-4=-356/157
BOT CHORD 6-7=-142/363, 5-6=-142/363, 4-5=-142/363
WEBS 2-6=-252/278, 3-5=-262/283

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 12-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss 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.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 7, 169 lb uplift at joint 6 and 186 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

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	V10	Valley	1	1	I66896584
					Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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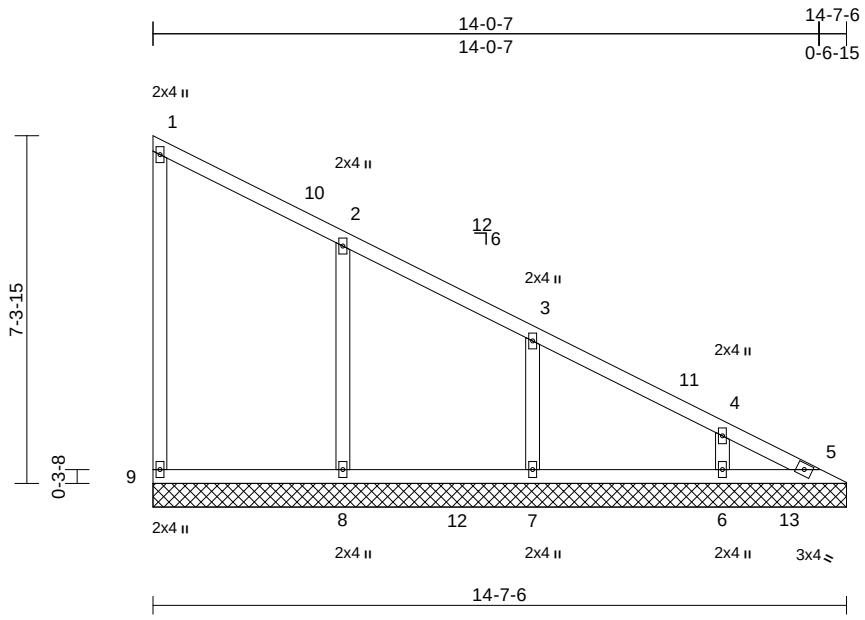

Scale = 1:48.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 67 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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=14-7-6, 6=14-7-6, 7=14-7-6, 8=14-7-6, 9=14-7-6
Max Horiz 9=-362 (LC 13)
Max Uplift 6=-143 (LC 13), 7=-167 (LC 13), 8=-174 (LC 13), 9=-67 (LC 13)
Max Grav 5=160 (LC 13), 6=290 (LC 2), 7=351 (LC 2), 8=428 (LC 2), 9=159 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-9=-95/108, 1-2=-78/32, 2-3=-206/89, 3-4=-332/140, 4-5=-433/179
BOT CHORD 8-9=-153/400, 7-8=-153/400, 6-7=-153/400, 5-6=-153/400
WEBS 2-8=-257/264, 3-7=-243/237, 4-6=-207/222

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 14-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 9, 174 lb uplift at joint 8, 167 lb uplift at joint 7 and 143 lb uplift at joint 6.
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

July 18,2024

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V11	Valley	1	1	Job Reference (optional)	I66896585

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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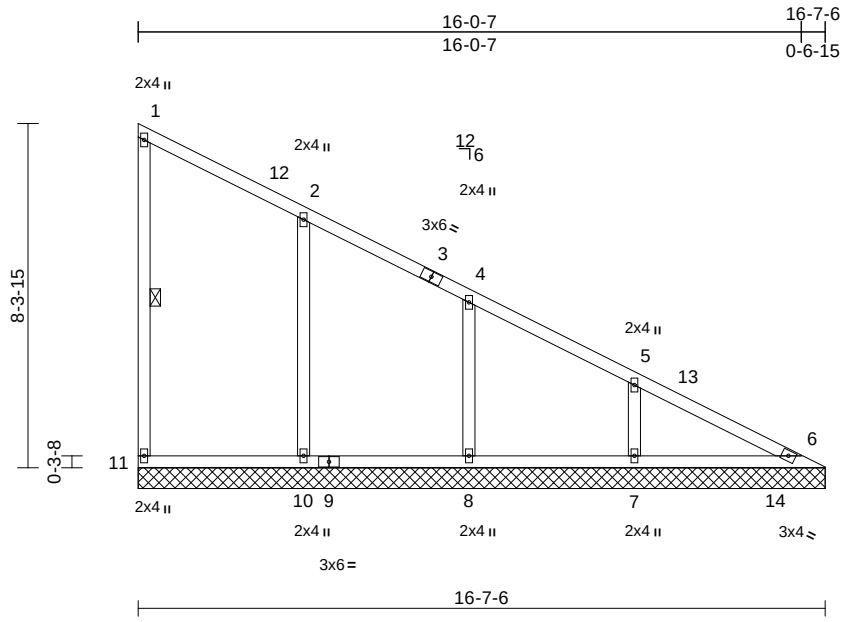

Scale = 1:55.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 80 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

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 1-11

REACTIONS (size) 6=16-7-6, 7=16-7-6, 8=16-7-6, 10=16-7-6, 11=16-7-6
Max Horiz 11=-414 (LC 13)
Max Uplift 7=-189 (LC 13), 8=-156 (LC 13), 10=-177 (LC 13), 11=-66 (LC 13)
Max Grav 6=184 (LC 22), 7=384 (LC 2), 8=350 (LC 2), 10=439 (LC 2), 11=157 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-11=-94/100, 1-2=-77/29, 2-4=-197/85, 4-5=-312/127, 5-6=-442/183
BOT CHORD	10-11=-162/434, 8-10=-162/434, 7-8=-162/434, 6-7=-162/434
WEBS	2-10=-261/251, 4-8=-228/208, 5-7=-268/253

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 16-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 11, 177 lb uplift at joint 10, 156 lb uplift at joint 8 and 189 lb uplift at joint 7.
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

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC
4111088	V12	Valley	1	1	I66896586 Job Reference (optional)

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Tue Jul 16 11:34:50 Page: 1
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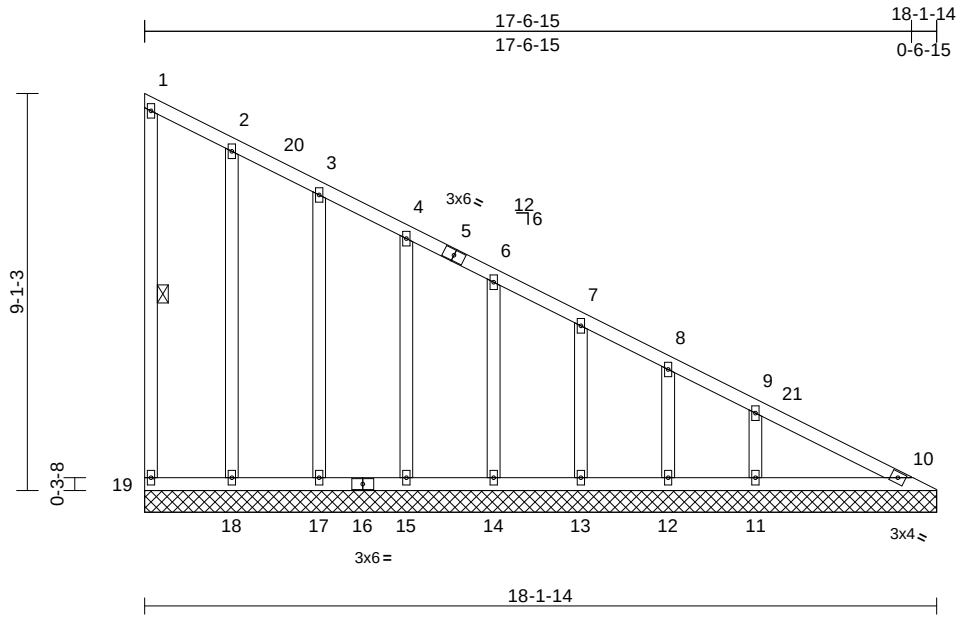

Scale = 1:52.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 116 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.3

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 1-19

REACTIONS (size) 10=18-1-14, 11=18-1-14, 12=18-1-14, 13=18-1-14, 14=18-1-14, 15=18-1-14, 17=18-1-14, 18=18-1-14, 19=18-1-14
Max Horiz 19=-455 (LC 13)
Max Uplift 11=-150 (LC 13), 12=-56 (LC 13), 13=-88 (LC 13), 14=-81 (LC 13), 15=-82 (LC 13), 17=-84 (LC 13), 18=-81 (LC 13), 19=-35 (LC 13)
Max Grav 10=173 (LC 22), 11=291 (LC 1), 12=108 (LC 1), 13=173 (LC 1), 14=157 (LC 1), 15=161 (LC 1), 17=159 (LC 1), 18=168 (LC 1), 19=61 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-19=-46/72, 1-2=-41/15, 2-3=-135/40, 3-4=-209/63, 4-6=-280/85, 6-7=-351/107, 7-8=-426/132, 8-9=-481/143, 9-10=-604/196
BOT CHORD 18-19=-174/583, 17-18=-174/583, 15-17=-174/583, 14-15=-174/583, 13-14=-174/583, 12-13=-174/583, 11-12=-174/583, 10-11=-174/583
WEBS 2-18=-125/185, 3-17=-120/143, 4-15=-120/136, 6-14=-118/134, 7-13=-128/147, 8-12=-85/99, 9-11=-209/276

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 17-6-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 19, 81 lb uplift at joint 18, 84 lb uplift at joint 17, 82 lb uplift at joint 15, 81 lb uplift at joint 14, 88 lb uplift at joint 13, 56 lb uplift at joint 12 and 150 lb uplift at joint 11.
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

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

July 18,2024

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	
4111088	V13	Valley	1	1	Job Reference (optional)	I66896587

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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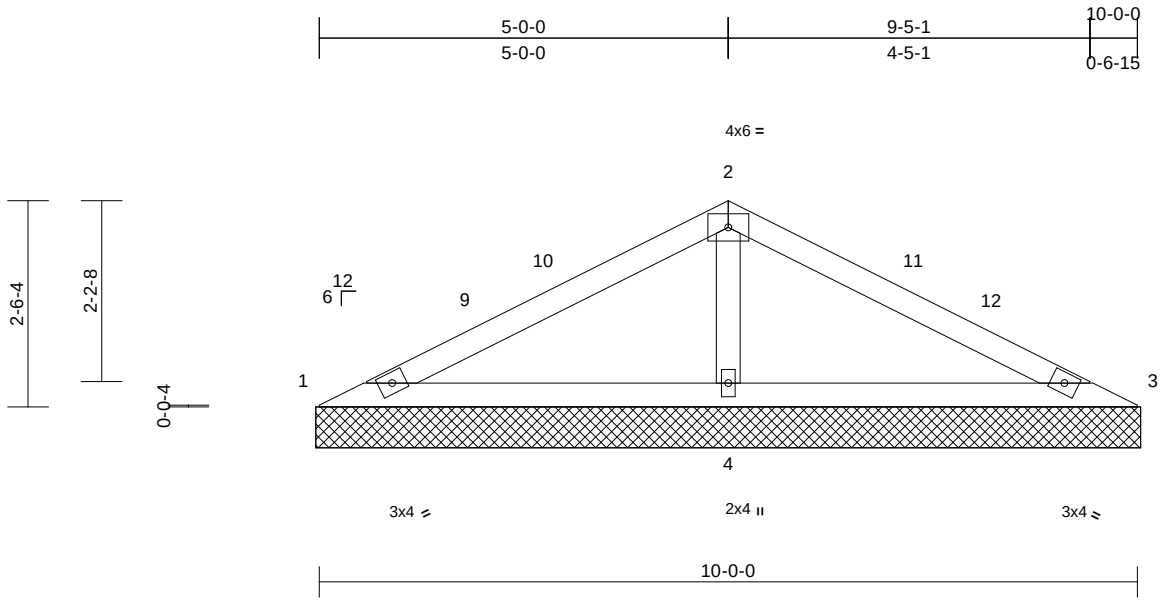

Scale = 1:28.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS (size) 1=10-1-0, 3=10-1-0, 4=10-1-0
Max Horiz 1=53 (LC 16)
Max Uplift 1=-23 (LC 12), 3=-34 (LC 13), 4=-170 (LC 12)
Max Grav 1=90 (LC 25), 3=90 (LC 26), 4=700 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-211/347, 2-3=-201/347
BOT CHORD 1-4=-254/268, 3-4=-254/268
WEBS 2-4=-536/448

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-0-8, Exterior(2R) 5-0-8 to 8-0-8, Interior (1) 8-0-8 to 10-1-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1, 34 lb uplift at joint 3 and 170 lb uplift at joint 4.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard

July 18,2024

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	4983 Ray Rd. Spring Lake, NC	I66896588
4111088	V14	Valley	1	1	Job Reference (optional)	

Builders FirstSource (Sumter, SC), Sumter, SC - 29153,

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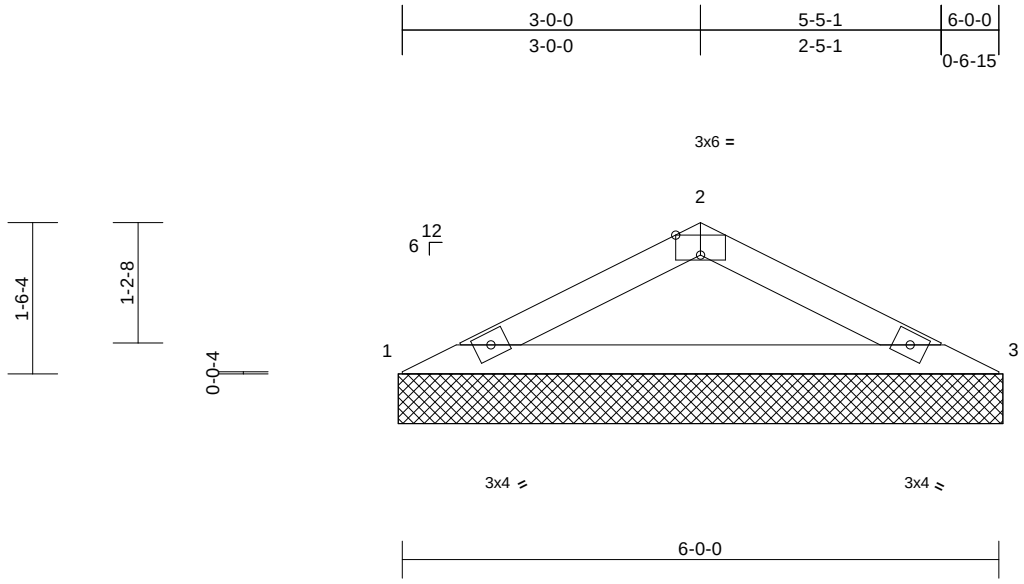


Scale = 1:23.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 17 lb	FT = 20%

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

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

REACTIONS (size) 1=6-1-0, 3=6-1-0
Max Horiz 1=31 (LC 12)
Max Uplift 1=-65 (LC 12), 3=-65 (LC 13)
Max Grav 1=243 (LC 1), 3=243 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-464/439, 2-3=-464/408
BOT CHORD 1-3=-398/409

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 1 and 65 lb uplift at joint 3.
9) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
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) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

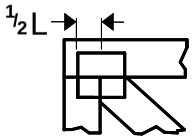
LOAD CASE(S) Standard

July 18,2024

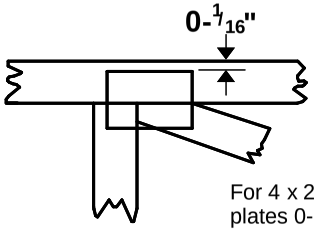
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

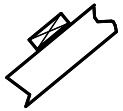
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

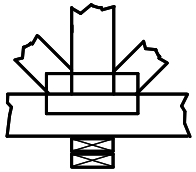
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

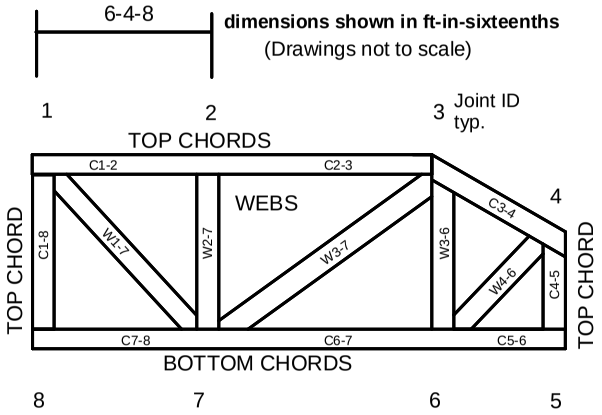


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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