ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: 2233821 - H&H/Cardinal/

Site Information:

Project Customer: h and h Project Name: 2233821
Lot/Block: Subdivision:
Model:
Address:
City: State: nc

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.2
Wind Code: N/A Wind Speed: 150 mph Design Method: User defined
Roof Load: 40.0 psf Floor Load: N/A psf

Mean Roof Height (feet): 25 Exposure Category: C

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I40248491	A01	2/13/20	35	I40248525		2/13/20
2	I40248492	A02	2/13/20	36	I40248526	C04	2/13/20
3	I40248493	A02A	2/13/20	37	I40248527	C05	2/13/20
4	I40248494	A03	2/13/20	38	I40248528	C06	2/13/20
5	I40248495	A04	2/13/20	39	I40248529	C07	2/13/20
6	I40248496		2/13/20	40	I40248530	C08	2/13/20
7	I40248497	A06	2/13/20	41	I40248531	CP01	2/13/20
8	I40248498	A07	2/13/20		I40248532	CP02	2/13/20
9	I40248499	A08	2/13/20	43		G01	2/13/20
10	I40248500	A09	2/13/20	44	I40248534	G02	2/13/20
11	I40248501	A10	2/13/20	45	I40248535	G03	2/13/20
12	I40248502	A11	2/13/20	46	I40248536	G04	2/13/20
13	I40248503	A11A	2/13/20	47	I40248537	G05	2/13/20
14	I40248504	A12	2/13/20	48	I40248538	G06	2/13/20
	I40248505	A13	2/13/20	49	I40248539	M01	2/13/20
16			2/13/20	50	I40248540	M02	2/13/20
17	I40248507	A15	2/13/20		I40248541	M03	2/13/20
18	I40248508	A16	2/13/20	52		V01	2/13/20
19	I40248509	A17	2/13/20	53	I40248543	V02	2/13/20
20	I40248510	A18	2/13/20	54	I40248544	V03	2/13/20
21	I40248511	B01	2/13/20	55	I40248545	V04	2/13/20
22	I40248512	B02	2/13/20	56	I40248546	V05	2/13/20
23	I40248513	B03	2/13/20	57	I40248547	V06	2/13/20
	I40248514		2/13/20	58	I40248548	V07	2/13/20
25		B05	2/13/20	59	I40248549	V08	2/13/20
26	I40248516	B06	2/13/20		I40248550	V09	2/13/20
27	I40248517	B07	2/13/20	61		V10	2/13/20
28	I40248518	B08	2/13/20	62	I40248552	V11	2/13/20
29	I40248519	B10	2/13/20	63	I40248553	V12	2/13/20
30	I40248520	B11	2/13/20	64	I40248554	V13	2/13/20
31	I40248521	B12	2/13/20	65	I40248555	V14	2/13/20
32	I40248522		2/13/20	66	I40248556	V15	2/13/20
	I40248523	C01	2/13/20	67	I40248557	V16	2/13/20
34		C02	2/13/20				

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: Sevier, Scott
My license renewal date for the state of North Carolina is December 31, 2020.

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.

February 13,2020

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A01	Common Supported Gable	2	1	I40248491
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:01 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-EnHR3pgKiW6zHFMX7TnYOo4CvDvqEce4W8qlq2zldbO

-0-10-8 14-0-0 27-9-0
0-10-8 14-0-0 13-9-0

Scale = 1:54.6

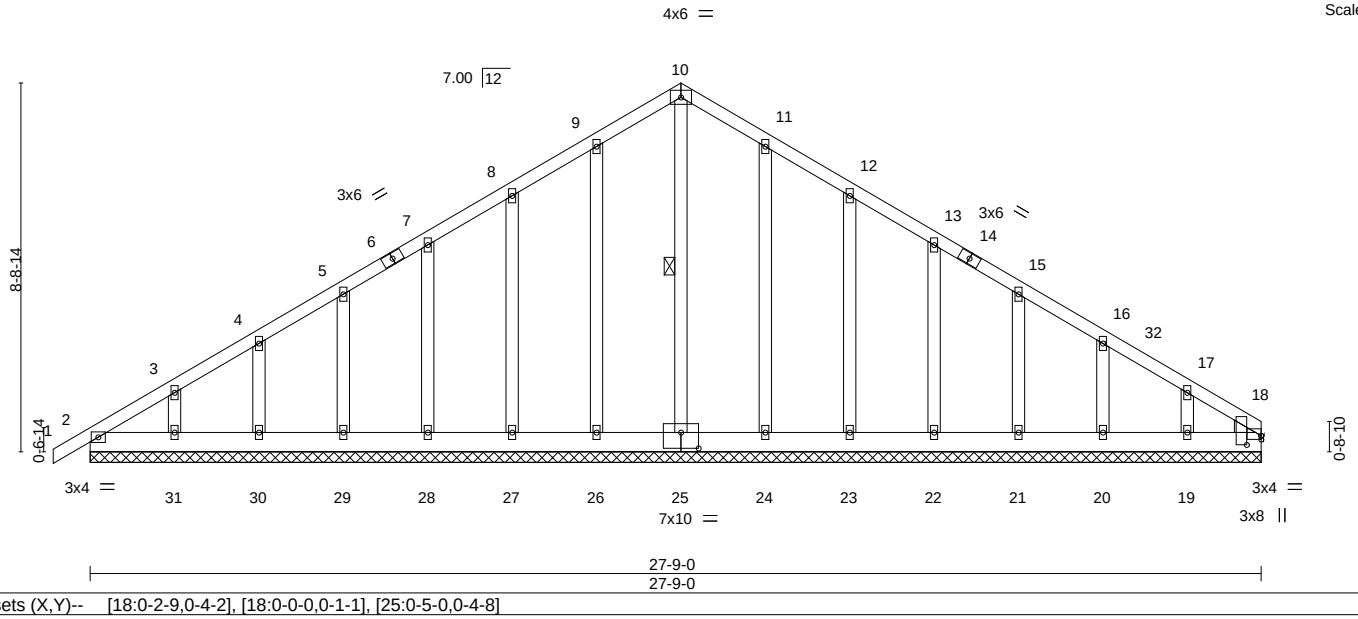


Plate Offsets (X,Y)-- [18:0-2-9,0-4-2], [18:0-0-0,0-1-1], [25:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 198 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-25

REACTIONS. All bearings 27-9-0.
(lb) - Max Horz 2=380(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 18 except 26=-136(LC 12), 27=-142(LC 12), 28=-137(LC 12), 29=-139(LC 12), 30=-137(LC 12), 31=-171(LC 12), 24=-133(LC 13), 23=-143(LC 13), 22=-137(LC 13), 21=-139(LC 13), 20=-135(LC 13), 19=-198(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-367/273, 3-4=-257/226, 8-9=-154/267, 9-10=-204/329, 10-11=-204/329, 17-18=-313/175
BOT CHORD 2-31=-145/286, 30-31=-145/286, 29-30=-145/286, 28-29=-145/286, 27-28=-145/286, 26-27=-145/286, 25-26=-145/286, 24-25=-145/286, 23-24=-145/286, 22-23=-145/286, 21-22=-145/286, 20-21=-145/286, 19-20=-145/286, 18-19=-145/286

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 27-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 18 except (jt=lb) 26=136, 27=142, 28=137, 29=139, 30=137, 31=171, 24=133, 23=143, 22=137, 21=139, 20=135, 19=198.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 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.

February 13,2020

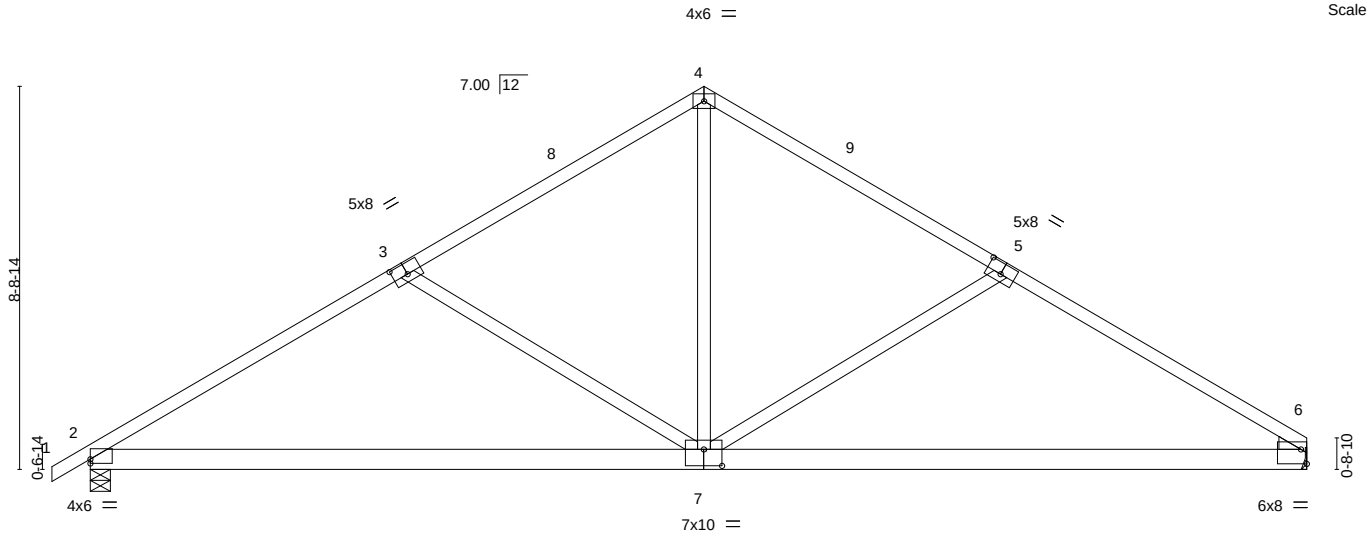
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A02	Common	14	1	I40248492
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:02 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-izrqH9gzTqEqvPxjgAInx0dDNd10zx2EloaIMUzldbN

-0-10-8	7-2-13	14-0-0	20-9-3	27-9-0
0-10-8	7-2-13	6-9-3	6-9-3	6-11-13

Scale = 1:52.6



14-0-0	27-9-0
14-0-0	13-9-0

Plate Offsets (X,Y)-- [2:0-0-0,0-1-3], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-0-13,0-0-7], [6:Edge,0-3-15], [6:0-5-10,0-0-15], [7:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.23	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.48	6-7	>687	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.14	2-7	>999	240	Weight: 150 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1166/0-5-8, 6=1097/Mechanical
Max Horz 2=380(LC 11)
Max Uplift 2=-537(LC 12), 6=-482(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1640/743, 3-4=-1250/588, 4-5=-1249/592, 5-6=-1615/748
BOT CHORD 2-7=-720/1458, 6-7=-499/1306
WEBS 3-7=-530/583, 4-7=-288/879, 5-7=-529/594

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=537, 6=482.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A02A	Common	24	1	I40248493
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:03 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-A9PCUVhbE7NhWZWvEup0UD9NY1SRiQwN_SJsvxzldbM

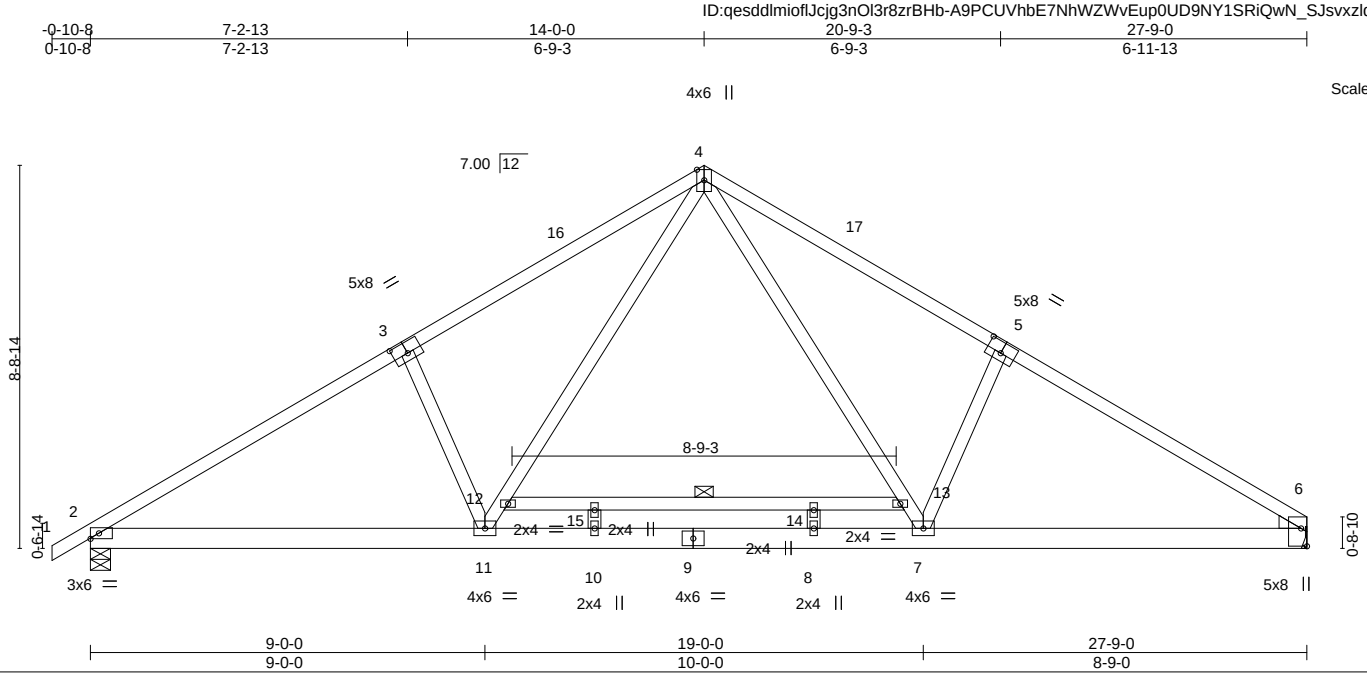


Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-0-7,0-0-13], [6:0-0-15,0-5-10], [6:Edge,0-1-10]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.06	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.23	8-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	2-11	>999	240	Weight: 171 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
12-13: 2x4 SP No.2
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-1-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-9-7 oc bracing.
WEBS 1 Row at midpt 12-13

REACTIONS. (lb/size) 2=1266/0-5-8, 6=1197/Mechanical
Max Horz 2=380(LC 9)
Max Uplift 2=-437(LC 12), 6=-381(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1915/509, 3-4=-1806/627, 4-5=-1795/629, 5-6=-1909/507
BOT CHORD 2-11=-523/1687, 10-11=-158/1147, 8-10=-158/1147, 7-8=-158/1147, 6-7=-295/1532
WEBS 3-11=-449/533, 11-12=-343/822, 4-12=-331/881, 4-13=-331/874, 7-13=-340/812, 5-7=-452/545

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 200.0lb AC unit load placed on the bottom chord, 14-0-0 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=437, 6=381.
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.

February 13,2020

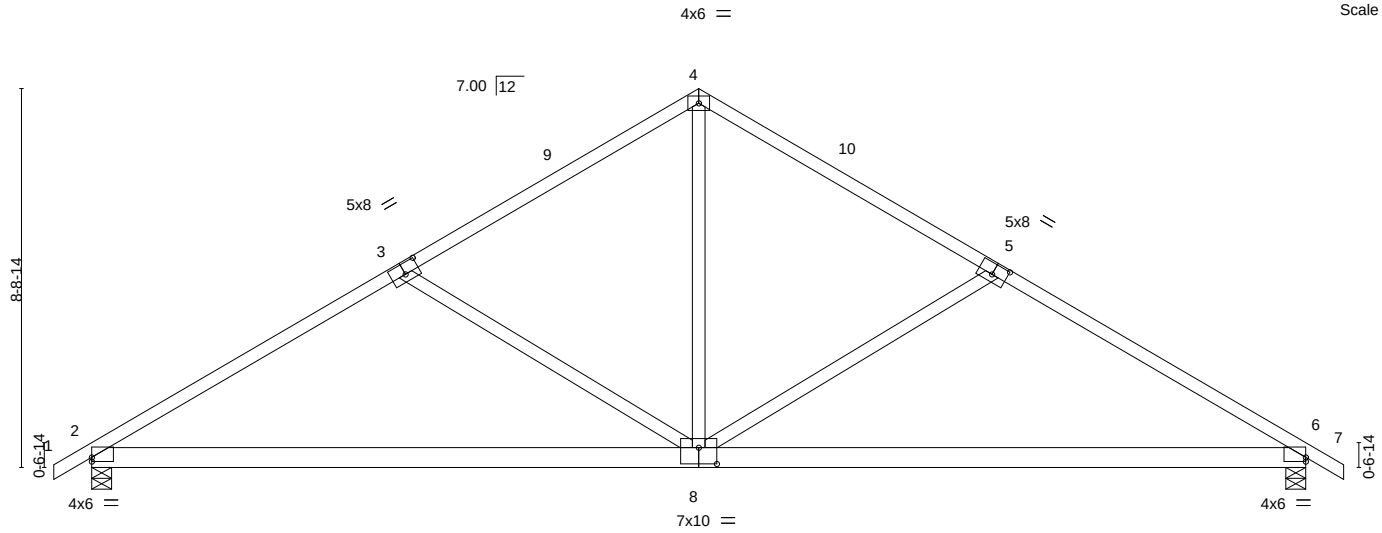
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A03	Common	8	1	I40248494
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:04 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-eLzahriD_RVY8j56obKF0RiYRRiXRqYXC63PRNzldbL

-0-10-8 | 7-2-13 | 14-0-0 | 20-9-3 | 28-0-0 | 28-10-8
0-10-8 | 7-2-13 | 6-9-3 | 6-9-3 | 7-2-13 | 0-10-8

Scale = 1:53.1



14-0-0 | 28-0-0
14-0-0 | 14-0-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.22	6-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.47	6-8	>698	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.13	2-8	>999	240	Weight: 152 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 or 3-8-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1168/0-5-8, 6=1168/0-5-8
Max Horz 2=386(LC 11)
Max Uplift 2=-537(LC 12), 6=-537(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1644/745, 3-4=-1254/591, 4-5=-1254/591, 5-6=-1644/746
BOT CHORD 2-8=-712/1469, 6-8=-470/1313
WEBS 4-8=-285/883, 5-8=-530/583, 3-8=-530/582

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 28-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 2=537, 6=537.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A04	Common	18	1	I40248495
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:05 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-6YXyvBjrlldPmtgIMJrUZeFiDr1IAH9gRmozzpzldbK

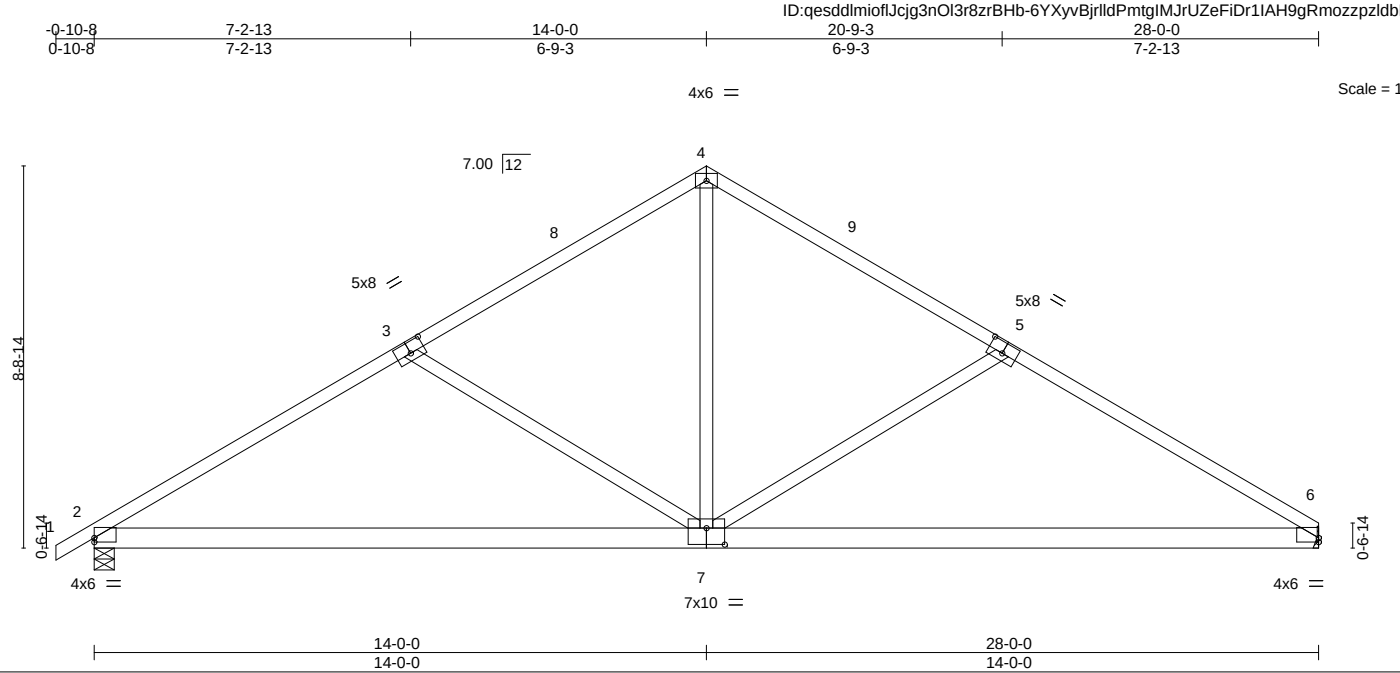


Plate Offsets (X,Y)-- [2:0-0-0,0-1-3], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:Edge,0-1-3], [7:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.25	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.52	6-7	>634	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.14	2-7	>999	240	Weight: 151 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 or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1176/0-5-8, 6=1107/Mechanical
Max Horz 2=380(LC 11)
Max Uplift 2=-540(LC 12), 6=-489(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1660/749, 3-4=-1269/595, 4-5=-1270/600, 5-6=-1657/770
BOT CHORD 2-7=-725/1472, 6-7=-521/1353
WEBS 4-7=-296/901, 5-7=-563/615, 3-7=-529/583

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-11-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=540, 6=489.
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.

February 13,2020

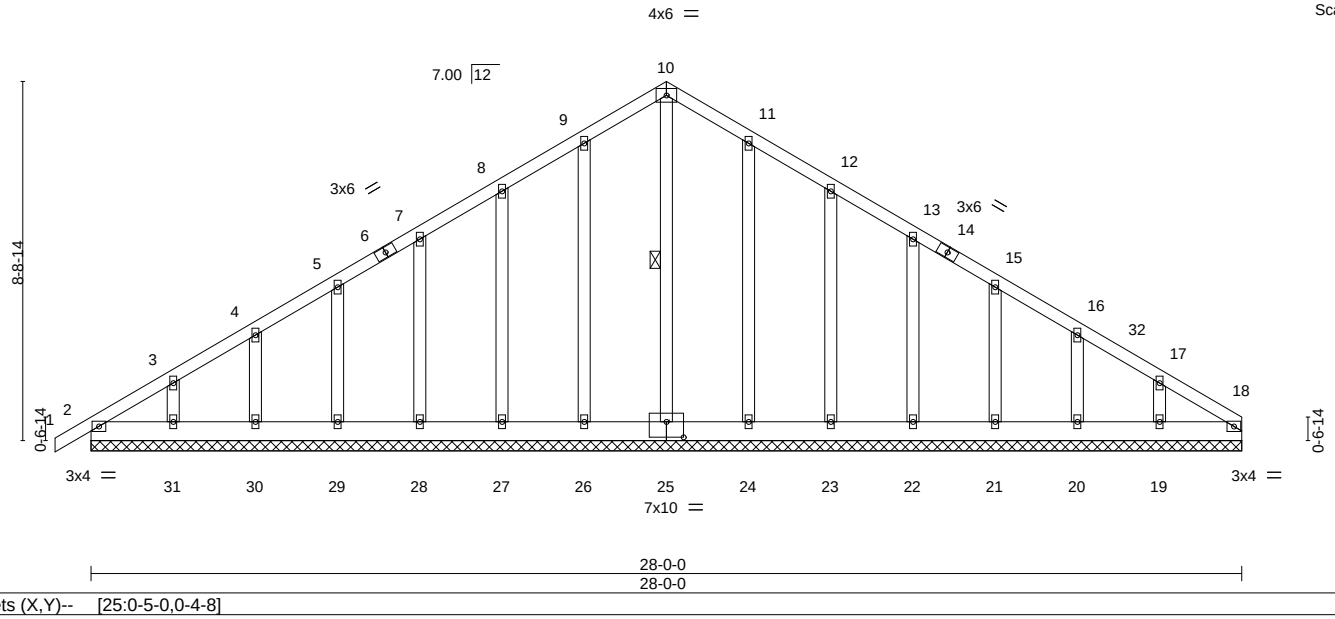
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A05	Common Supported Gable	2	1	I40248496
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:07 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-2wfjKsk5HMt6?AqgTkuye3KDOeyDeJ7zu3H32izldbI

-0-10-8 14-0-0 28-0-0
0-10-8 14-0-0 14-0-0

Scale = 1:56.1



28-0-0
28-0-0

Plate Offsets (X,Y)-- [25:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 198 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-25

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=380(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 18 except 26=-136(LC 12), 27=-142(LC 12), 28=-137(LC 12), 29=-139(LC 12), 30=-137(LC 12), 31=-171(LC 12), 24=-133(LC 13), 23=-143(LC 13), 22=-137(LC 13), 21=-140(LC 13), 20=-132(LC 13), 19=-183(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-367/273, 3-4=-257/226, 8-9=-154/268, 9-10=-204/328, 10-11=-204/328, 17-18=-300/168
BOT CHORD 2-31=-145/286, 30-31=-145/286, 29-30=-145/286, 28-29=-145/286, 27-28=-145/286, 26-27=-145/286, 25-26=-145/286, 24-25=-145/286, 23-24=-145/286, 22-23=-145/286, 21-22=-145/286, 20-21=-145/286, 19-20=-145/286, 18-19=-145/286

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 28-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 18 except (jt=lb) 26=136, 27=142, 28=137, 29=139, 30=137, 31=171, 24=133, 23=143, 22=137, 21=140, 20=132, 19=183.
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.

February 13,2020

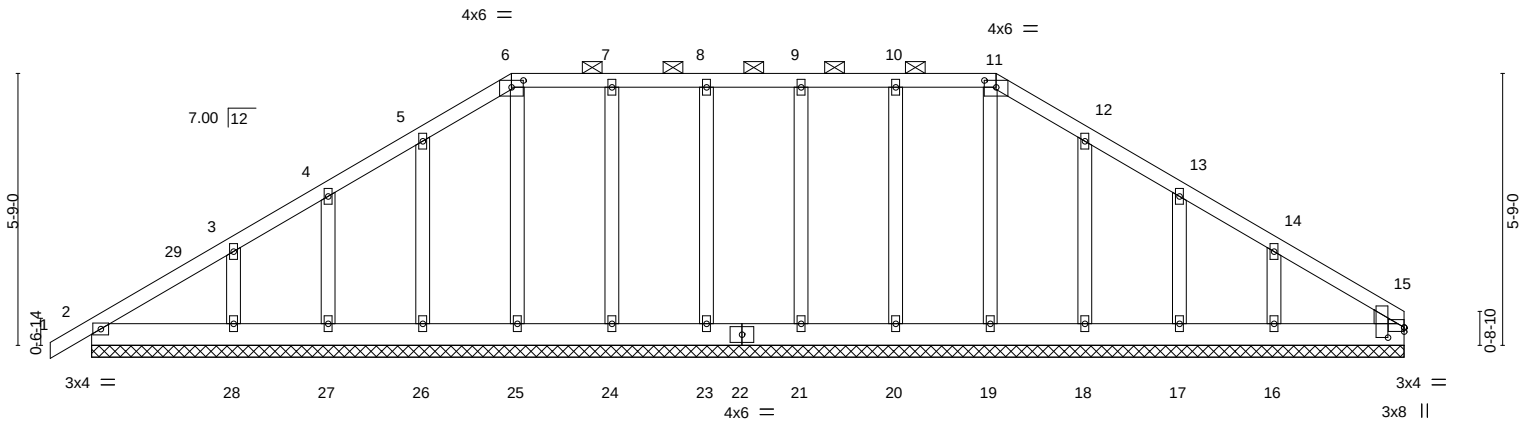
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A06	GABLE	2	1	I40248497
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:08 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-X7D5XClj2g?zdKPt1RPBAHtO02ISNnd67j1da8zldbH

-0-10-8 8-10-8 19-1-8 27-9-0
0-10-8 8-10-8 10-3-0 8-7-8

Scale = 1:48.7



27-9-0
27-9-0

Plate Offsets (X,Y)-- [6:0-3-0,0-1-12], [11:0-3-0,0-1-12], [15:0-0-0,0-1-1], [15:0-2-9,0-4-2]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 182 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

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

REACTIONS. All bearings 27-9-0.
(lb) - Max Horz 2=248(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 23, 25, 21, 19 except 24=-104(LC 8), 26=-147(LC 12), 27=-115(LC 12), 28=-215(LC 12), 20=-105(LC 9), 18=-146(LC 13), 17=-115(LC 13), 16=-223(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 23, 24, 25, 26, 27, 21, 20, 19, 18, 17, 15 except 28=286(LC 19), 16=281(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 8-10-8, Corner(3R) 8-10-8 to 11-10-8 , Exterior(2N) 11-10-8 to 19-1-8, Corner(3R) 19-1-8 to 22-1-8, Exterior(2N) 22-1-8 to 27-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 23, 25, 21, 19 except (jt=lb) 24=104, 26=147, 27=115, 28=215, 20=105, 18=146, 17=115, 16=223.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

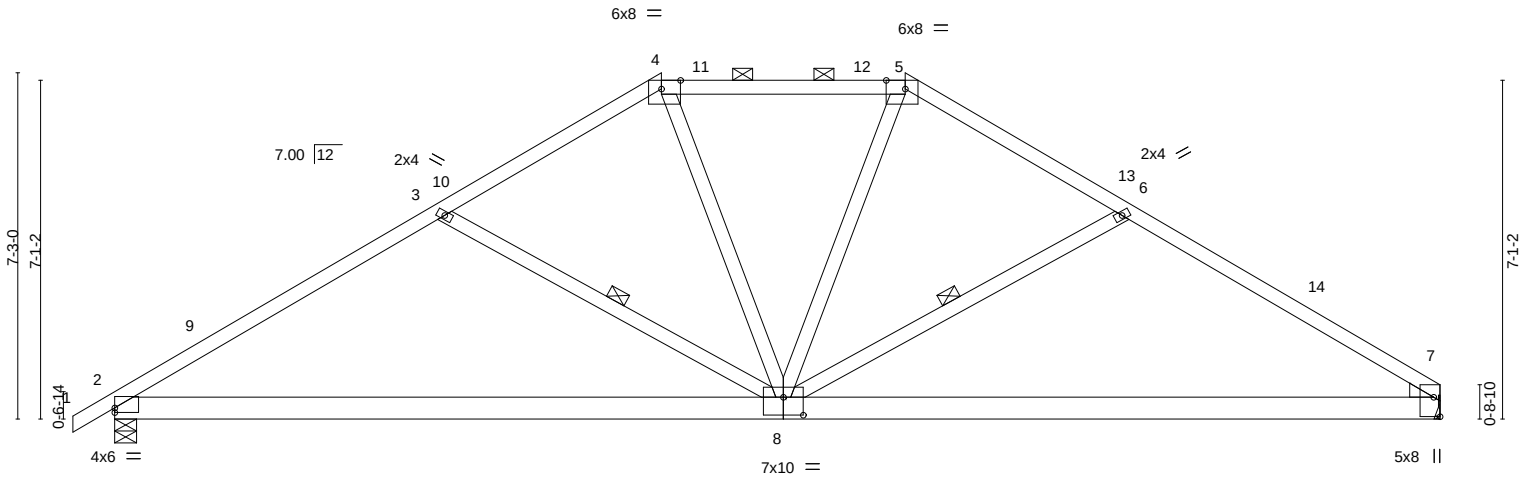
Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A07	Hip	2	1	I40248498
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:09 2020 Page 1

ID:qesddlmioflJcjg3nOl3r8zrBHb-?JmTlYmMpz7qEUz3b9wQjUPQpSPg6DbGMNmA6azldbG

-0-10-8	6-10-14	11-5-6	16-6-10	21-1-2	27-9-0
0-10-8	6-10-14	4-6-7	5-1-4	4-6-8	6-7-14

Scale: 1/4"=1'



14-0-0	27-9-0
14-0-0	13-9-0

Plate Offsets (X,Y)-- [2:0-0-0,0-1-3], [4:0-4-13,Edge], [5:0-4-13,Edge], [7:Edge,0-1-10], [7:0-0-15,0-5-10], [7:0-0-7,0-0-13], [8:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.22	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.47	7-8	>696	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.13	2-8	>999	240	Weight: 158 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-2-4 oc purlins, except 2-0-0 oc purlins (4-8-13 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-8, 6-8

REACTIONS. (lb/size) 2=1166/0-5-8, 7=1097/Mechanical
Max Horz 2=311(LC 9)
Max Uplift 2=-508(LC 12), 7=-452(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1637/684, 3-4=-1276/495, 4-5=-1157/495, 5-6=-1276/504, 6-7=-1612/690
BOT CHORD 2-8=-623/1305, 7-8=-431/1301
WEBS 4-8=-123/408, 5-8=-127/406, 3-8=-438/480, 6-8=-439/495

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-5-6, Exterior(2R) 11-5-6 to 15-8-5, Interior(1) 15-8-5 to 16-6-10, Exterior(2R) 16-6-10 to 20-9-9, Interior(1) 20-9-9 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=508, 7=452.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

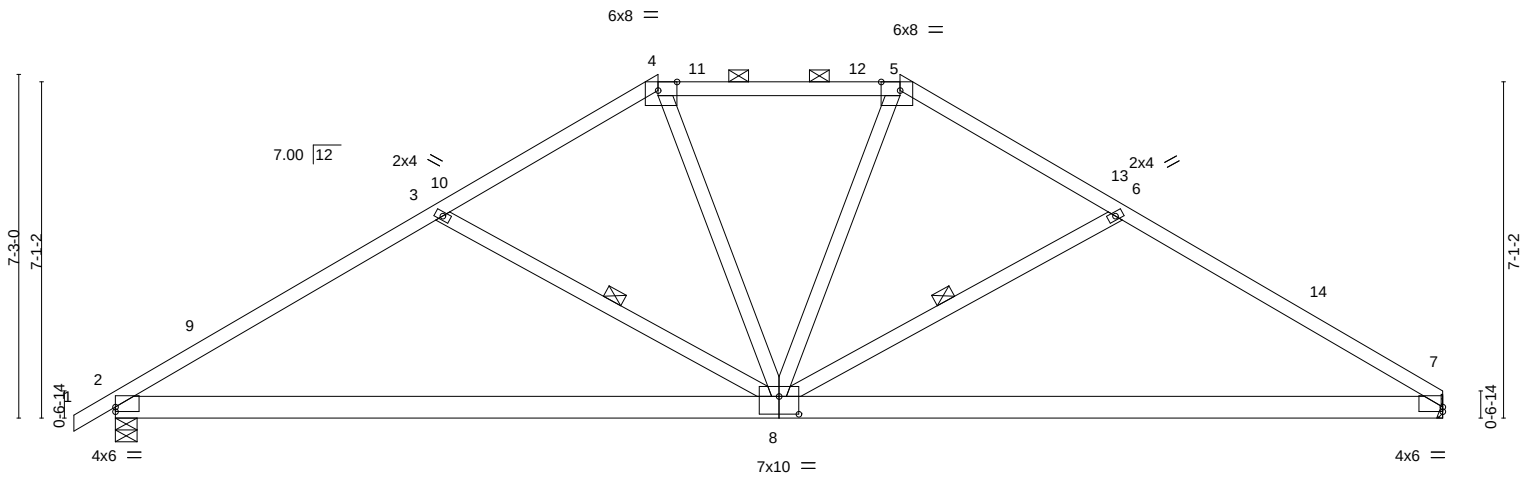
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A08	Hip	2	1	I40248499
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:10 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-TVKryun_aHFhseYF8sRfGiyZzskUrgePb1Wje1zldbF

-0-10-8	6-10-14	11-5-6	16-6-10	21-1-2	28-0-0
0-10-8	6-10-14	4-6-8	5-1-4	4-6-8	6-10-14

Scale = 1:48.6



14-0-0	28-0-0
14-0-0	14-0-0

Plate Offsets (X,Y)-- [2:Edge,0-1-3], [4:0-4-13,Edge], [5:0-4-13,Edge], [7:0-0-0,0-1-3], [8:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.25	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.52	7-8	>641	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.13	2-8	>999	240	Weight: 159 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 or 2-2-0 oc purlins, except 2-0-0 oc purlins (4-8-2 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-8, 6-8

REACTIONS. (lb/size) 7=1107/Mechanical, 2=1176/0-5-8
Max Horz 2=311(LC 11)
Max Uplift 7=-460(LC 13), 2=-511(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1657/688, 3-4=-1296/500, 4-5=-1179/503, 5-6=-1296/508, 6-7=-1658/713
BOT CHORD 2-8=-628/1322, 7-8=-456/1353
WEBS 3-8=-437/480, 4-8=-127/417, 5-8=-131/416, 6-8=-475/518

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-5-6, Exterior(2R) 11-5-6 to 15-8-5, Interior(1) 15-8-5 to 16-6-10, Exterior(2R) 16-6-10 to 20-9-9, Interior(1) 20-9-9 to 27-11-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=460, 2=511.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

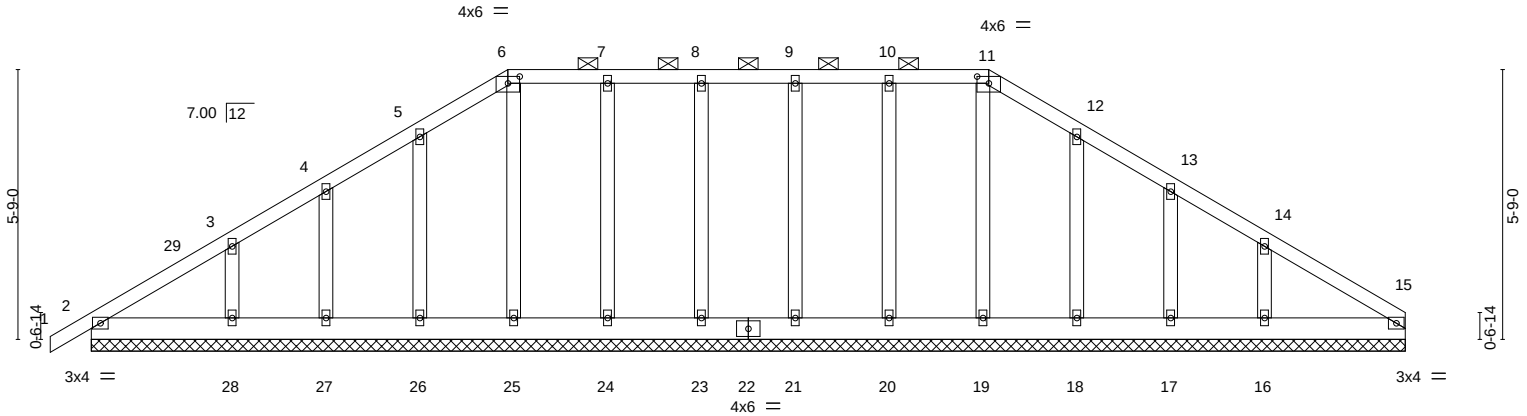
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A09	GABLE	2	1	I40248500
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:12 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-PuScNaoE6uVP6yieGHT7L7140ffMJbdi2L?qjvzldbD

-0-10-8 8-10-8 19-1-8 28-0-0
0-10-8 8-10-8 10-3-0 8-10-8

Scale = 1:49.1



28-0-0
28-0-0

Plate Offsets (X,Y)-- [6:0-3-0,0-1-12], [11:0-3-0,0-1-12]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 183 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 or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=248(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 23, 25, 21, 19 except 24=-104(LC 8), 26=-147(LC 12), 27=-115(LC 12), 28=-215(LC 12), 20=-105(LC 9), 18=-147(LC 13), 17=-110(LC 13), 16=-226(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 15, 2, 23, 24, 25, 26, 27, 21, 20, 19, 18, 17 except 28=286(LC 19), 16=298(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 8-10-8, Corner(3R) 8-10-8 to 11-10-8 , Exterior(2N) 11-10-8 to 19-1-8, Corner(3R) 19-1-8 to 22-1-8, Exterior(2N) 22-1-8 to 28-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 23, 25, 21, 19 except (jt=lb) 24=104, 26=147, 27=115, 28=215, 20=105, 18=147, 17=110, 16=226.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A10	Common Supported Gable	2	1	I40248501
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:13 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-t40_awpstCdGj5Hqq_?MtKaE33?Q21crH?kOFLzldbC

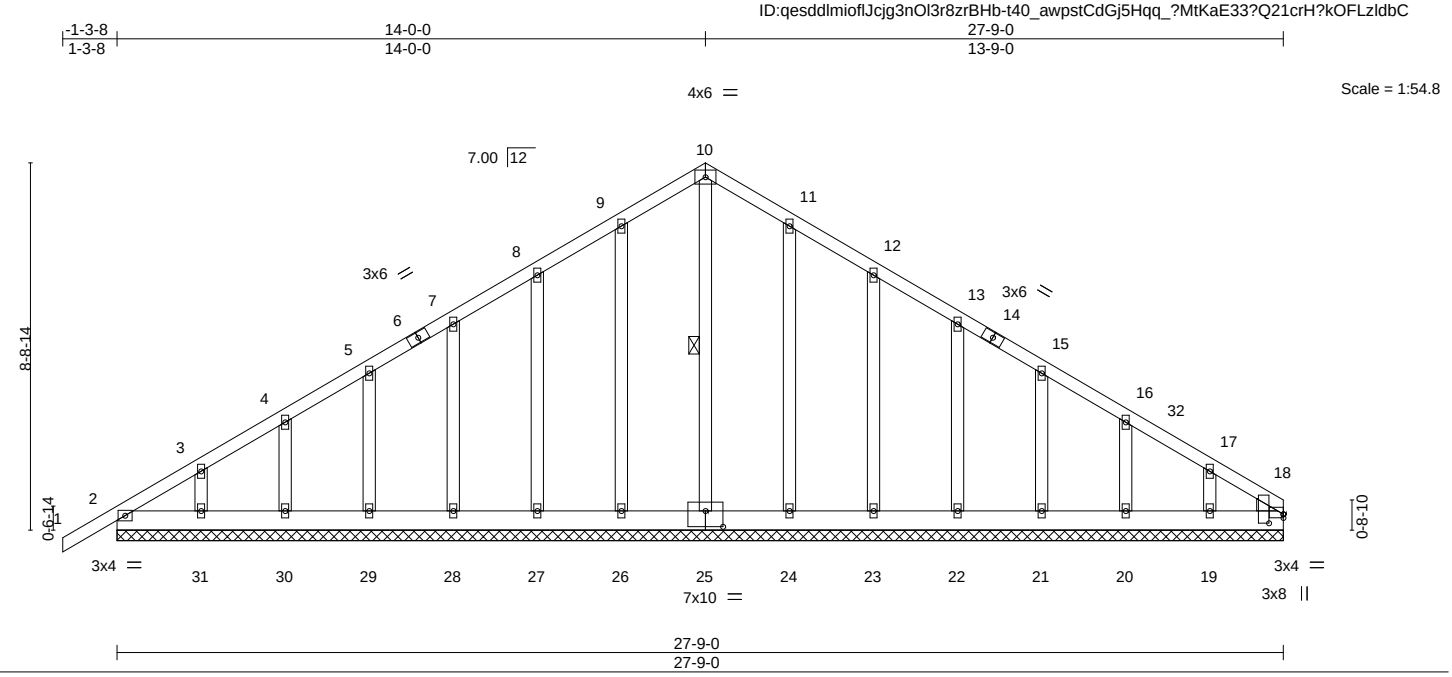


Plate Offsets (X,Y)-- [18:0-2-9,0-4-2], [18:0-0-0,0-1-1], [25:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 198 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-25

REACTIONS. All bearings 27-9-0.
(lb) - Max Horz 2=388(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 18 except 2=-100(LC 8), 26=-137(LC 12), 27=-142(LC 12), 28=-138(LC 12), 29=-137(LC 12), 30=-143(LC 12), 31=-148(LC 12), 24=-133(LC 13), 23=-143(LC 13), 22=-137(LC 13), 21=-139(LC 13), 20=-135(LC 13), 19=-198(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-365/271, 3-4=-258/226, 8-9=-154/267, 9-10=-204/329, 10-11=-204/329, 17-18=-314/175
BOT CHORD 2-31=-145/286, 30-31=-145/286, 29-30=-145/286, 28-29=-145/286, 27-28=-145/286, 26-27=-145/286, 25-26=-145/286, 24-25=-145/286, 23-24=-145/286, 22-23=-145/286, 21-22=-145/286, 20-21=-145/286, 19-20=-145/286, 18-19=-145/286

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 2-0-0, Exterior(2N) 2-0-0 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 27-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 18 except (jt=lb) 2=100, 26=137, 27=142, 28=138, 29=137, 30=143, 31=148, 24=133, 23=143, 22=137, 21=139, 20=135, 19=198.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A11	Common	14	1	I40248502
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:14 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-LHaMoGqUeWl7LFs1NiWbQY6GMT7qnM2?VfUxoozldbB

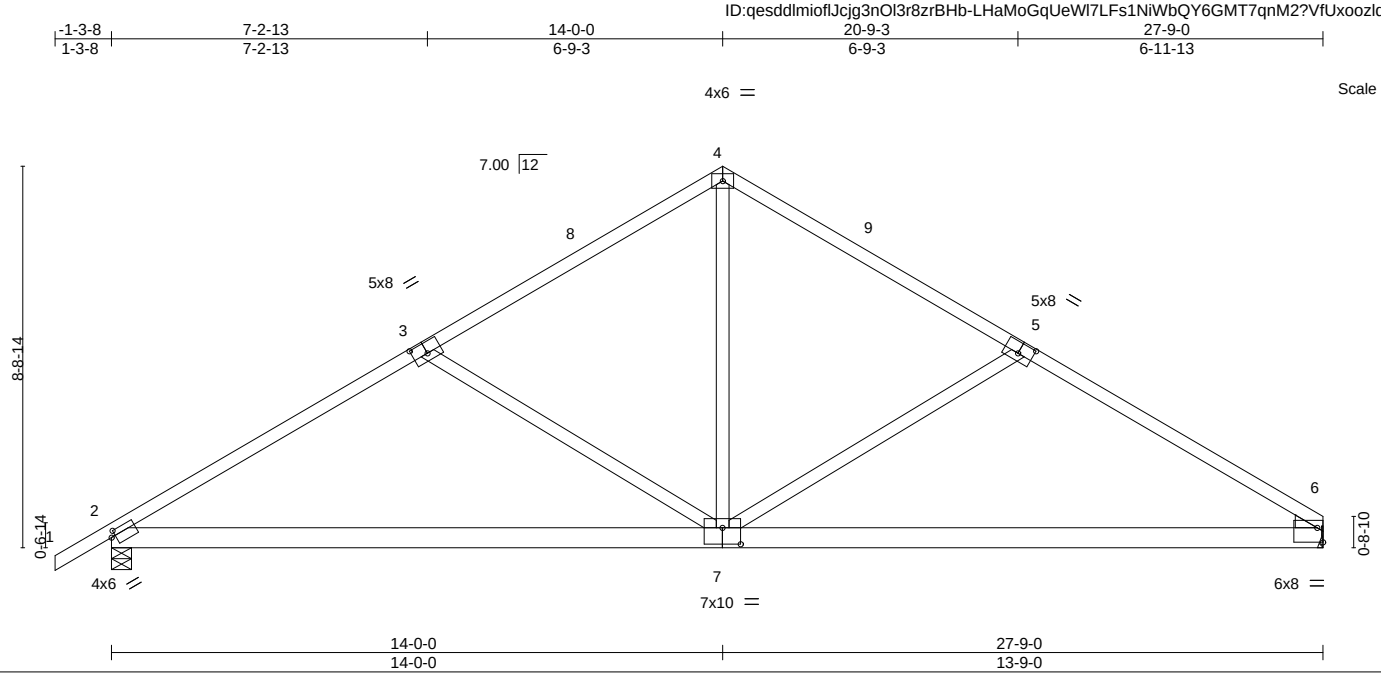


Plate Offsets (X,Y)-- [2:0-1-3,0-1-8], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-0-13,0-0-7], [6:Edge,0-3-15], [6:0-5-10,0-0-15], [7:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.23	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.48	6-7	>685	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.13	2-7	>999	240	Weight: 151 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-3-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1192/0-5-8, 6=1096/Mechanical
Max Horz 2=388(LC 9)
Max Uplift 2=-558(LC 12), 6=-481(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1636/739, 3-4=-1250/583, 4-5=-1250/590, 5-6=-1612/747
BOT CHORD 2-7=-715/1453, 6-7=-497/1303
WEBS 3-7=-527/580, 4-7=-285/880, 5-7=-529/594

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=558, 6=481.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A11A	Common	24	1	I40248503
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:15 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-pT8k?bq6Ppt_zPRDxP1qzlfRWsYGWs38kJDUKEzldbA

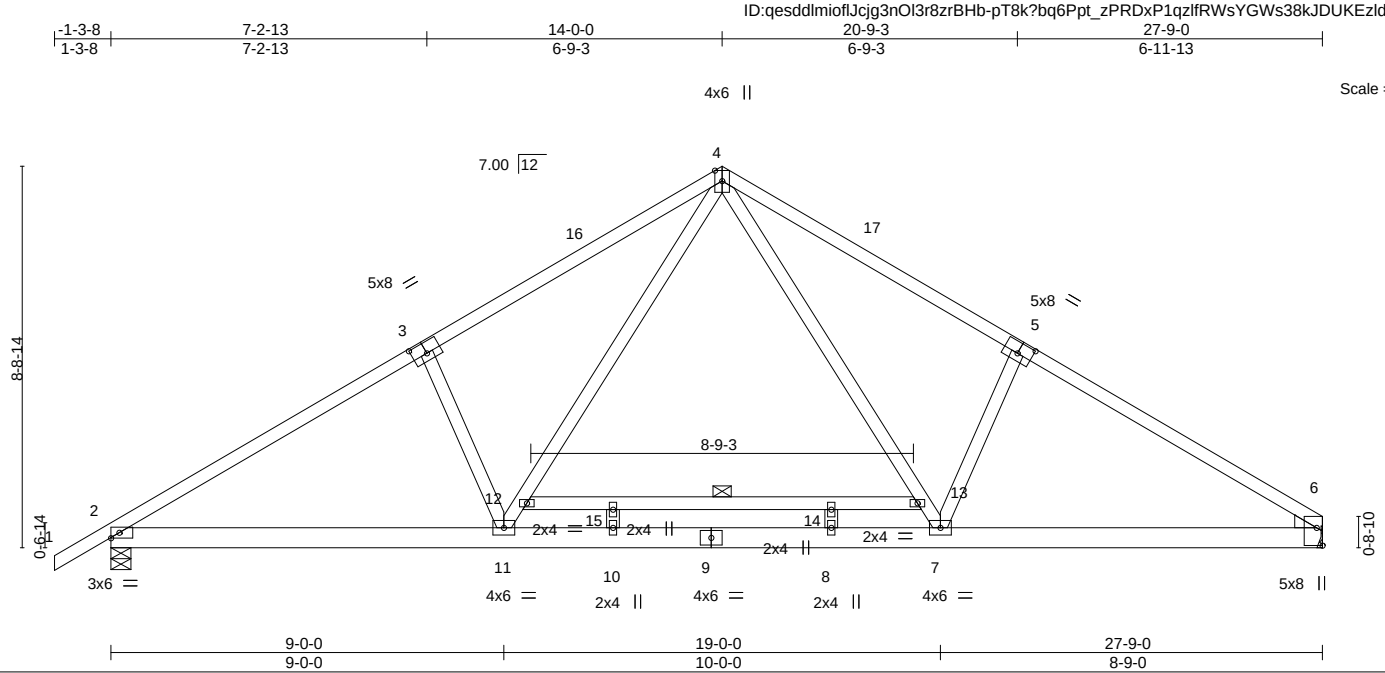


Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-0-7,0-0-13], [6:0-0-15,0-5-10], [6:Edge,0-1-10]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.06	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.23	8-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	2-11	>999	240	Weight: 172 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
12-13: 2x4 SP No.2
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-1-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-10-12 oc bracing.
WEBS 1 Row at midpt 12-13

REACTIONS. (lb/size) 2=1292/0-5-8, 6=1196/Mechanical
Max Horz 2=388(LC 9)
Max Uplift 2=-458(LC 12), 6=-381(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1909/502, 3-4=-1807/620, 4-5=-1796/628, 5-6=-1907/506
BOT CHORD 2-11=-516/1681, 10-11=-155/1145, 8-10=-155/1145, 7-8=-155/1145, 6-7=-294/1530
WEBS 3-11=-447/531, 11-12=-336/814, 4-12=-325/874, 4-13=-332/874, 7-13=-340/812, 5-7=-452/545

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 200.0lb AC unit load placed on the bottom chord, 14-0-0 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=458, 6=381.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A12	Common	8	1	I40248504
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:16 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-Ifh6DxrlA7?raZ0PV7Y3VzCcWGoOFGaIzzz2sgzldb9

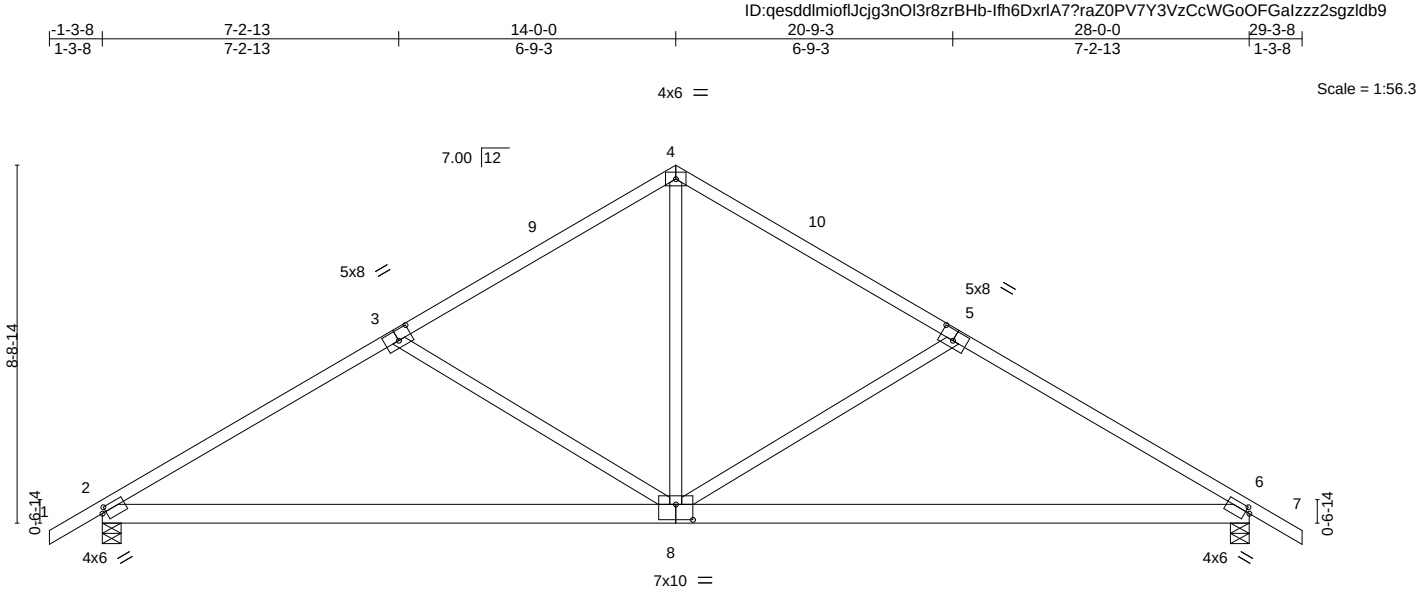


Plate Offsets (X,Y)-- [2:0-1-3,0-1-8], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-1-3,0-1-8], [8:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.22	2-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.47	2-8	>701	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.12	2-8	>999	240	Weight: 154 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 or 3-8-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1193/0-5-8, 6=1193/0-5-8
Max Horz 2=396(LC 11)
Max Uplift 2=-558(LC 12), 6=-558(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1637/740, 3-4=-1253/584, 4-5=-1253/584, 5-6=-1637/740
BOT CHORD 2-8=-699/1468, 6-8=-452/1306
WEBS 4-8=-279/880, 5-8=-527/580, 3-8=-527/579

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 29-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 2=558, 6=558.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A13	Common	18	1	I40248505
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:17 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-msFVQHsNxR7iCjbb3q3l2AkmBg77_j7RCdibO7zldb8

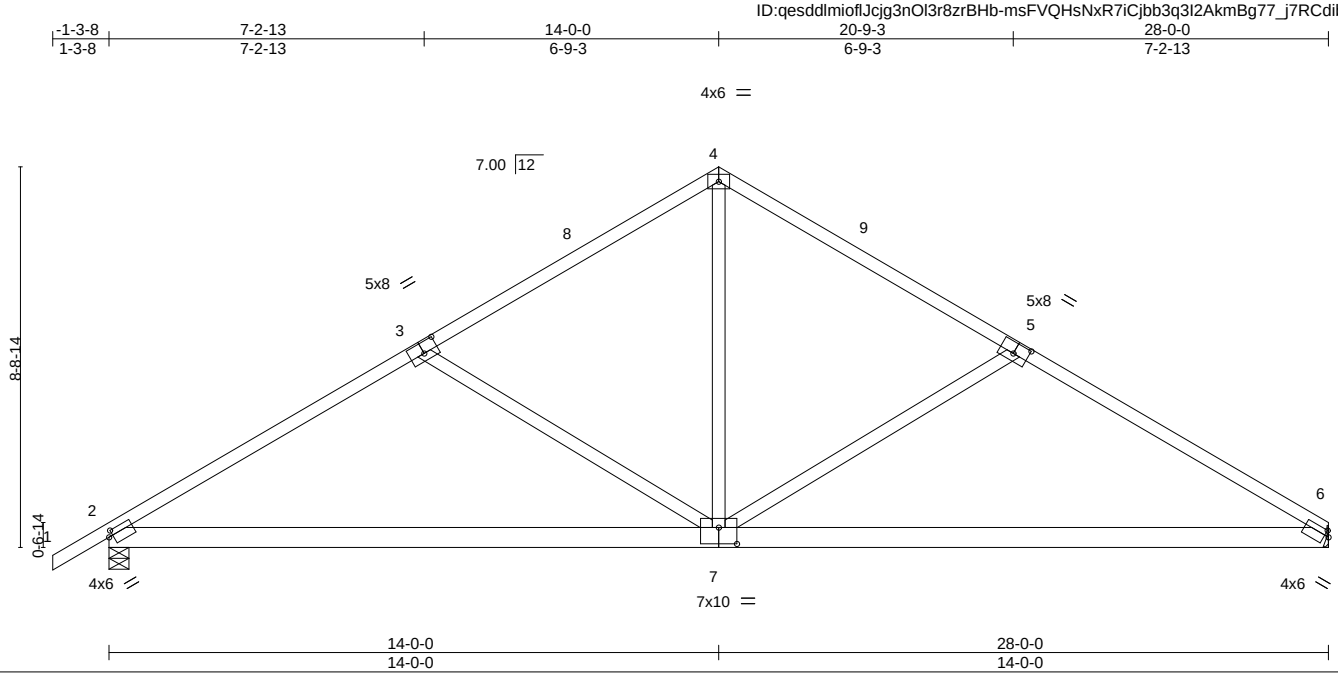


Plate Offsets (X,Y)-- [2:0-1-3,0-1-8], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-1-3,0-1-8], [7:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.25	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.53	6-7	>633	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.13	2-7	>999	240	Weight: 151 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 or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS. (lb/size) 2=1202/0-5-8, 6=1106/Mechanical
Max Horz 2=388(LC 9)
Max Uplift 2=-561(LC 12), 6=-488(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1656/744, 3-4=-1270/590, 4-5=-1271/598, 5-6=-1654/769
BOT CHORD 2-7=-720/1467, 6-7=-519/1351
WEBS 4-7=-294/902, 5-7=-563/615, 3-7=-526/580

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 14-0-0, Exterior(2R) 14-0-0 to 17-0-0, Interior(1) 17-0-0 to 27-11-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=561, 6=488.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A14	Common Supported Gable	2	1	I40248506
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:19 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-iENFrzudS2OPR0k_AF5m7bqFYU2qSl5kfxBiT?zldb6

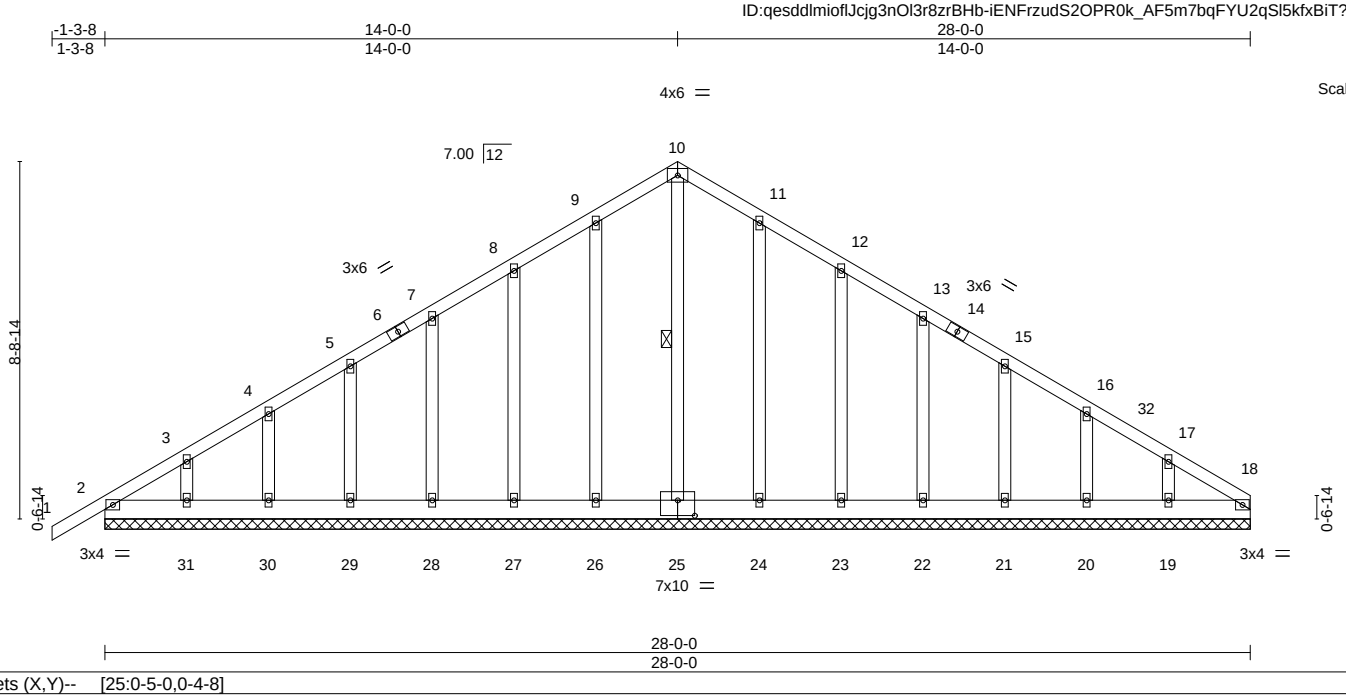


Plate Offsets (X,Y)-- [25:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 199 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-25

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=388(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 18 except 2=-100(LC 8), 26=-137(LC 12), 27=-142(LC 12), 28=-138(LC 12), 29=-137(LC 12), 30=-143(LC 12), 31=-148(LC 12), 24=-133(LC 13), 23=-143(LC 13), 22=-137(LC 13), 21=-140(LC 13), 20=-132(LC 13), 19=-183(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-365/271, 3-4=-258/226, 8-9=-154/267, 9-10=-204/328, 10-11=-204/328, 17-18=-300/168
BOT CHORD 2-31=-145/286, 30-31=-145/286, 29-30=-145/286, 28-29=-145/286, 27-28=-145/286, 26-27=-145/286, 25-26=-145/286, 24-25=-145/286, 23-24=-145/286, 22-23=-145/286, 21-22=-145/286, 20-21=-145/286, 19-20=-145/286, 18-19=-145/286

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 2-0-0, Exterior(2N) 2-0-0 to 14-0-0, Corner(3R) 14-0-0 to 17-0-0, Exterior(2N) 17-0-0 to 28-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 18 except (jt=lb) 2=100, 26=137, 27=142, 28=138, 29=137, 30=143, 31=148, 24=133, 23=143, 22=137, 21=140, 20=132, 19=183.
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.

February 13,2020

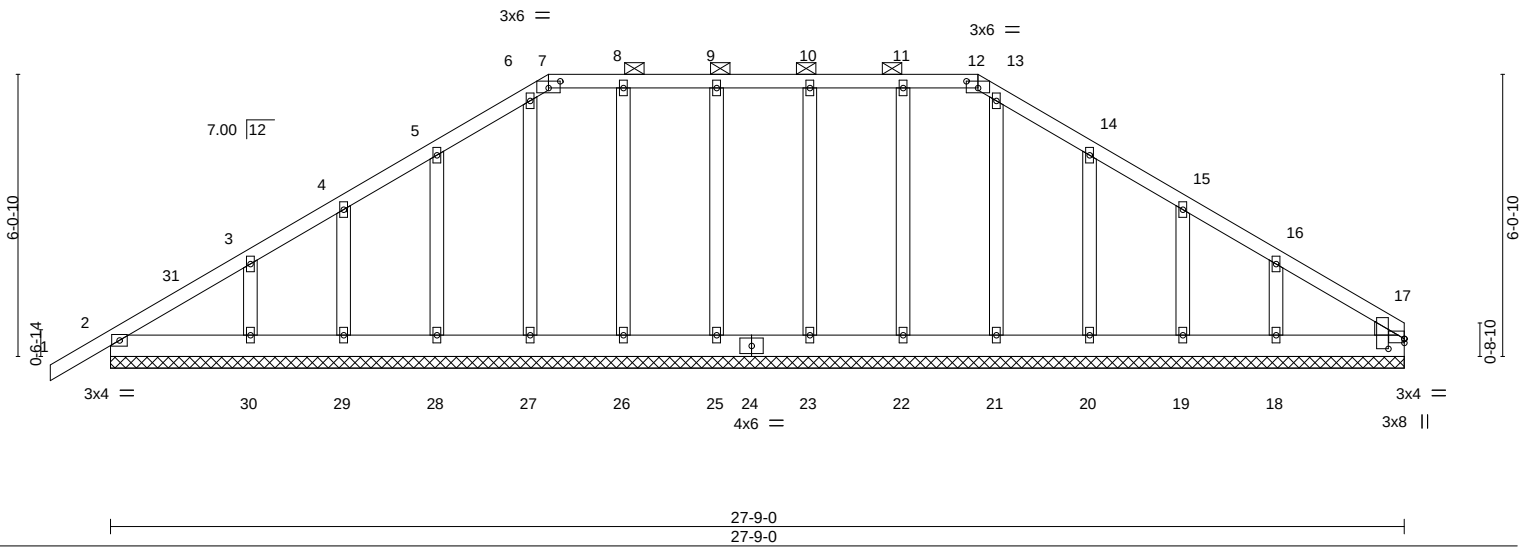
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A15	GABLE	2	1	I40248507
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:20 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-AQxd2JuFDMWG3AJAkyd?gpMQltODBDbtubxF?RzIdb5

-1-3-8 9-4-12 18-7-4 27-9-0
1-3-8 9-4-12 9-2-9 9-1-12

Scale = 1:49.4



27-9-0
27-9-0

Plate Offsets (X,Y)-- [7:0-3-0,0-1-12], [12:0-3-0,0-1-12], [17:0-0-0,0-1-1], [17:0-2-9,0-4-2]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	17	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 185 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 27-9-0.
(lb) - Max Horz 2=269(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 26, 27, 23, 22, 21, 17 except 28=-157(LC 12), 29=-119(LC 12), 30=-200(LC 12), 20=-162(LC 13), 19=-111(LC 13), 18=-227(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 25, 26, 27, 28, 29, 23, 22, 21, 20, 19, 17 except 30=268(LC 19), 18=282(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 1-8-8, Exterior(2N) 1-8-8 to 9-4-12, Corner(3R) 9-4-12 to 12-4-12, Exterior(2N) 12-4-12 to 18-7-4, Corner(3R) 18-7-4 to 21-7-4, Exterior(2N) 21-7-4 to 27-9-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 26, 27, 23, 22, 21, 17 except (jt=lb) 28=157, 29=119, 30=200, 20=162, 19=111, 18=227.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

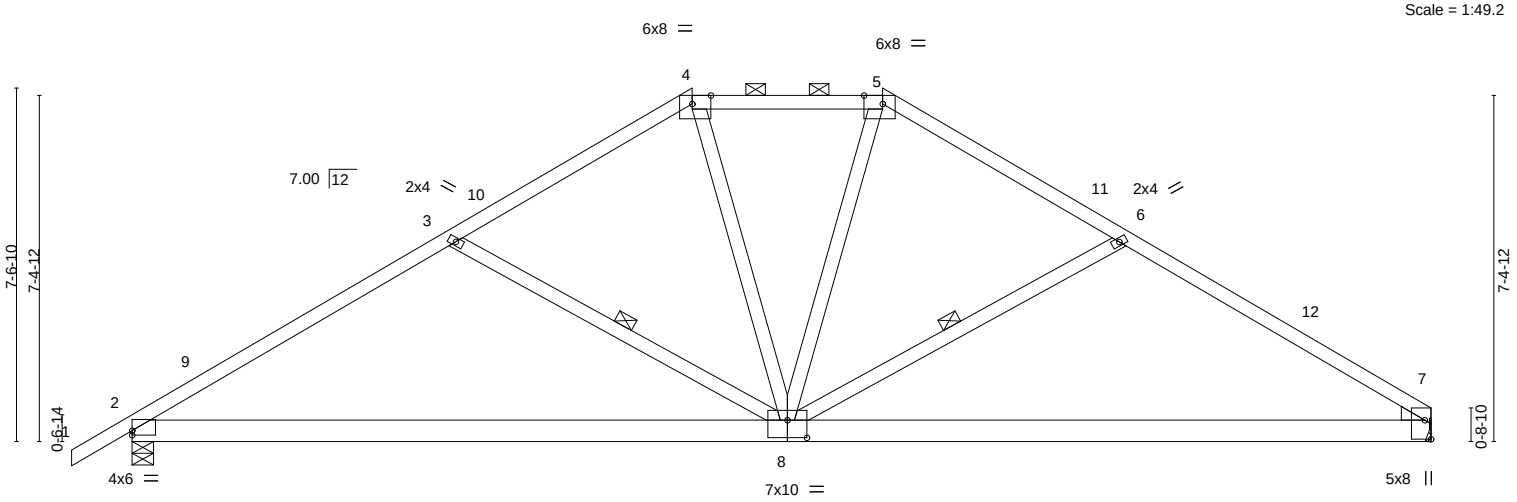
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A16	Hip	2	1	I40248508
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:21 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-edV?Gfvt_fe7hKuNIg8EC0vUXHWVweT16FhpXuzldb4

-1-3-8	6-11-0	11-11-9	16-0-7	21-1-1	27-9-0
1-3-8	6-11-0	5-0-9	4-0-13	5-0-10	6-7-15

Scale = 1:49.2



14-0-0	27-9-0
14-0-0	13-9-0

Plate Offsets (X,Y)-- [2:0-0-0,0-1-3], [4:0-4-13,Edge], [5:0-4-13,Edge], [7:Edge,0-1-10], [7:0-0-15,0-5-10], [7:0-0-7,0-0-13], [8:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.22	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.47	7-8	>696	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.12	2-8	>999	240	Weight: 160 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-4-11 oc purlins, except
2-0-0 oc purlins (5-3-8 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-8, 6-8

REACTIONS. (lb/size) 2=1192/0-5-8, 7=1096/Mechanical
Max Horz 2=332(LC 9)
Max Uplift 2=-536(LC 12), 7=-459(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1635/695, 3-4=-1265/498, 4-5=-1114/506, 5-6=-1265/498, 6-7=-1613/705
BOT CHORD 2-8=-642/1304, 7-8=-445/1303
WEBS 3-8=-452/498, 4-8=-137/400, 5-8=-141/398, 6-8=-455/516

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 11-11-9, Exterior(2E) 11-11-9 to 16-0-7, Exterior(2R) 16-0-7 to 20-3-5, Interior(1) 20-3-5 to 27-8-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=536, 7=459.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

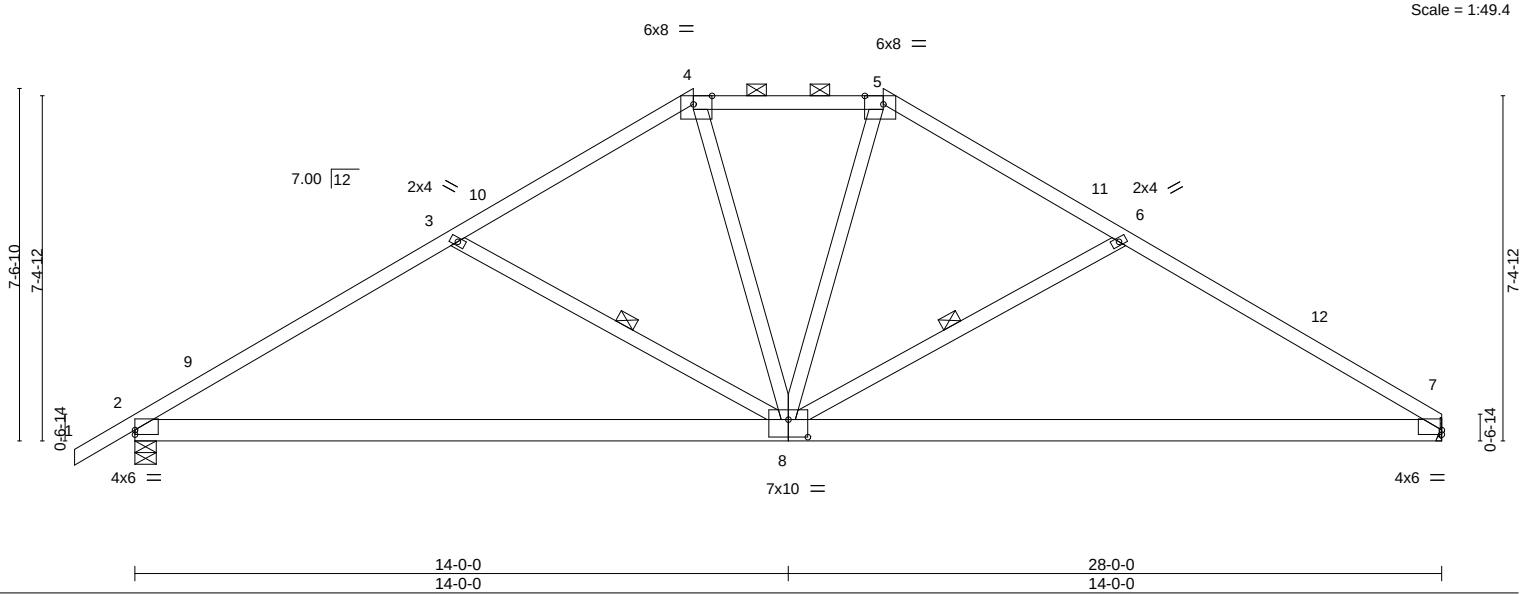
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A17	Hip	2	1	I40248509
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:22 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-6p3OT?wVIzm_IUTZrNfTlESdfhqJf5WALvQM4Kzldb3

-1-3-8	6-11-0	11-11-9	16-0-7	21-1-0	28-0-0
1-3-8	6-11-0	5-0-9	4-0-13	5-0-9	6-11-0

Scale = 1:49.4



14-0-0	28-0-0
14-0-0	14-0-0

Plate Offsets (X,Y)-- [2:Edge,0-1-3], [4:0-4-13,Edge], [5:0-4-13,Edge], [7:0-0-0,0-1-3], [8:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.25	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.52	7-8	>641	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.12	2-8	>999	240	Weight: 160 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 or 2-2-0 oc purlins, except 2-0-0 oc purlins (5-2-13 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-8, 6-8

REACTIONS. (lb/size) 7=1106/Mechanical, 2=1202/0-5-8
Max Horz 2=332(LC 11)
Max Uplift 7=-466(LC 13), 2=-538(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1655/700, 3-4=-1285/505, 4-5=-1134/514, 5-6=-1286/503, 6-7=-1657/728
BOT CHORD 2-8=-647/1320, 7-8=-470/1354
WEBS 3-8=-450/498, 4-8=-141/409, 5-8=-145/408, 6-8=-492/538

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 11-11-9, Exterior(2E) 11-11-9 to 16-0-7, Exterior(2R) 16-0-7 to 20-3-5, Interior(1) 20-3-5 to 27-11-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=466, 2=538.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

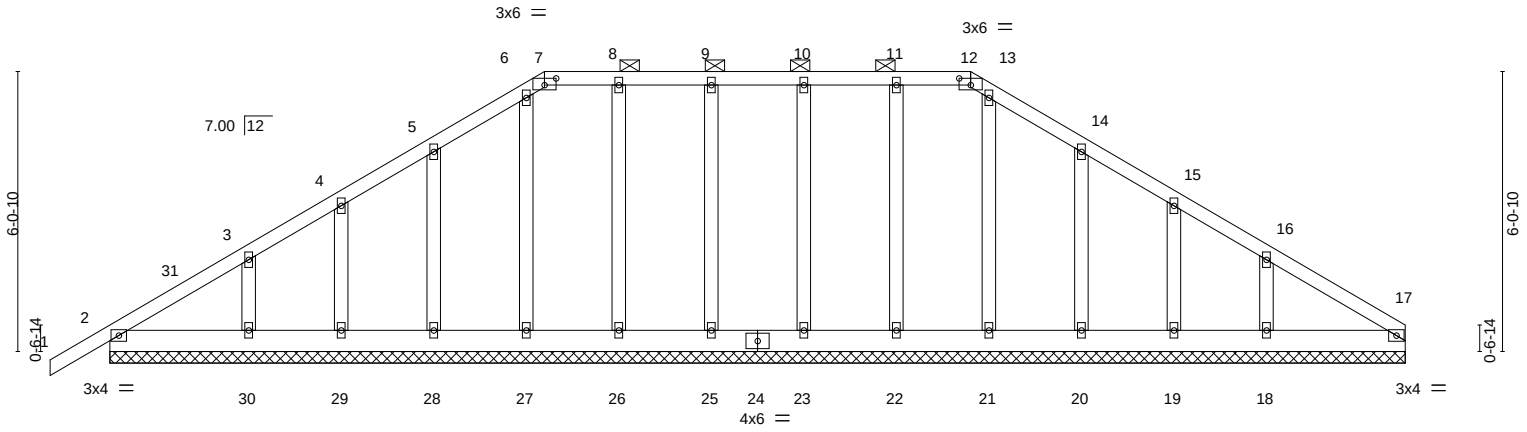
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	A18	GABLE	2	1	I40248510
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:24 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-3CA8ugxmHa0iYodyzohxqfX6HVl770bTpDvT8Dzldb1

-1-3-8 | 9-4-12 | 18-7-4 | 28-0-0
1-3-8 | 9-4-12 | 9-2-9 | 9-4-12

Scale = 1:49.8



28-0-0
28-0-0

Plate Offsets (X,Y)-- [7:0-3-0,0-1-12], [12:0-3-0,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	17	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 186 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 or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=269(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 25, 26, 27, 23, 22, 21 except 28=-157(LC 12), 29=-119(LC 12), 30=-200(LC 12), 20=-163(LC 13), 19=-106(LC 13), 18=-228(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 17, 2, 25, 26, 27, 28, 29, 23, 22, 21, 20, 19 except 30=268(LC 19), 18=299(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 1-8-8, Exterior(2N) 1-8-8 to 9-4-12, Corner(3R) 9-4-12 to 12-4-12, Exterior(2N) 12-4-12 to 18-7-4, Corner(3R) 18-7-4 to 21-7-4, Exterior(2N) 21-7-4 to 28-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 25, 26, 27, 23, 22, 21 except (jt=lb) 28=157, 29=119, 30=200, 20=163, 19=106, 18=228.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B01	Roof Special Structural Gable	2	1	I40248511 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:25 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-XOkW60yO2u8Z9xC8XWCANs4CDuvWsPVc1tf0gfzIdb0

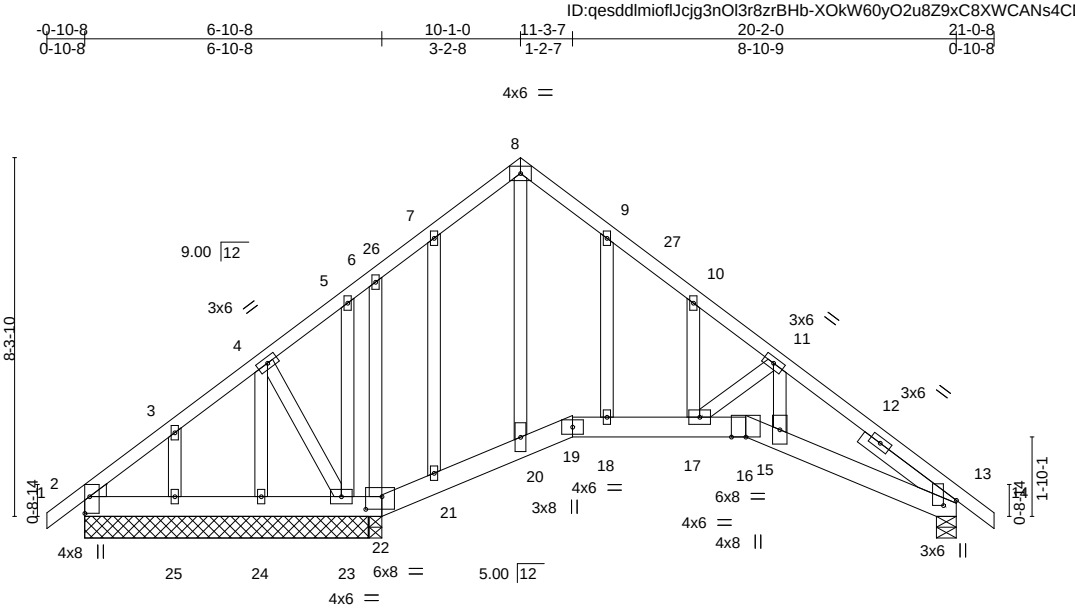


Plate Offsets (X,Y)-- [2:0-0-8,0-0-11], [2:0-1-0,0-4-7], [2:Edge,0-1-5], [13:0-1-7,0-3-9], [22:0-4-8,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.22	17-18	>715	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.44	17-18	>355	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.31	13	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.29	17-18	>540	240	Weight: 156 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except*
16-19: 2x6 SP No.1
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 2-8-3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-3-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-11-2 oc bracing: 17-18.

REACTIONS. All bearings 6-6-12 except (jt=length) 13=0-5-8, 22=0-3-8.
(lb) - Max Horz 2=366(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2 except 23=-1063(LC 20), 25=-218(LC 12), 13=-268(LC 13), 22=-400(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 23, 25 except 2=467(LC 20), 24=443(LC 1), 13=724(LC 1), 22=1049(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-601/86, 3-4=-540/98, 4-5=-629/117, 5-6=-505/136, 6-7=-608/195, 7-8=-604/258, 8-9=-542/230, 9-10=-565/115, 10-11=-617/68, 11-13=-1496/337
BOT CHORD 2-25=-46/442, 24-25=-46/442, 23-24=-46/442, 22-23=0/525, 21-22=0/514, 20-21=0/547, 19-20=-47/457, 18-19=0/515, 17-18=0/515, 16-17=-94/1058, 15-16=-16/854, 13-15=-126/1160
WEBS 8-20=-174/492, 4-24=-334/3, 11-15=-310/885, 6-22=-253/118, 11-17=-881/545

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-0, Interior(1) 2-1-0 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 23=1063, 25=218, 13=268, 22=400.

Continued on page 2

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
					I40248511
2233821	B01	Roof Special Structural Gable	2	1	Job Reference (optional)

NOTES-

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 has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B02	Roof Special	22	1	I40248512
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:26 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-?aIuJMz0pCGQn5nK4DkPv4cLwIKGbtGmGXOaD5zIdb?

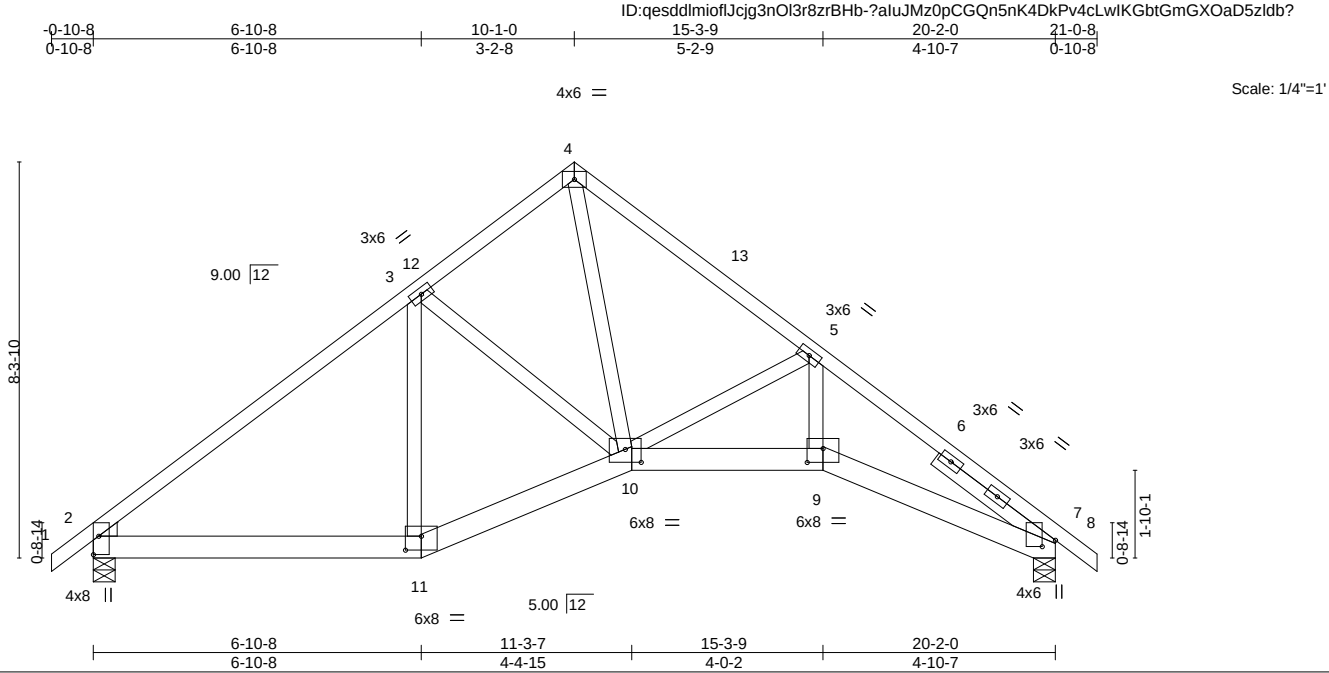


Plate Offsets (X,Y)-- [2:0-0-8,0-0-11], [2:0-1-0,0-4-7], [2:Edge,0-1-5], [7:0-1-10,0-3-5], [9:0-4-0,0-3-8], [10:0-4-0,0-3-4], [11:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.05	9-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.11	9-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.07	9-10	>999	240	Weight: 129 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 3-1-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=857/0-5-8, 7=853/0-5-8
Max Horz 2=366(LC 11)
Max Uplift 2=-380(LC 12), 7=-379(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1001/424, 3-4=-814/436, 4-5=-998/492, 5-7=-1781/628
BOT CHORD 2-11=-311/817, 10-11=-337/891, 9-10=-362/1256, 7-9=-403/1396
WEBS 3-10=-276/332, 4-10=-420/853, 5-10=-697/486, 5-9=-88/552

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=380, 7=379.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B03	Roof Special	4	1	I40248513 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:27 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-TnsHWi_eaVOHPFMWewFeSH9VRihpKJQvVB87lYzldb_

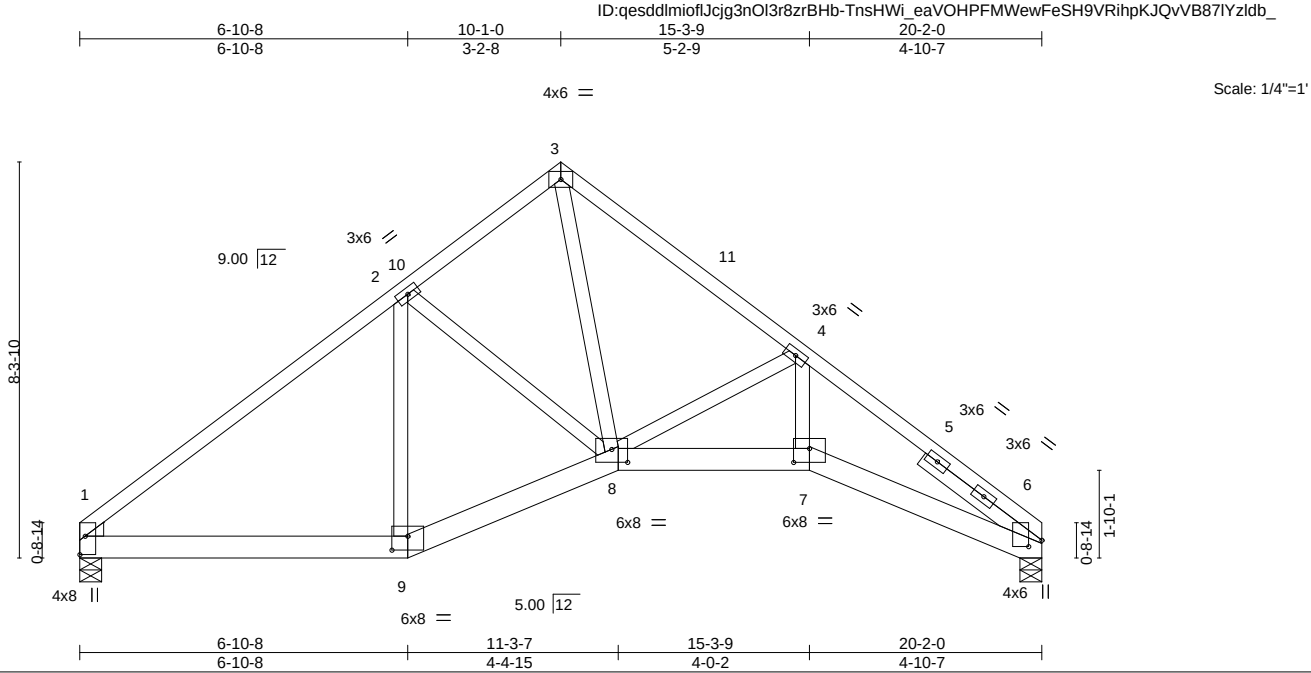


Plate Offsets (X,Y)-- [1:0-0-8,0-0-11], [1:0-1-0,0-4-7], [1:Edge,0-1-5], [6:0-1-10,0-3-5], [7:0-4-0,0-3-8], [8:0-4-0,0-3-4], [9:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.05	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.11	7-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.07	7-8	>999	240	Weight: 126 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 3-1-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-4-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=790/0-5-8, 6=790/0-5-8
Max Horz 1=-354(LC 8)
Max Uplift 1=-327(LC 12), 6=-328(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1005/427, 2-3=-818/449, 3-4=-1006/500, 4-6=-1805/674
BOT CHORD 1-9=-328/822, 8-9=-356/897, 7-8=-382/1271, 6-7=-429/1417
WEBS 2-8=-278/342, 3-8=-443/862, 4-8=-693/503, 4-7=-102/570

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior(1) 3-2-12 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0 , Interior(1) 13-1-0 to 19-11-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=327, 6=328.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B04	Common Girder	4	2	I40248514
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:28 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-xzQfk2?GLpW80PwjCemt_Vimy60n3gB3jrtgG_zldaz

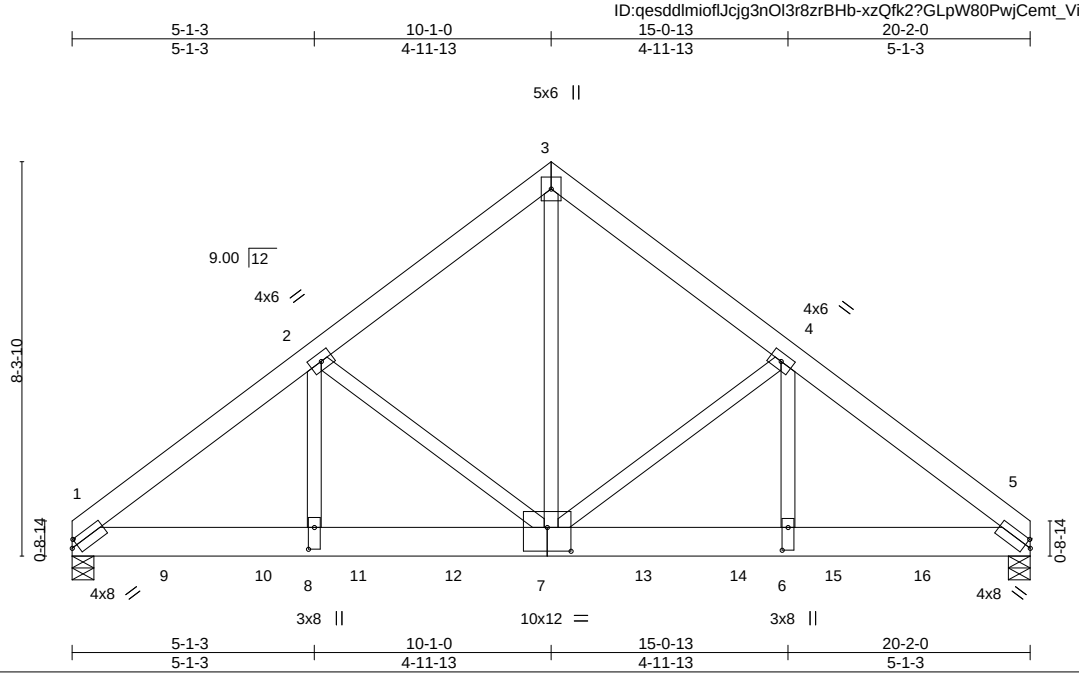


Plate Offsets (X,Y)-- [1:0-1-8,0-1-11], [5:0-1-8,0-1-11], [6:0-5-12,0-1-8], [7:0-6-0,0-6-0], [8:0-5-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.10	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.14	6-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 322 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=5806/0-5-8, 5=5966/0-5-8
Max Horz 1=-343(LC 25)
Max Uplift 1=-2382(LC 8), 5=-2186(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-7758/3134, 2-3=-5421/2226, 3-4=-5339/2196, 4-5=-8011/2931
BOT CHORD 1-8=-2524/5960, 7-8=-2524/5960, 6-7=-2180/6157, 5-6=-2180/6157
WEBS 3-7=-2392/6025, 4-7=-2462/1079, 4-6=-923/3089, 2-7=-2158/1261, 2-8=-1158/2719

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-7-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=2382, 5=2186.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1077 lb down and 472 lb up at 2-0-12, 1077 lb down and 502 lb up at 4-0-12, 1077 lb down and 502 lb up at 6-0-12, 1077 lb down and 502 lb up at 8-0-12, 1177 lb down and 401 lb up at 10-0-12, 1177 lb down and 401 lb up at 12-0-12, 1177 lb down and 401 lb up at 14-0-12, and 1177 lb down and 401 lb up at 16-0-12, and 1177 lb down and 401 lb up at 17-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

February 13,2020

Continued on page 2

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

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 1-5=-20
   Concentrated Loads (lb)
   Vert: 7=-1177(B) 9=-1077(B) 10=-1077(B) 11=-1077(B) 12=-1077(B) 13=-1177(B) 14=-1177(B) 15=-1177(B) 16=-1177(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B05	Hip Structural Gable	2	1	I40248515
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:29 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-P9_1xO?u67e?eZVvmLH6XiEpLWFYoFQCyVdEoQzlday

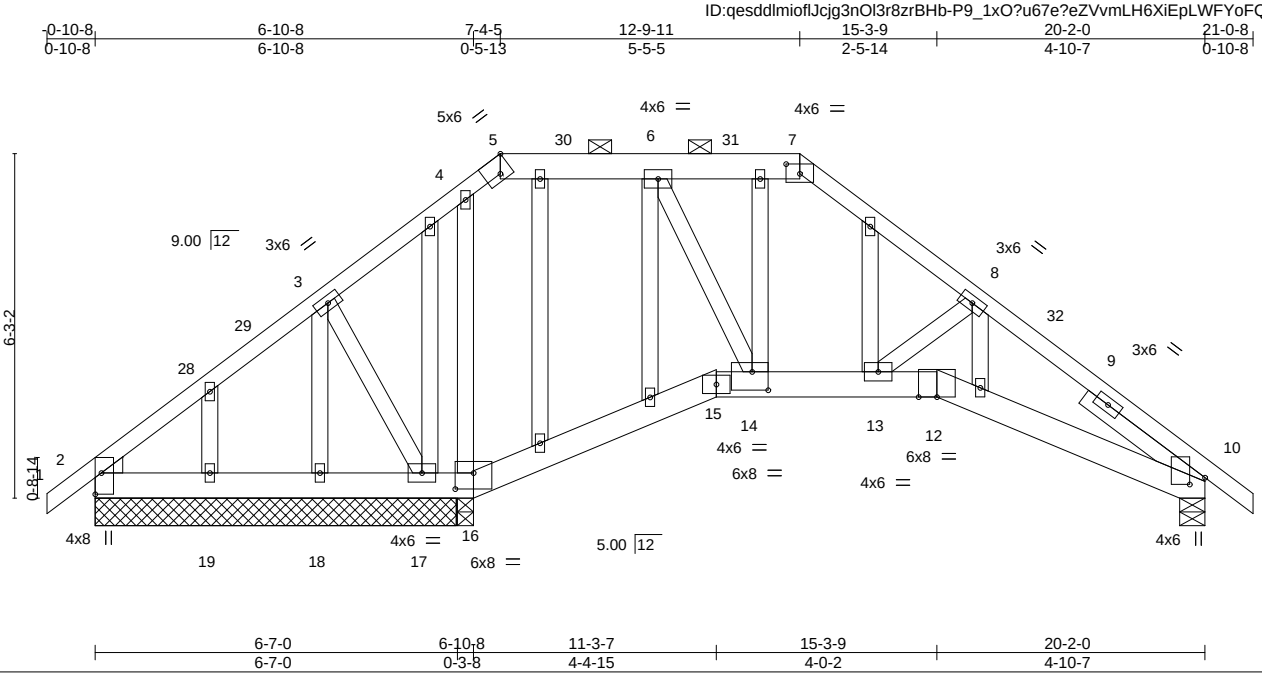


Plate Offsets (X,Y)-- [2:Edge,0-1-5], [2:0-1-0,0-4-7], [2:0-0-8,0-0-11], [5:0-2-10,Edge], [7:0-3-0,0-2-2], [10:0-1-8,0-3-5], [14:0-3-8,0-4-0], [16:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.24	12	>663	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.48	12	>326	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.31	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.29	12	>547	240	Weight: 159 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 *Except* 5-7: 2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	
Left: 2x4 SP No.3	
SLIDER	Right 2x4 SP No.2 2-8-3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-5-14 oc purlins, except 2-0-0 oc purlins (5-4-14 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 6-6-12 except (jt=length) 10=0-5-8, 16=0-3-8.
(lb) - Max Horz 2=275(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 19, 16 except 2=-218(LC 8), 17=-440(LC 26), 10=-342(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 17, 18, 19 except 2=621(LC 1), 10=770(LC 26), 16=504(LC 3)

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

TOP CHORD	2-3=-806/392, 3-4=-648/401, 4-5=-700/424, 5-6=-521/379, 6-7=-740/417, 7-8=-943/435, 8-10=-1121/454
BOT CHORD	2-19=-241/549, 18-19=-241/549, 17-18=-241/549, 16-17=-180/534, 15-16=-187/560, 14-15=-176/525, 13-14=-143/744, 12-13=-231/784, 10-12=-238/797
WEBS	3-17=-172/293, 8-13=-156/279, 6-14=-98/553

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 7-4-5, Exterior(2R) 7-4-5 to 11-7-4, Interior(1) 11-7-4 to 12-9-11, Exterior(2R) 12-9-11 to 17-0-9, Interior(1) 17-0-9 to 21-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 16 except (jt=lb) 2=218, 17=440, 10=342.

Continued on page 2

NORTH CAROLINA PROFESSIONAL SEAL 044925 ENGINEER SCOTT M. SEVIER

February 13,2020

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

NOTES-

11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B06	Hip	2	1	I40248516
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:30 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-tMYP9k0XtQmsGj45J3oL4wn1GvhFXekLB8MnLszIdax

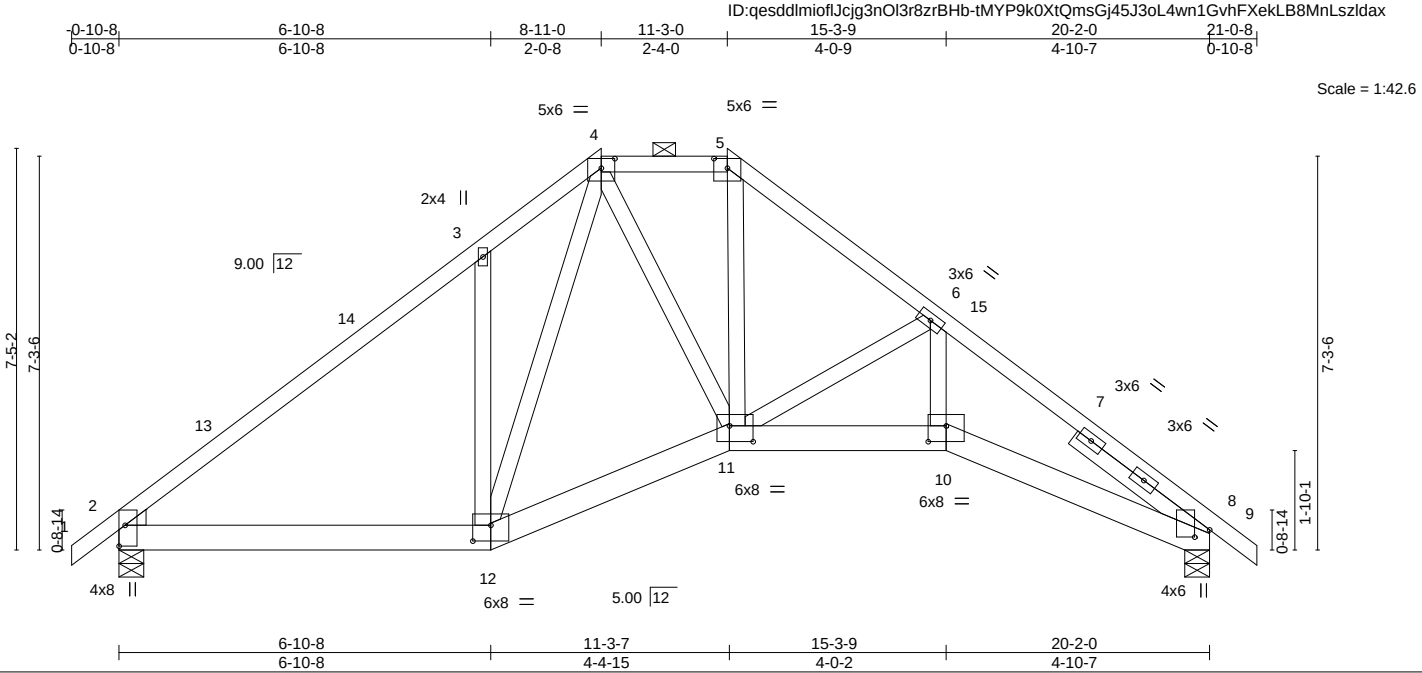


Plate Offsets (X,Y)-- [2:Edge,0-1-5], [2:0-1-0,0-4-7], [2:0-0-8,0-0-11], [4:0-3-0,0-2-2], [5:0-3-0,0-2-2], [8:0-1-10,0-3-5], [10:0-4-0,0-3-8], [11:0-5-4,0-3-8], [12:0-4-0,0-3-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.05	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.09	10-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	2-12	>999	240	Weight: 137 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 3-1-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-8-14 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=857/0-5-8, 8=853/0-5-8
Max Horz 2=325(LC 11)
Max Uplift 2=-372(LC 12), 8=-371(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1002/404, 3-4=-916/699, 4-5=-760/426, 5-6=-992/465, 6-8=-1768/591
BOT CHORD 2-12=-273/744, 11-12=-189/712, 10-11=-303/1237, 8-10=-344/1378
WEBS 3-12=-405/535, 4-11=-54/346, 6-10=-72/554, 4-12=-487/310, 6-11=-596/416, 5-11=-146/351

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 8-11-0, Exterior(2E) 8-11-0 to 11-3-0, Exterior(2R) 11-3-0 to 15-5-14, Interior(1) 15-5-14 to 21-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=372, 8=371.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B07	Roof Special Structural Gable	2	1	I40248517 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:31 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-LY5nM419ekuitsfItmJac7KBsJwNG8zVQo6LtJzIdaw

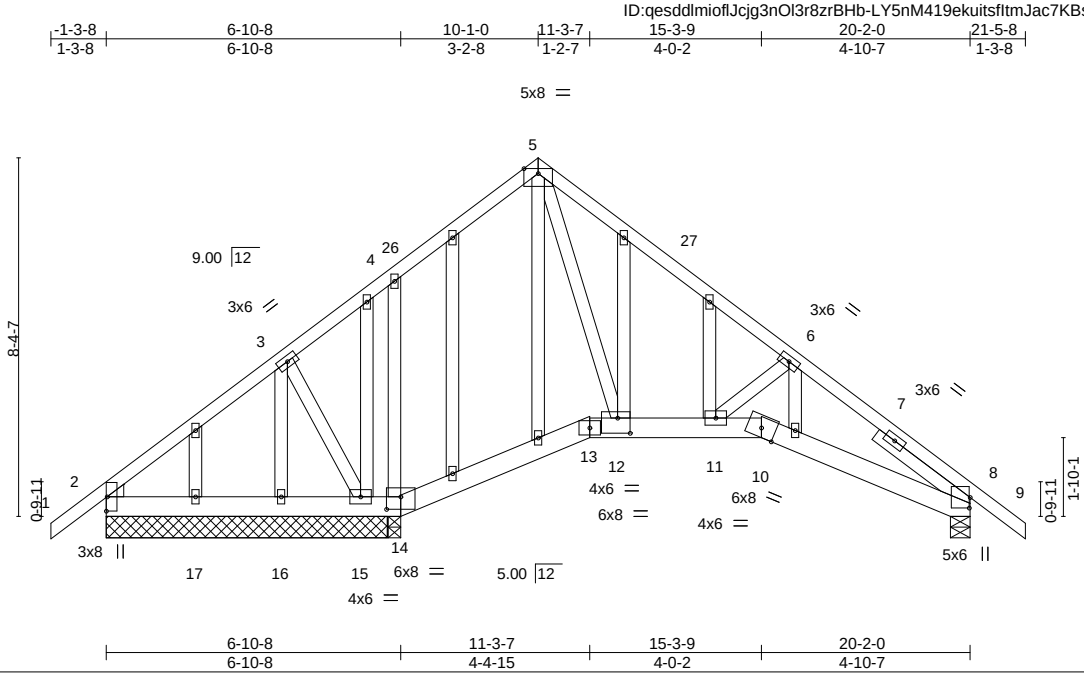


Plate Offsets (X,Y)-- [2:0-0-1,0-0-2], [2:0-0-3,0-3-5], [8:0-2-15,0-0-4], [12:0-3-8,0-4-4], [14:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.21	10	>765	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.42	10	>372	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.25	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.29	10	>540	240	Weight: 167 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.2 2-8-11

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

REACTIONS. All bearings 6-6-12 except (jt=length) 8=0-5-8, 14=0-3-8.
(lb) - Max Horz 2=380(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 17 except 2=-128(LC 13), 8=-324(LC 13), 15=-273(LC 12), 14=-233(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 15, 16, 17 except 2=684(LC 1), 8=821(LC 1), 14=271(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-874/161, 3-4=-739/208, 4-5=-726/294, 5-6=-992/230, 6-8=-1196/263
BOT CHORD 2-17=-15/635, 16-17=-15/635, 15-16=-15/635, 14-15=0/568, 13-14=0/619, 12-13=0/562, 11-12=0/731, 10-11=-69/861, 8-10=-64/870
WEBS 6-11=-307/443, 3-15=-170/283, 4-14=-280/263, 5-12=-75/698

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17 except (jt=lb) 2=128, 8=324, 15=273, 14=233.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B08	Roof Special	22	1	I40248518
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:32 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-qkf9aP2nO20ZV0EURUqp9LsNljN_?bveeSruPlzldav

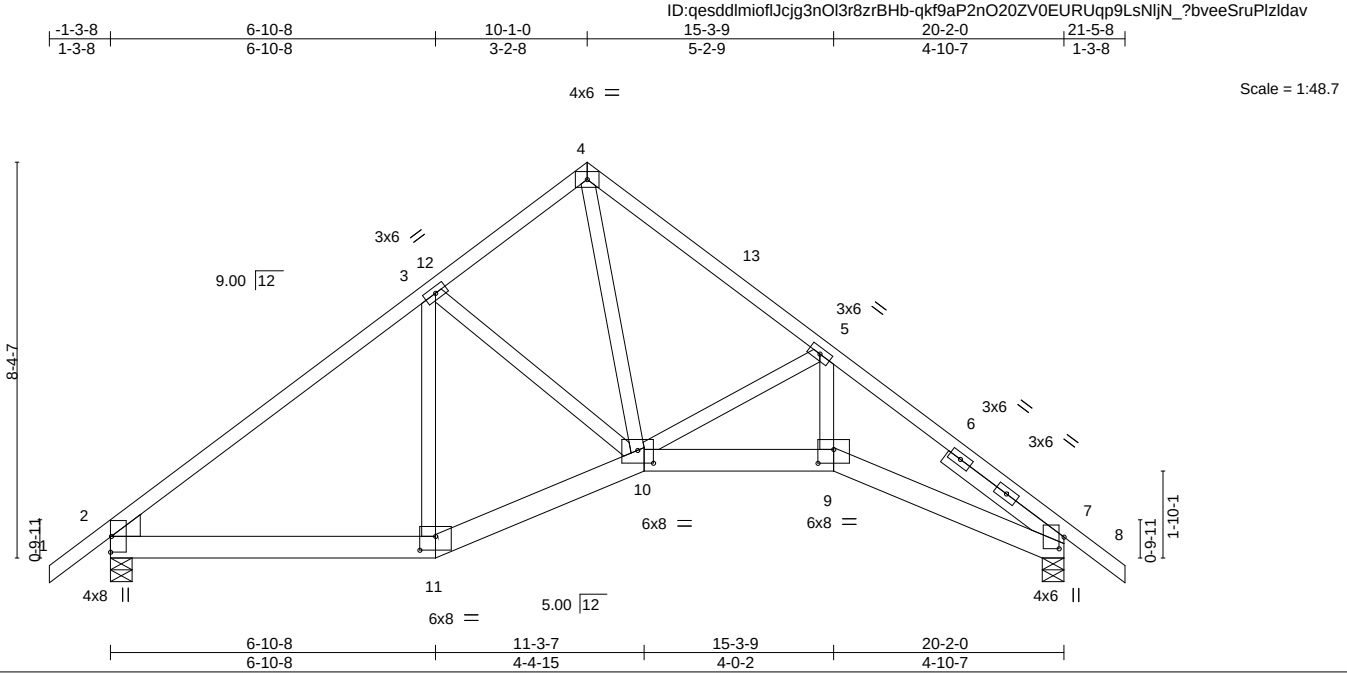


Plate Offsets (X,Y)-- [2:0-0-1,0-0-2], [2:0-0-3,0-5-2], [7:0-2-15,0-1-4], [9:0-4-0,0-3-8], [10:0-4-0,0-3-4], [11:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.05	9-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.11	9-10	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.07	9-10	>999	240	Weight: 132 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x6 SP No.2
SLIDER Right 2x4 SP No.2 3-1-8

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=882/0-5-8, 7=878/0-5-8
Max Horz 2=380(LC 11)
Max Uplift 2=-400(LC 12), 7=-398(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-987/412, 3-4=-810/426, 4-5=-967/481, 5-7=-1714/587
BOT CHORD 2-11=-294/809, 10-11=-319/883, 9-10=-326/1198, 7-9=-363/1327
WEBS 3-10=-279/331, 4-10=-410/843, 5-10=-670/458, 5-9=-71/518

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0, Interior(1) 13-1-0 to 21-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=400, 7=398.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B10	Roof Special	4	1	I40248519
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:33 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-lxDYnl2P9L8Q7Apg?BM2hYPXG7jjk2?ot6bRxBzldau

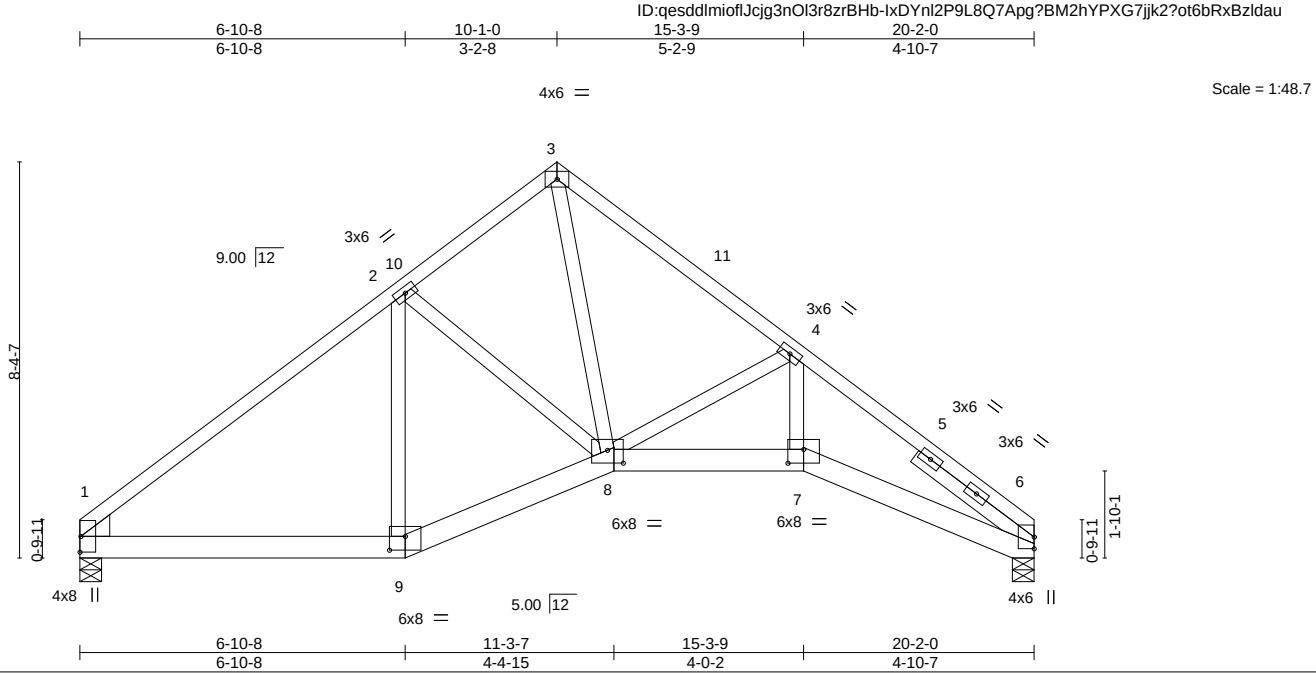


Plate Offsets (X,Y)-- [1:0-0-3,0-5-2], [1:0-0-1,0-0-2], [7:0-4-0,0-3-8], [8:0-4-0,0-3-4], [9:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.05	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.11	7-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.08	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.07	7-8	>999	240	Weight: 127 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x6 SP No.2
SLIDER Right 2x4 SP No.2 3-1-8

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-0-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 6=790/0-5-8, 1=790/0-5-8
Max Horz 1=-358(LC 8)
Max Uplift 6=-327(LC 13), 1=-326(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-999/424, 2-3=-813/449, 3-4=-974/498, 4-6=-1756/656
BOT CHORD 1-9=-324/815, 8-9=-352/889, 7-8=-366/1228, 6-7=-407/1367
WEBS 2-8=-277/343, 3-8=-442/851, 4-8=-661/491, 4-7=-93/547

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-2-12 to 3-2-12, Interior(1) 3-2-12 to 10-1-0, Exterior(2R) 10-1-0 to 13-1-0 , Interior(1) 13-1-0 to 19-11-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=327, 1=326.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B11	Common Girder	4	2	I40248520
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:34 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-m7nw_531wfHHkKOtYvtHEmxoVX5GTOnx6mK?UezIdat

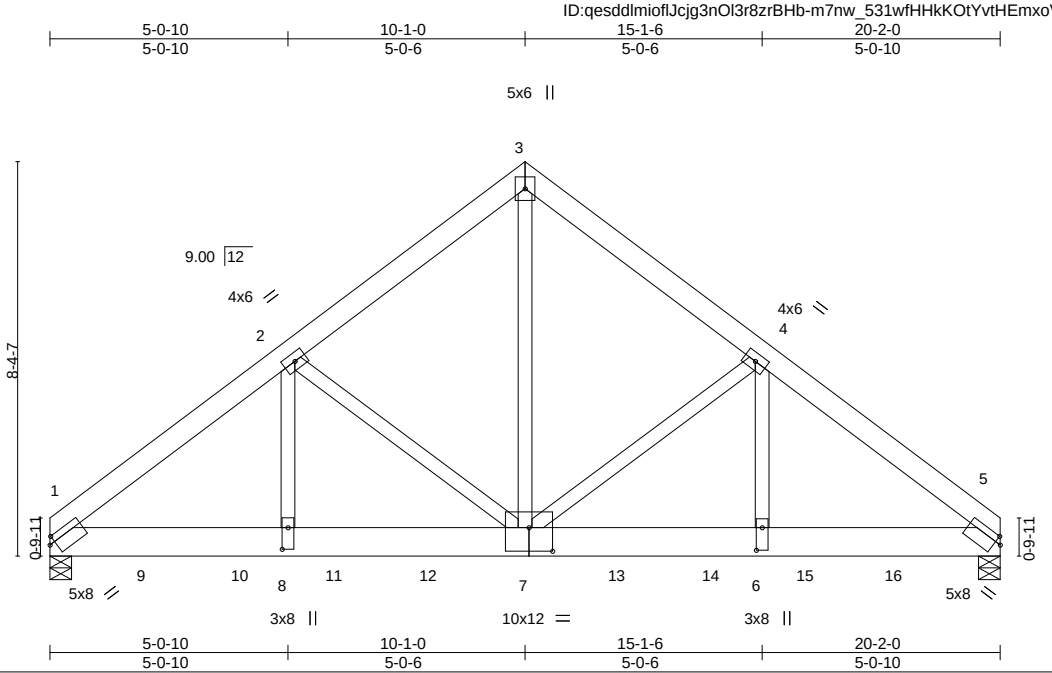


Plate Offsets (X,Y)-- [1:0-1-7,0-1-11], [5:0-1-7,0-1-11], [6:0-5-12,0-1-8], [7:0-6-0,0-6-0], [8:0-5-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.10	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.13	6-7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 323 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=5791/0-5-8, 5=5970/0-5-8
Max Horz 1=346(LC 5)
Max Uplift 1=-2382(LC 8), 5=-2187(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-7690/3112, 2-3=-5297/2179, 3-4=-5377/2209, 4-5=-7948/2907
BOT CHORD 1-8=-2490/5864, 7-8=-2490/5864, 6-7=-2146/6063, 5-6=-2146/6063
WEBS 3-7=-2369/5971, 4-7=-2337/1036, 4-6=-904/3030, 2-7=-2136/1257, 2-8=-1177/2760

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-7-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=2382, 5=2187.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1076 lb down and 479 lb up at 2-0-12, 1076 lb down and 501 lb up at 4-0-12, 1076 lb down and 501 lb up at 6-0-12, 1076 lb down and 501 lb up at 8-0-12, 1176 lb down and 401 lb up at 10-0-12, 1176 lb down and 401 lb up at 12-0-12, 1176 lb down and 401 lb up at 14-0-12, and 1176 lb down and 401 lb up at 16-0-12, and 1176 lb down and 401 lb up at 17-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

February 13,2020

Continued on page 2

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

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-3=-60, 3-5=-60, 1-5=-20
   Concentrated Loads (lb)
   Vert: 7=-1176(B) 9=-1076(B) 10=-1076(B) 11=-1076(B) 12=-1076(B) 13=-1176(B) 14=-1176(B) 15=-1176(B) 16=-1176(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B12	Hip Structural Gable	2	1	I40248521 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:36 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-iVvgPn5HSGX?_eYFgJvlJB10sKeZxQyEZ4p6YWzldar

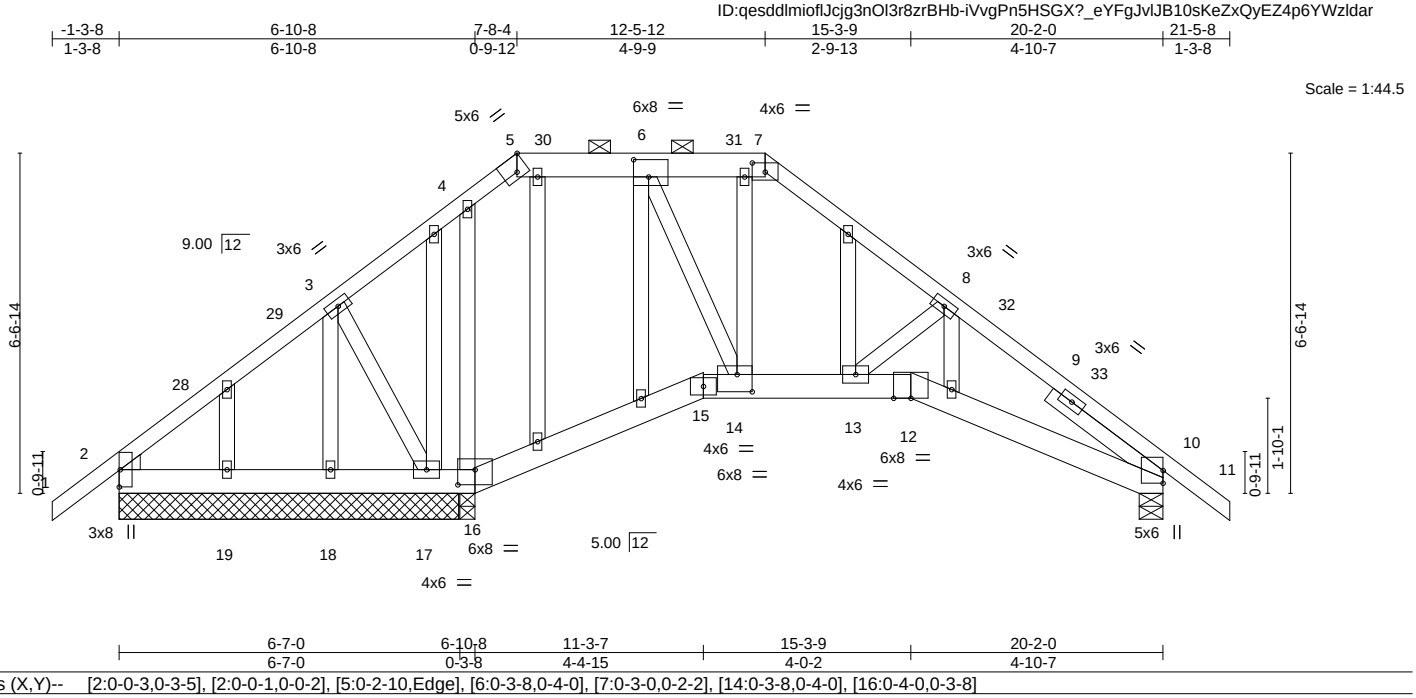


Plate Offsets (X,Y)-- [2:0-0-3,0-3-5], [2:0-0-1,0-0-2], [5:0-2-10,Edge], [6:0-3-8,0-4-0], [7:0-3-0,0-2-2], [14:0-3-8,0-4-0], [16:0-4-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.21	12	>734	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.44	12	>356	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.28	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.26	12	>611	240	Weight: 163 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 *Except* 5-7: 2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3
SLIDER	Right 2x4 SP No.2 2-8-11

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-3-13 oc purlins, except 2-0-0 oc purlins (5-11-12 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 6-6-12 except (jt=length) 10=0-5-8, 16=0-3-8.
(lb) - Max Horz 2=300(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 19, 16 except 2=-216(LC 8), 17=-353(LC 26), 10=-366(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 17, 18, 19 except 2=692(LC 1), 10=817(LC 1), 16=406(LC 3)

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

TOP CHORD	2-3=-848/377, 3-4=-700/408, 4-5=-719/424, 5-6=-541/388, 6-7=-756/427, 7-8=-973/440, 8-10=-1153/454
BOT CHORD	2-19=-206/577, 18-19=-206/577, 17-18=-206/577, 16-17=-141/555, 15-16=-148/589, 14-15=-138/546, 13-14=-100/762, 12-13=-218/801, 10-12=-225/814
WEBS	3-17=-167/300, 6-14=-104/582, 8-13=-156/293

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 7-8-4, Exterior(2R) 7-8-4 to 11-11-2, Interior(1) 11-11-2 to 12-5-12, Exterior(2R) 12-5-12 to 16-8-11, Interior(1) 16-8-11 to 21-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

February 13,2020

Continued on page 2

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

NOTES-

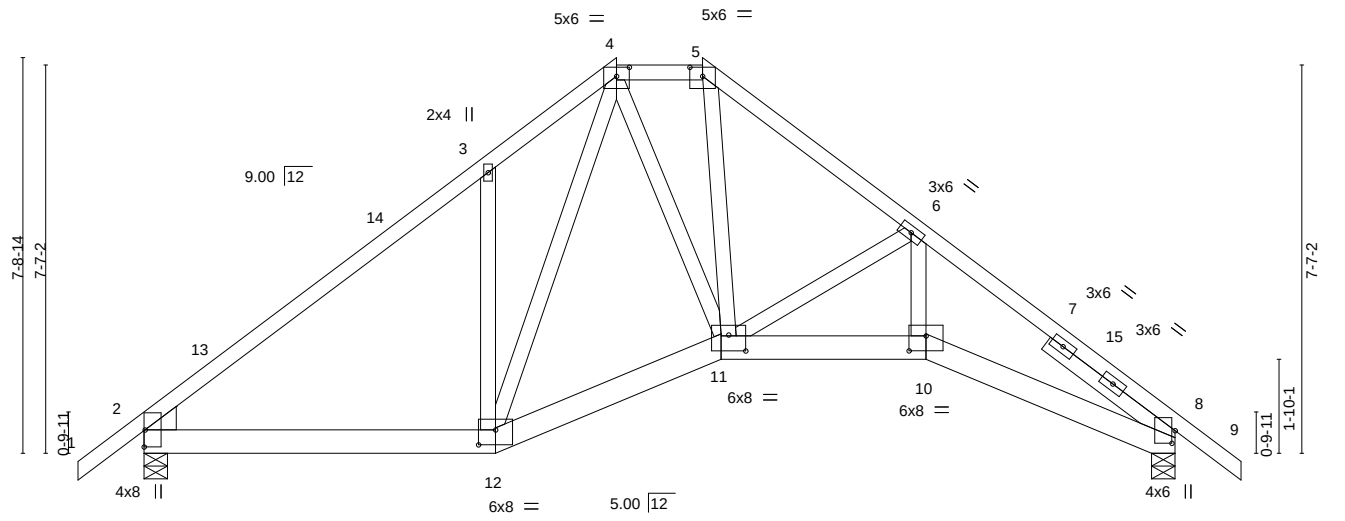
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 19, 16 except (jt=lb) 2=216, 17=353, 10=366.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	B13	Hip	2	1	I40248522
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:37 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-AiT2d75wDafsbn6SE1Q_sOZDPk4BgoYNokZf5yzldaq

-1-3-8	6-10-8	9-2-14	10-11-2	15-3-9	20-2-0	21-5-8
1-3-8	6-10-8	2-4-6	1-8-3	4-4-7	4-10-7	1-3-8

Scale = 1:45.1



6-10-8	11-3-7	15-3-9	20-2-0
6-10-8	4-4-15	4-0-2	4-10-7

Plate Offsets (X,Y)-- [2:0-0-3,0-5-2], [2:0-0-1,0-0-2], [4:0-3-0,0-2-2], [5:0-3-0,0-2-2], [8:0-2-15,0-0-12], [10:0-4-0,0-3-8], [11:0-4-0,0-3-12], [12:0-4-0,0-3-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.05	10-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.10	10-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.06	2-12	>999	240	Weight: 141 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x6 SP No.2
SLIDER Right 2x4 SP No.2 3-1-8

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

REACTIONS. (lb/size) 2=882/0-5-8, 8=878/0-5-8
Max Horz 2=350(LC 11)
Max Uplift 2=-395(LC 12), 8=-393(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-988/383, 3-4=-897/695, 4-5=-718/403, 5-6=-968/439, 6-8=-1704/526
BOT CHORD 2-12=-266/757, 11-12=-156/723, 10-11=-277/1184, 8-10=-313/1314
WEBS 3-12=-395/530, 6-10=-57/519, 4-12=-491/314, 5-11=-139/343, 6-11=-572/404, 4-11=-64/350

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-3-8 to 1-8-8, Interior(1) 1-8-8 to 9-2-14, Exterior(2E) 9-2-14 to 10-11-2, Exterior(2R) 10-11-2 to 15-1-13, Interior(1) 15-1-13 to 21-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=395, 8=393.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C01	GABLE	2	1	I40248523
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:38 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-eu1RqT6Y_unjDxhenkxDOc6Wa8XaPLjX1OICdPzldap

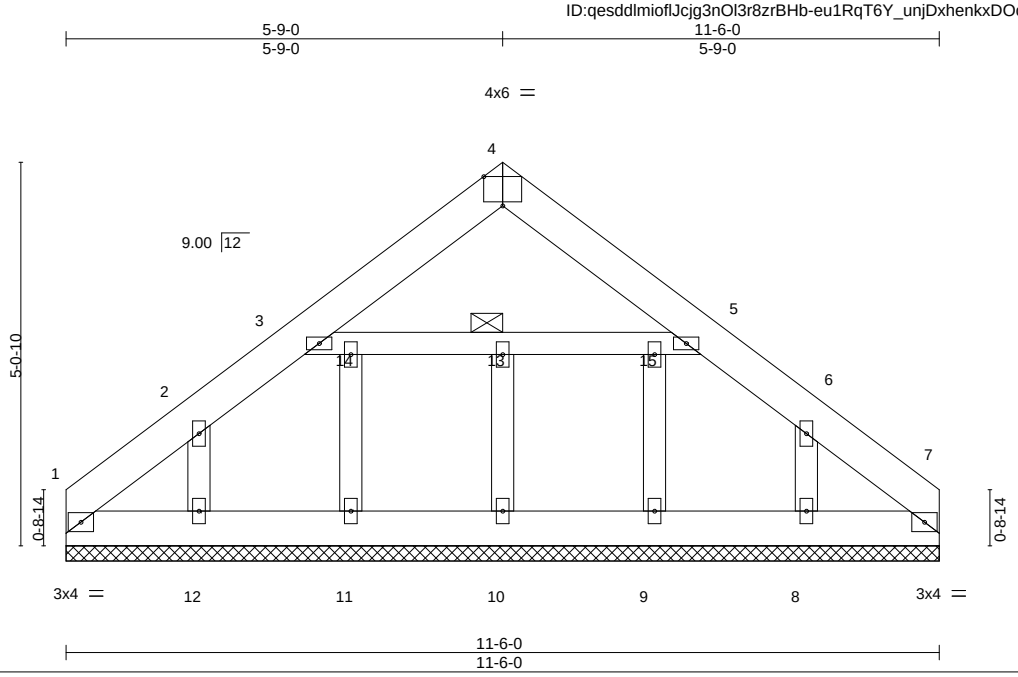


Plate Offsets (X,Y)-- [4:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 82 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): 13

REACTIONS. All bearings 11-6-0.
(lb) - Max Horz 1=202(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 11, 9 except 1=-141(LC 13), 7=-122(LC 12), 12=-203(LC 12), 8=-187(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 11, 9, 8 except 12=258(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-328/227, 2-3=-292/380, 5-6=-292/376, 6-7=-298/218
WEBS 3-14=-155/275, 13-14=-153/273, 13-15=-153/273, 5-15=-155/275, 2-12=-216/298, 6-8=-198/292

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 5-9-0, Corner(3R) 5-9-0 to 8-6-0, Exterior(2N) 8-6-0 to 11-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Vertical gable studs spaced at 2-0-0 oc and horizontal 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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 11, 9 except (jt=lb) 1=141, 7=122, 12=203, 8=187.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C02	Common Girder	2	2	I40248524
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:39 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-64ap2p7AlBvar5GqLSSSxpfgKYrX8lagF22m9rzldao

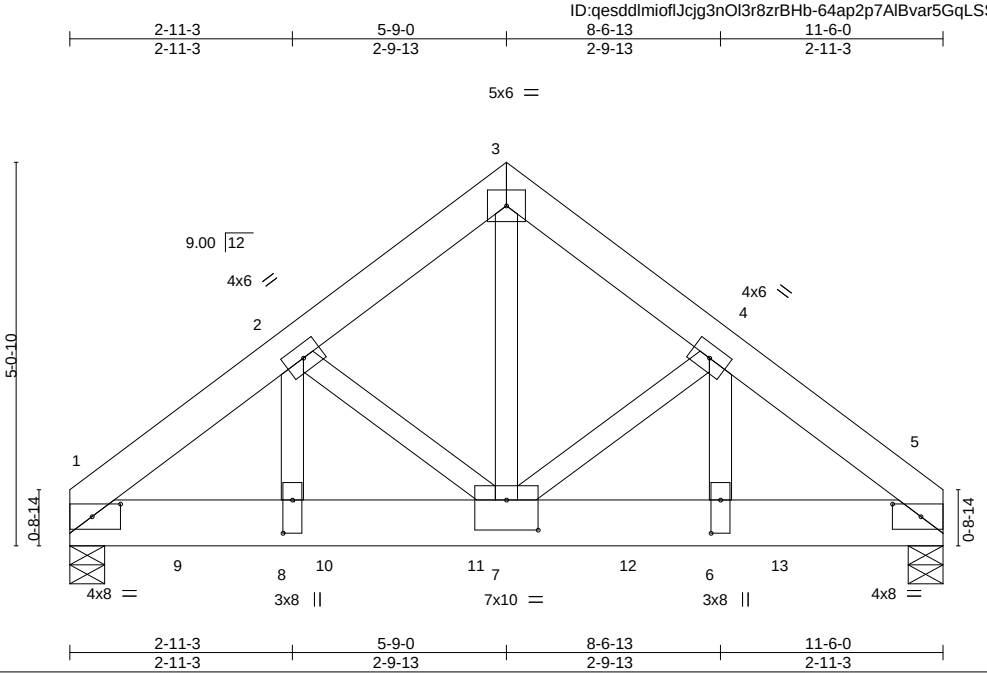


Plate Offsets (X,Y)-- [1:0-4-8,0-2-0], [5:0-4-8,0-2-0], [6:0-5-4,0-1-8], [7:0-5-0,0-4-12], [8:0-5-4,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	0.03	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.04	7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.38	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 183 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS. (lb/size) 1=3301/0-5-8, 5=3017/0-5-8
Max Horz 1=-198(LC 25)
Max Uplift 1=-1499(LC 8), 5=-1368(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3978/1796, 2-3=-2830/1364, 3-4=-2830/1364, 4-5=-3876/1747
BOT CHORD 1-8=-1394/2959, 7-8=-1394/2959, 6-7=-1260/2879, 5-6=-1260/2879
WEBS 3-7=-1451/3072, 4-7=-815/513, 4-6=-539/1269, 2-7=-919/558, 2-8=-605/1399

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=1499, 5=1368.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1087 lb down and 509 lb up at 1-6-12, 1087 lb down and 509 lb up at 3-5-4, 1087 lb down and 509 lb up at 5-5-4, and 1087 lb down and 509 lb up at 7-5-4, and 1087 lb down and 509 lb up at 9-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

February 13,2020

Continued on page 2

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

LOAD CASE(S) Standard

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 1-5=-20

Concentrated Loads (lb)

Vert: 9=-1087(B) 10=-1087(B) 11=-1087(B) 12=-1087(B) 13=-1087(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C03	GABLE	2	1	I40248525
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:40 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-bH8BF98oWV1RTFr0v9_hT1BsHxDmtFzqUinJhHzldan

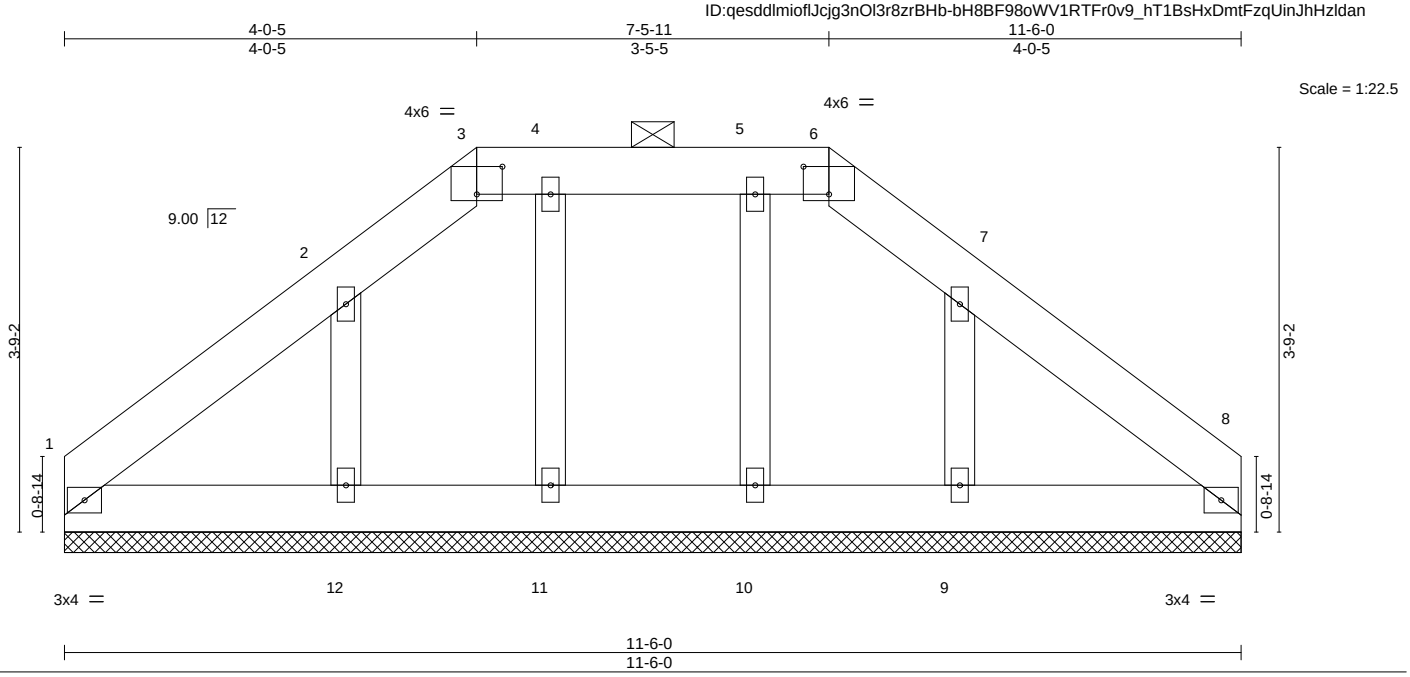


Plate Offsets (X,Y)-- [3:0-3-0,0-3-4], [6:0-3-0,0-3-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 74 lb	FT = 20%

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

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

REACTIONS. All bearings 11-6-0.
(lb) - Max Horz 1=-147(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 11, 10 except 12=-228(LC 12), 9=-220(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 11, 10 except 12=282(LC 19), 9=273(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-12=-226/375, 7-9=-226/372

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 2-9-0, Exterior(2N) 2-9-0 to 4-0-5, Corner(3R) 4-0-5 to 6-9-0, Exterior(2N) 6-9-0 to 7-5-11, Corner(3R) 7-5-11 to 10-5-11, Exterior(2N) 10-5-11 to 11-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 11, 10 except (jt=lb) 12=228, 9=220.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C04	Hip Girder	2	2	I40248526
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:41 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-3TiZSU9QHp9I4PQDTtVw0Ek0LLU?cg6zjMXsEkzIdam

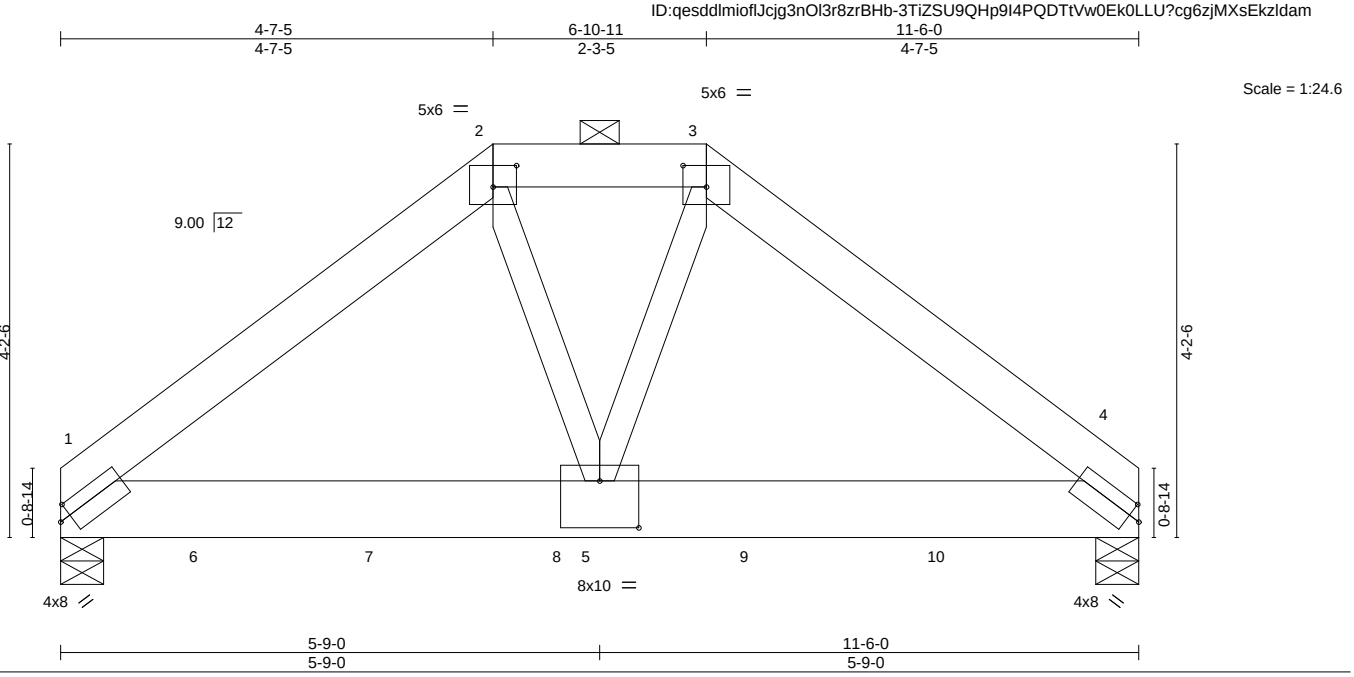


Plate Offsets (X,Y)-- [1:0-1-8,0-1-11], [2:0-3-0,0-2-12], [3:0-3-0,0-2-12], [4:0-1-8,0-1-11], [5:0-5-0,0-6-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.04	1-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	1-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.25	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 158 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS. (lb/size) 1=3300/0-5-8, 4=3018/0-5-8
Max Horz 1=-162(LC 27)
Max Uplift 1=-1484(LC 8), 4=-1335(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3346/1485, 2-3=-3129/1478, 3-4=-3347/1485
BOT CHORD 1-5=-1136/2547, 4-5=-1080/2543
WEBS 2-5=-907/1995, 3-5=-913/2008

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=1484, 4=1335.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1087 lb down and 509 lb up at 1-6-12, 1087 lb down and 509 lb up at 3-5-4, 1087 lb down and 509 lb up at 5-5-4, and 1087 lb down and 509 lb up at 7-5-4, and 1087 lb down and 480 lb up at 9-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 044925 ENGINEER SCOTT M. SEVIER

February 13,2020

Continued on page 2

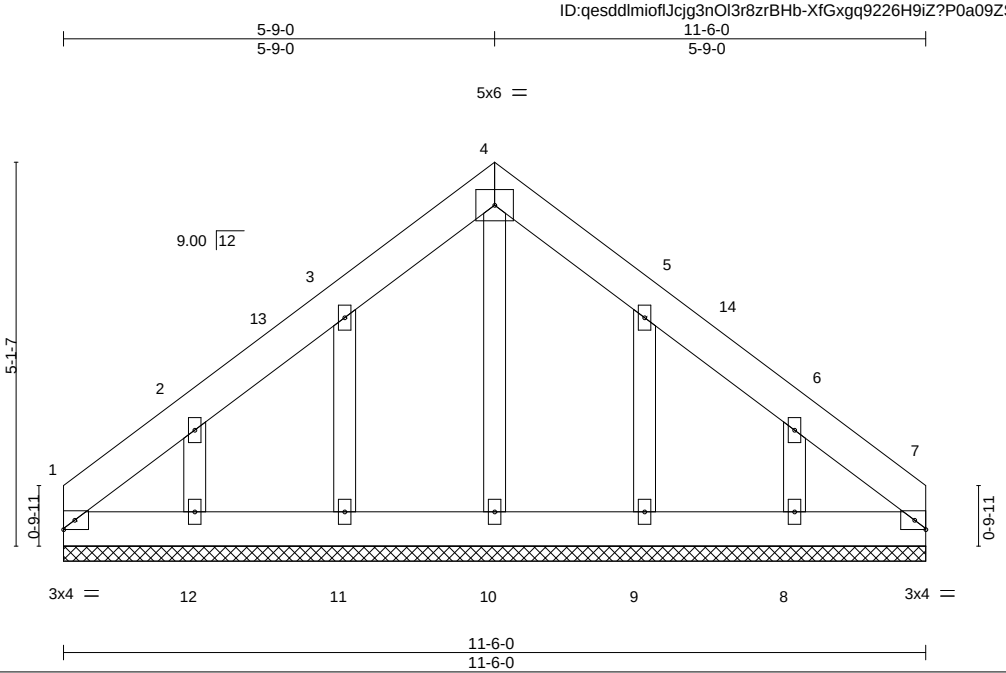
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-3=-60, 3-4=-60, 1-4=-20
   Concentrated Loads (lb)
   Vert: 6=-1087(B) 7=-1087(B) 8=-1087(B) 9=-1087(B) 10=-1087(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C05	Common Supported Gable	2	1	I40248527 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:42 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-XfGxgq9226H9iZ?P0a09ZSHD0luUL9V6x0GQmAzIdal



LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.11	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 80 lb	FT = 20%

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

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

REACTIONS. All bearings 11-6-0.
(lb) - Max Horz 1=205(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 11=-161(LC 12), 12=-213(LC 12), 9=-157(LC 13), 8=-210(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 10, 11, 12, 9, 8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-142/258, 4-5=-142/258
WEBS 3-11=-175/260, 2-12=-200/368, 5-9=-175/259, 6-8=-200/367

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 5-9-0, Corner(3R) 5-9-0 to 8-9-0, Exterior(2N) 8-9-0 to 11-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 1, 7 except (jt=lb) 11=161, 12=213, 9=157, 8=210.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C06	Common Girder	2	2	I40248528
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:43 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-?sqKtAAgpQP?KiabaIXO5fpMM9CY4YfGAg0zIczIdak

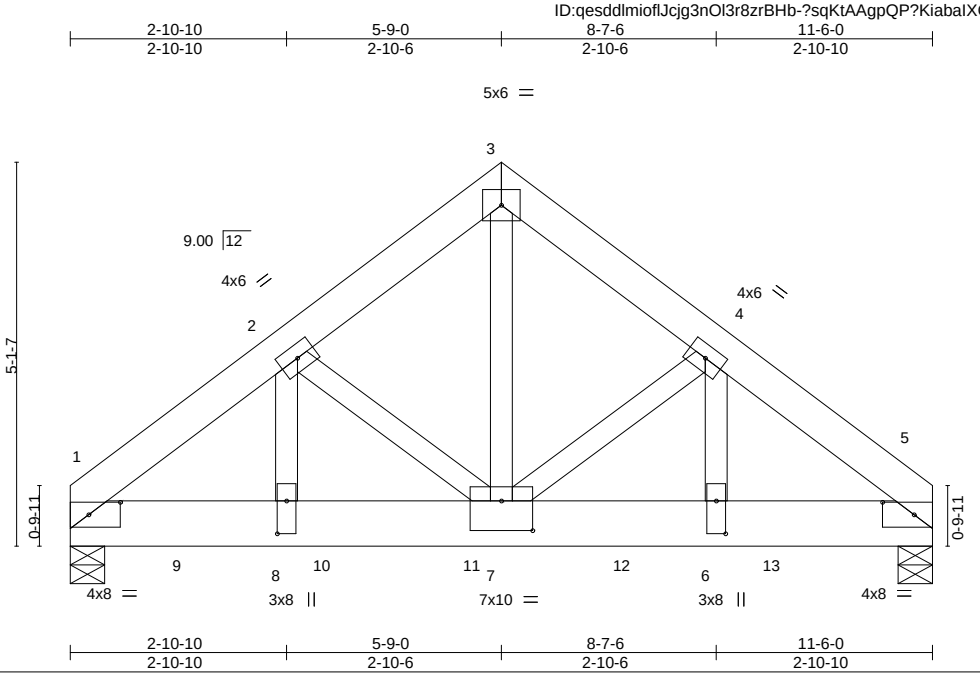


Plate Offsets (X,Y)-- [1:0-5-1,0-2-0], [5:0-5-1,0-2-0], [6:0-5-4,0-1-8], [7:0-5-0,0-4-12], [8:0-5-4,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	0.03	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	7	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 183 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS. (lb/size) 1=3297/0-5-8, 5=3015/0-5-8
Max Horz 1=-201(LC 25)
Max Uplift 1=-1497(LC 8), 5=-1367(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3931/1776, 2-3=-2788/1348, 3-4=-2788/1348, 4-5=-3829/1727
BOT CHORD 1-8=-1361/2884, 7-8=-1361/2884, 6-7=-1227/2805, 5-6=-1227/2805
WEBS 3-7=-1432/3027, 4-7=-763/491, 4-6=-538/1268, 2-7=-865/535, 2-8=-604/1397

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=1497, 5=1367.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1086 lb down and 508 lb up at 1-6-12, 1086 lb down and 508 lb up at 3-5-4, 1086 lb down and 508 lb up at 5-5-4, and 1086 lb down and 508 lb up at 7-5-4, and 1086 lb down and 508 lb up at 9-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

February 13,2020

Continued on page 2

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

LOAD CASE(S) Standard

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 1-5=-20

Concentrated Loads (lb)

Vert: 9=-1086(B) 10=-1086(B) 11=-1086(B) 12=-1086(B) 13=-1086(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C07	GABLE	2	1	I40248529
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:44 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-T2Oi5WBJakXsxs9o8?2detMYAZajp3rPPKIXq2zIdaj

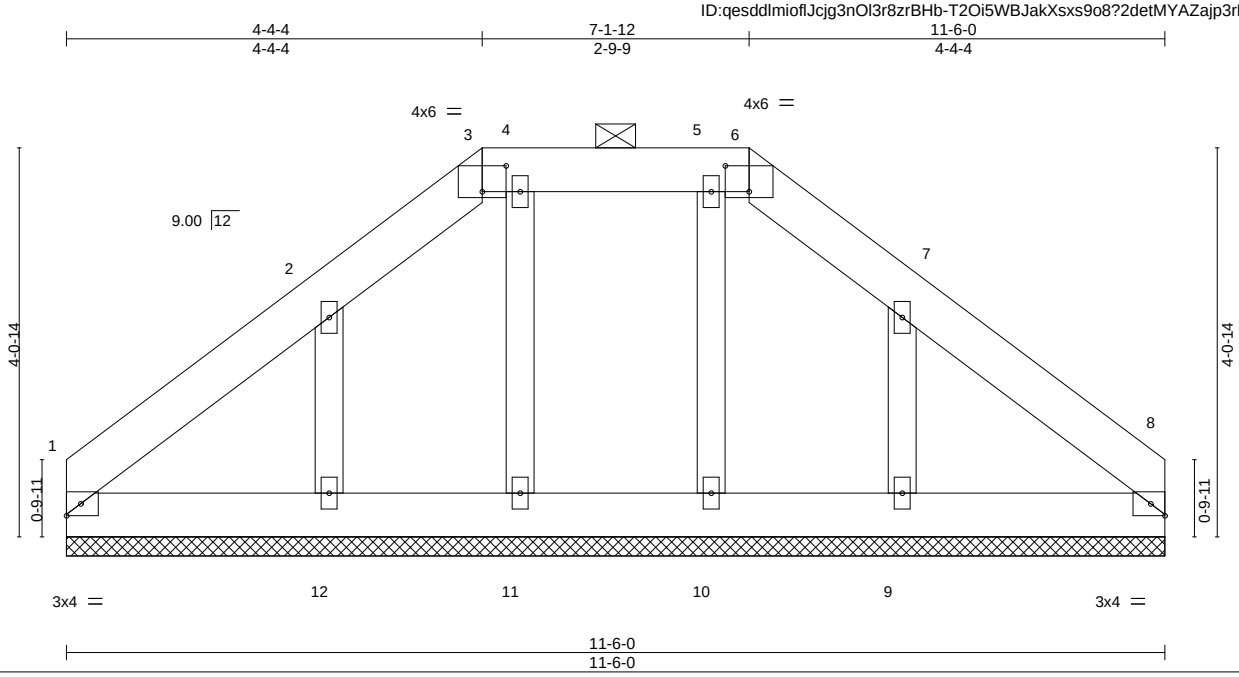


Plate Offsets (X,Y)-- [3:0-3-0,0-3-4], [6:0-3-0,0-3-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 76 lb	FT = 20%

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

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

REACTIONS. All bearings 11-6-0.
(lb) - Max Horz 1=-161(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 11, 10 except 12=-248(LC 12), 9=-242(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 8, 11, 10 except 12=291(LC 19), 9=284(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-12=-240/403, 7-9=-240/401

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 2-9-0, Exterior(2N) 2-9-0 to 4-4-4, Corner(3E) 4-4-4 to 7-1-12, Corner(3R) 7-1-12 to 10-1-12, Exterior(2N) 10-1-12 to 11-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 11, 10 except (jt=lb) 12=248, 9=242.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	C08	Hip Girder	2	2	I40248530 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:45 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-xEy4IsCxL1fjZ0k_iiZsA4vhAysxYU9Ze_V4NVzIdai

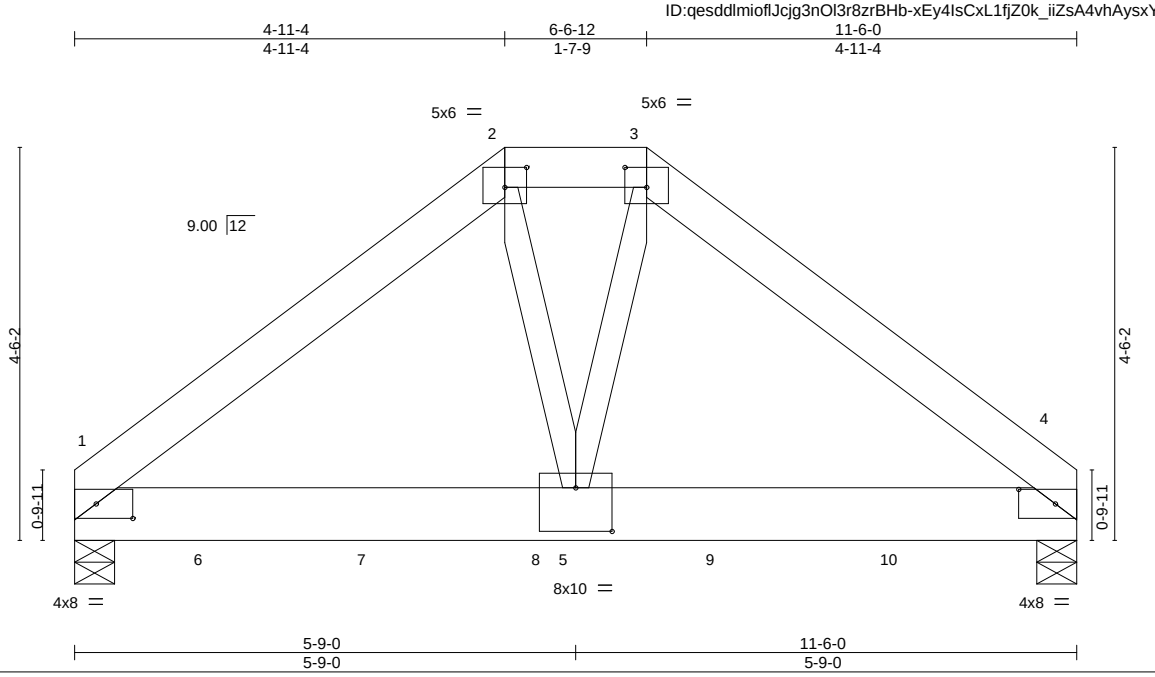


Plate Offsets (X,Y)-- [1:0-5-1,0-2-0], [2:0-3-0,0-2-12], [3:0-3-0,0-2-12], [4:0-5-1,0-2-0], [5:0-5-0,0-6-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.04	1-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.05	1-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.24	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 160 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2

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

REACTIONS. (lb/size) 1=3297/0-5-8, 4=3015/0-5-8
Max Horz 1=176(LC 7)
Max Uplift 1=-1487(LC 8), 4=-1342(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-3316/1487, 2-3=-2890/1393, 3-4=-3317/1488
BOT CHORD 1-5=-1104/2506, 4-5=-1056/2503
WEBS 2-5=-915/1961, 3-5=-923/1975

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Webs 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=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 1=1487, 4=1342.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1086 lb down and 508 lb up at 1-6-12, 1086 lb down and 508 lb up at 3-5-4, 1086 lb down and 508 lb up at 5-5-4, and 1086 lb down and 508 lb up at 7-5-4, and 1086 lb down and 486 lb up at 9-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 044925 ENGINEER SCOTT M. SEVIER

February 13,2020

Continued on page 2

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

LOAD CASE(S) Standard

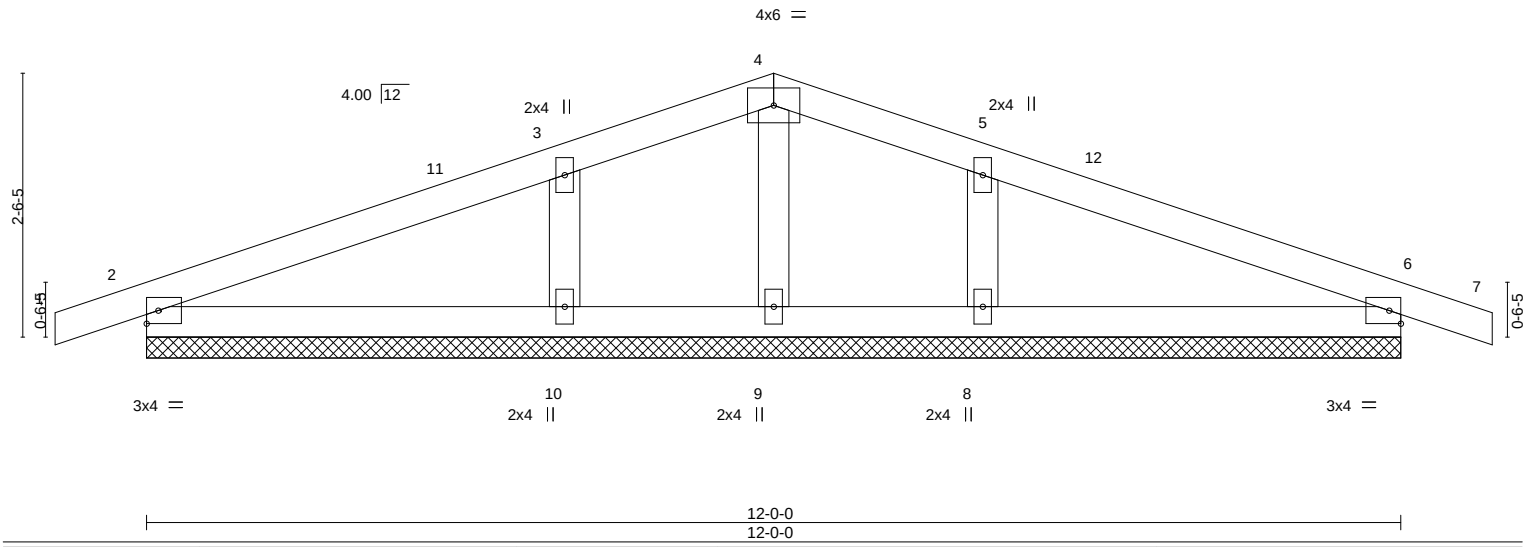
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-3=-60, 3-4=-60, 1-4=-20
   Concentrated Loads (lb)
   Vert: 6=-1086(B) 7=-1086(B) 8=-1086(B) 9=-1086(B) 10=-1086(B)

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	CP01	Common Supported Gable	4	1	I40248531
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:46 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-PRVSWCCZ5LnaBAIAFQ45jIRrbMFBHyniseEdvxzIdah

-0-10-8 6-0-0 12-0-0 12-10-8
0-10-8 6-0-0 6-0-0 0-10-8

Scale = 1:22.0



12-0-0
12-0-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	7	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.01	7	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 46 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 12-0-0.
(lb) - Max Horz 2=69(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-144(LC 8), 6=-153(LC 9), 10=-219(LC 12), 8=-217(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=326(LC 1), 8=326(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-10=-231/519, 5-8=-231/518

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-0-0, Corner(3R) 6-0-0 to 9-0-0, Exterior(2N) 9-0-0 to 12-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 144 lb uplift at joint 2, 153 lb uplift at joint 6, 219 lb uplift at joint 10 and 217 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.

February 13,2020

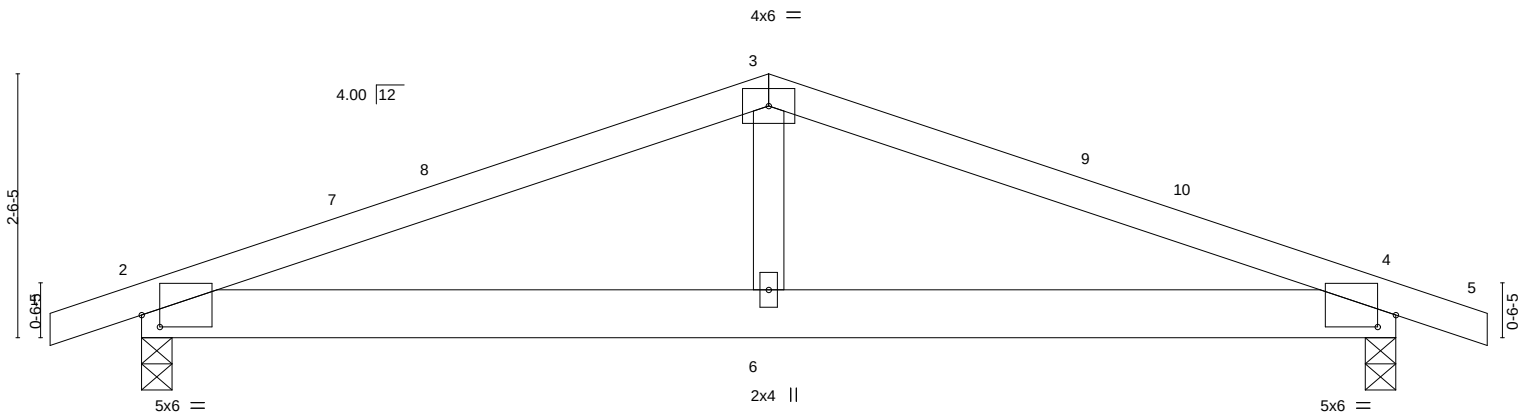
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	CP02	Common	16	1	I40248532
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:47 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-td3qjYDBsfvRoKtNp7cKGV_w5mX80Qjs5I_BRNzldag

-0-10-8 0-10-8 | 6-0-0 6-0-0 | 12-0-0 6-0-0 | 12-10-8 0-10-8

Scale = 1:22.0



6-0-0 6-0-0 | 12-0-0 6-0-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	0.06	2-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.04	2-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 52 lb	FT = 20%

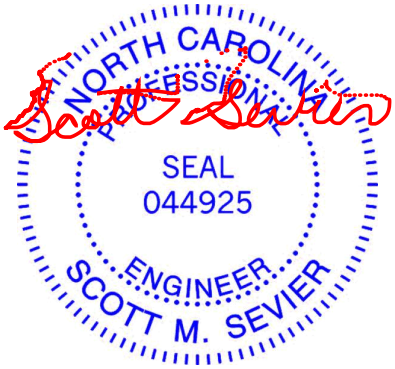
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-11-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-9-5 oc bracing.

REACTIONS. (lb/size) 2=530/0-3-8, 4=530/0-3-8
Max Horz 2=69(LC 12)
Max Uplift 2=-507(LC 8), 4=-507(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-824/1245, 3-4=-824/1244
BOT CHORD 2-6=-1043/714, 4-6=-1043/714
WEBS 3-6=-368/290

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 12-10-8 zone; cantilever left and right exposed ; 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 3-6-0 tall by 2-0-0 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 507 lb uplift at joint 2 and 507 lb uplift at joint 4.
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.



February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G01	Common Supported Gable	1	1	I40248533
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:48 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-MpdDwuEpdy1IQUSZNr7ZojXCIAw6ltF?KyjkzqzIdaf

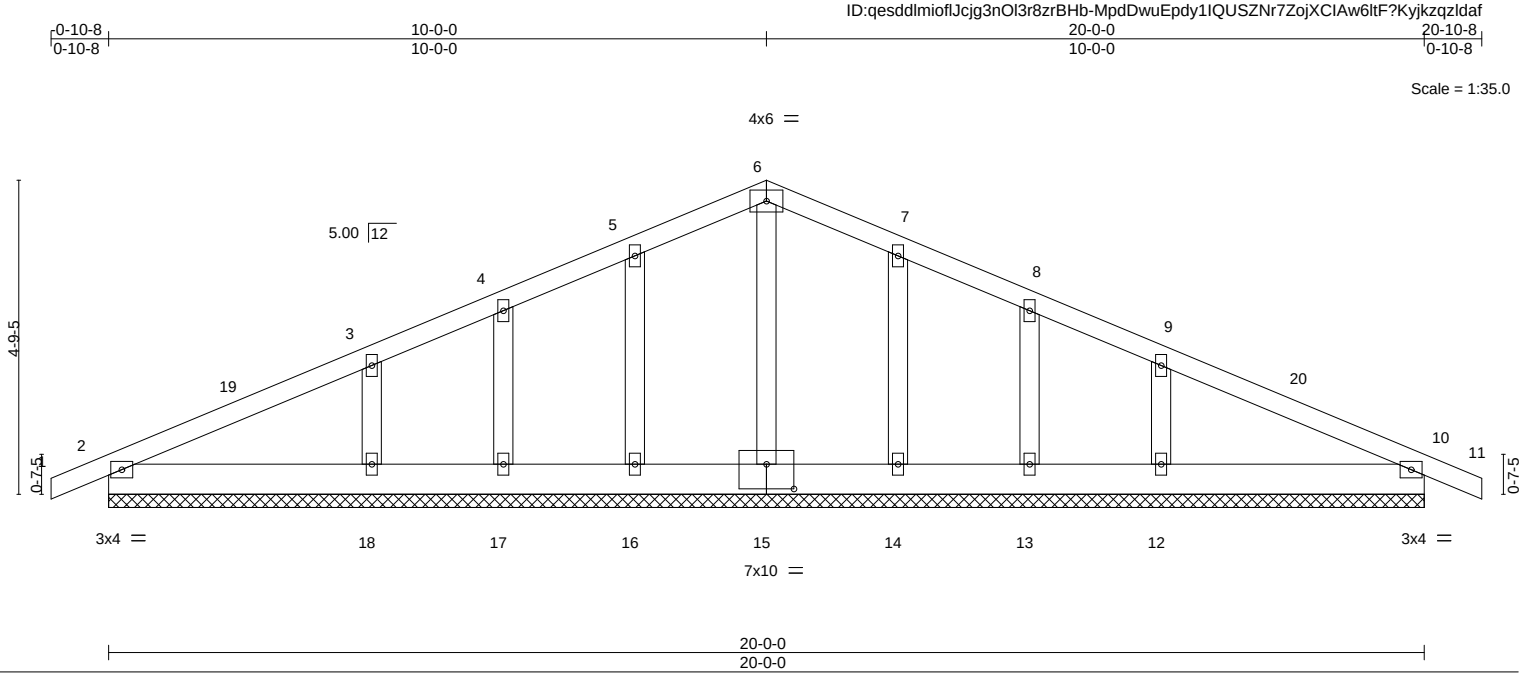


Plate Offsets (X,Y)-- [15:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	0.00	11	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	11	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 109 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 20-0-0.
(lb) - Max Horz 2=-136(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 2, 17, 13, 10 except 16=-134(LC 12), 18=-238(LC 12), 14=-133(LC 13), 12=-235(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 15, 16, 17, 14, 13, 10 except 18=315(LC 25), 12=315(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-18=-209/312, 9-12=-209/311

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 17, 13, 10 except (jt=lb) 16=134, 18=238, 14=133, 12=235.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G02	Common	10	1	I40248534
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:49 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-q0Bb8DFROG992d1lxYeoLw3GVaAjUJ68YcTlWGzldae

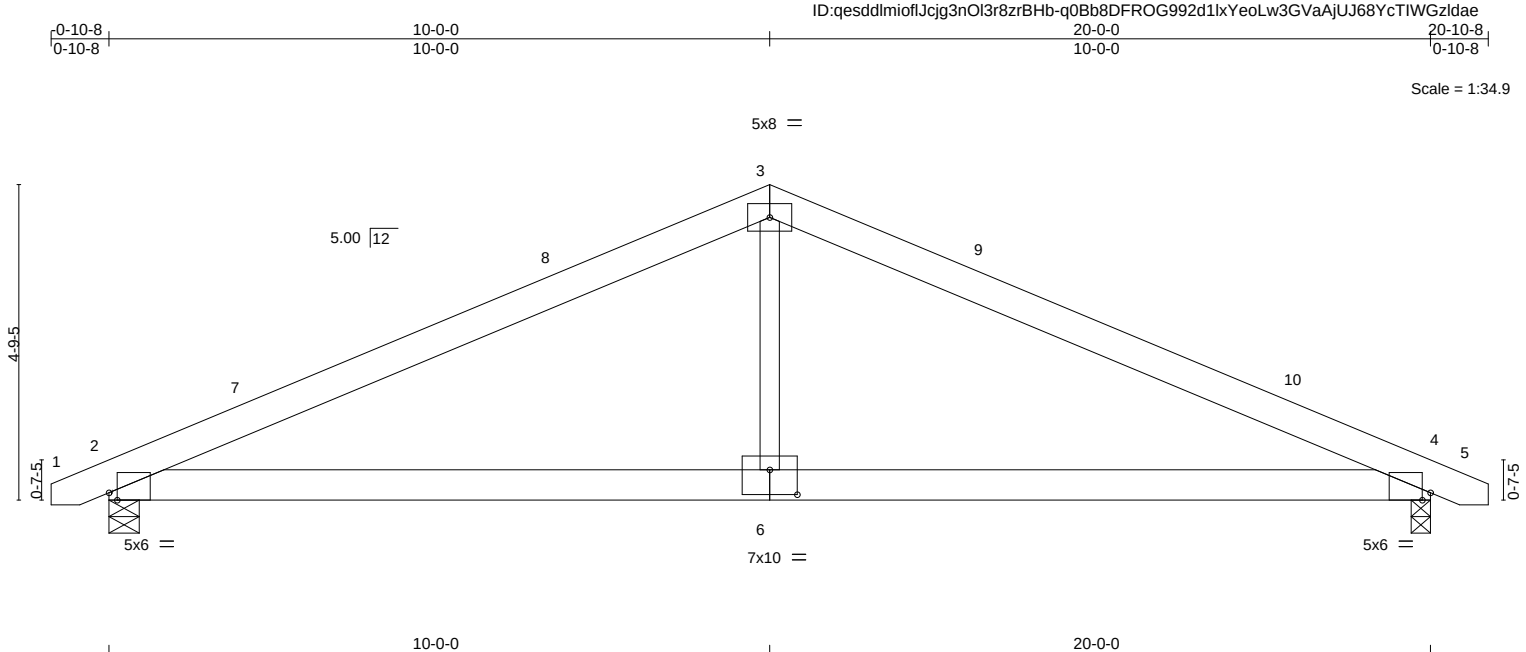


Plate Offsets (X,Y)-- [2:0-1-8,Edge], [4:0-1-8,Edge], [6:0-5-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.06	4-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.15	4-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	4-6	>999	240	Weight: 108 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=838/0-5-8, 4=833/0-3-8
Max Horz 2=-133(LC 17)
Max Uplift 2=-400(LC 12), 4=-397(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1248/674, 3-4=-1246/674
BOT CHORD 2-6=-434/1040, 4-6=-434/1040
WEBS 3-6=0/477

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-7-14 to 2-4-2, Interior(1) 2-4-2 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 20-7-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 2=400, 4=397.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

February 13,2020

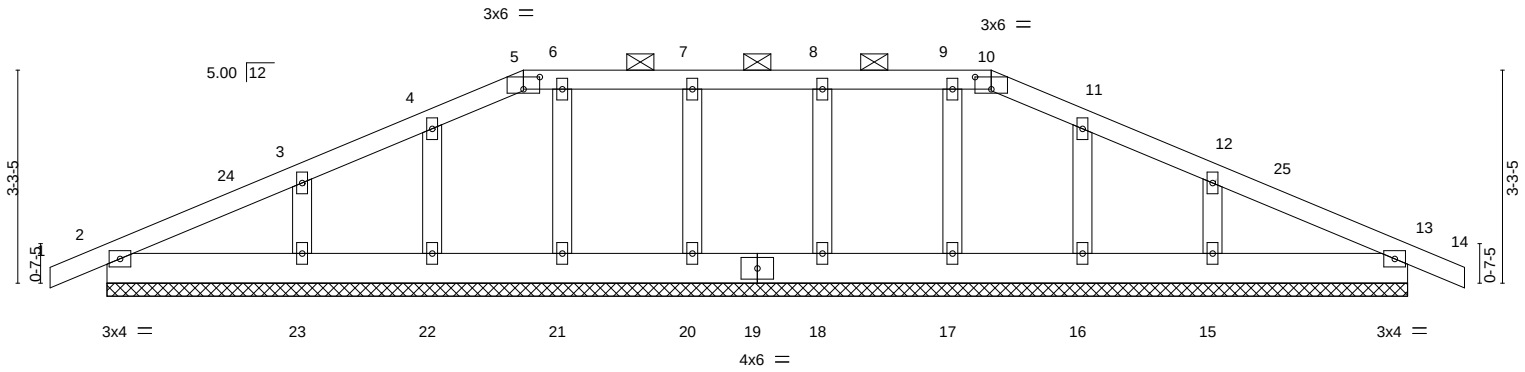
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G03	GABLE	1	1	I40248535
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:50 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-IClzLZG39aI0fncxUG91t8cZuzdFDn?InGCr2izldad

0-10-8 6-4-13 13-7-3 20-0-0 20-10-8
0-10-8 6-4-13 7-2-5 6-4-13 0-10-8

Scale = 1:35.4



20-0-0
20-0-0

Plate Offsets (X,Y)-- [5:0-3-0,0-2-4], [10:0-3-0,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	13	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	14	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	13	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 106 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 or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 20-0-0.
(lb) - Max Horz 2=-91(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 18, 17, 16, 13 except 23=-179(LC 12), 15=-178(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 21, 22, 23, 18, 17, 16, 15, 13

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-23=-159/257, 12-15=-159/256

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-4-13, Corner(3R) 6-4-13 to 9-4-13, Exterior(2N) 9-4-13 to 13-7-3, Corner(3R) 13-7-3 to 16-7-3, Exterior(2N) 16-7-3 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 21, 22, 18, 17, 16, 13 except (jt=lb) 23=179, 15=178.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

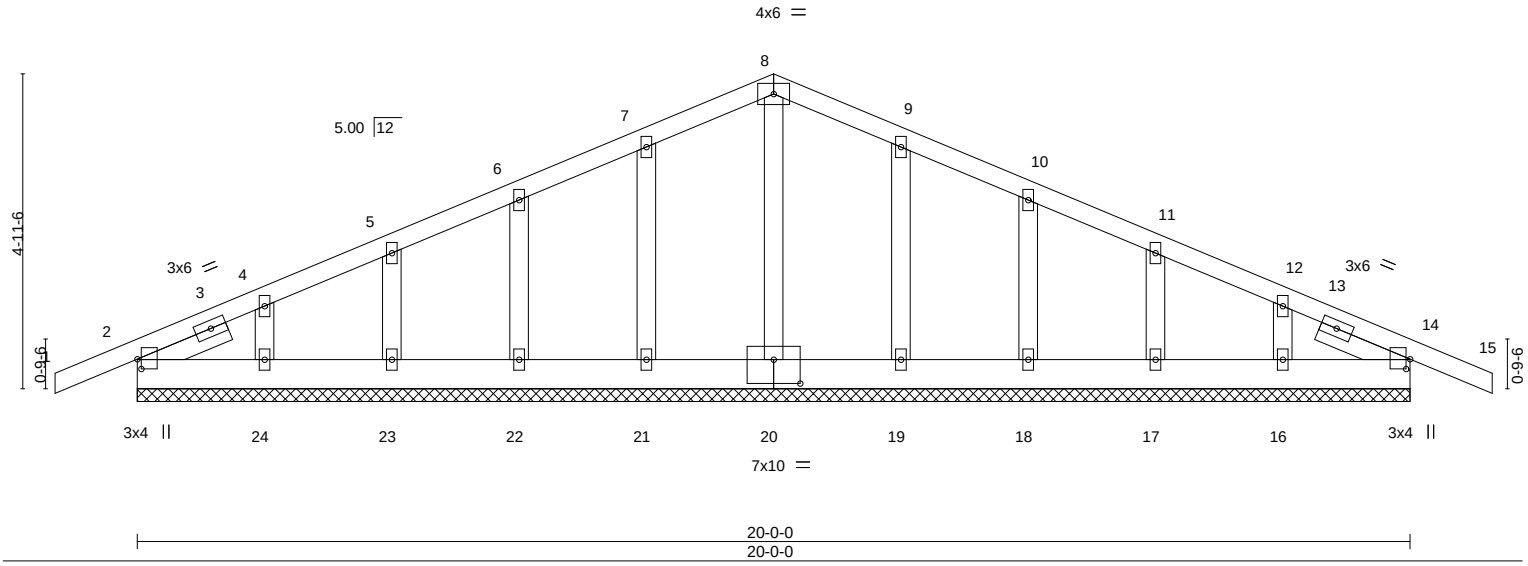
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G04	Common Supported Gable	1	1	I40248536
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:52 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-EatjmFHKhBYkv5mKchBWzYhu9nJ0himbFahy6bzldab

-1-3-8 1-3-8 | 10-0-0 10-0-0 | 20-0-0 10-0-0 | 21-3-8 1-3-8

Scale = 1:36.2



20-0-0
20-0-0

Plate Offsets (X,Y)-- [2:0-1-13,0-0-12], [14:0-1-13,0-0-12], [20:0-5-0,0-4-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.00	15	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	15	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 120 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.2 1-6-1, Right 2x4 SP No.2 1-6-1

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

REACTIONS. All bearings 20-0-0.
(lb) - Max Horz 2=-141(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 2, 14 except 21=-122(LC 12), 22=-115(LC 12), 23=-114(LC 12), 24=-139(LC 12), 19=-121(LC 13), 18=-115(LC 13), 17=-115(LC 13), 16=-128(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 21, 22, 23, 24, 19, 18, 17, 16, 14

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 2-0-0, Exterior(2N) 2-0-0 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 21-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 2, 14 except (jt=lb) 21=122, 22=115, 23=114, 24=139, 19=121, 18=115, 17=115, 16=128.
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.

February 13,2020

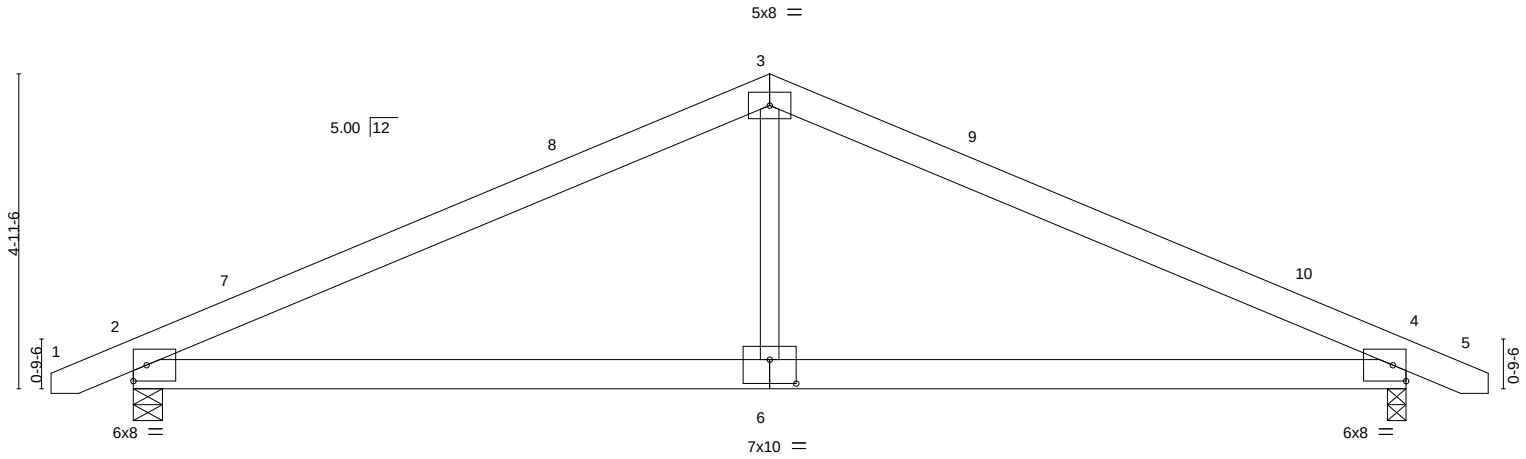
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G05	Common	10	1	I40248537
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:53 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-inR6_blySVgbWFLWAOjlVmExbBYkQ75kTERVf1zldaa

-1-3-8 1-3-8 | 10-0-0 10-0-0 | 20-0-0 10-0-0 | 21-3-8 1-3-8

Scale = 1:36.2



10-0-0 10-0-0 | 20-0-0 10-0-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.06	4-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.14	4-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S		Wind(LL)	0.10	4-6	>999	240	Weight: 110 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=864/0-5-8, 4=858/0-3-8
Max Horz 2=-138(LC 13)
Max Uplift 2=-419(LC 12), 4=-416(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1208/646, 3-4=-1206/647
BOT CHORD 2-6=-399/992, 4-6=-399/992
WEBS 3-6=0/476

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-0-14 to 1-11-2, Interior(1) 1-11-2 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 21-0-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 2=419, 4=416.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

February 13,2020

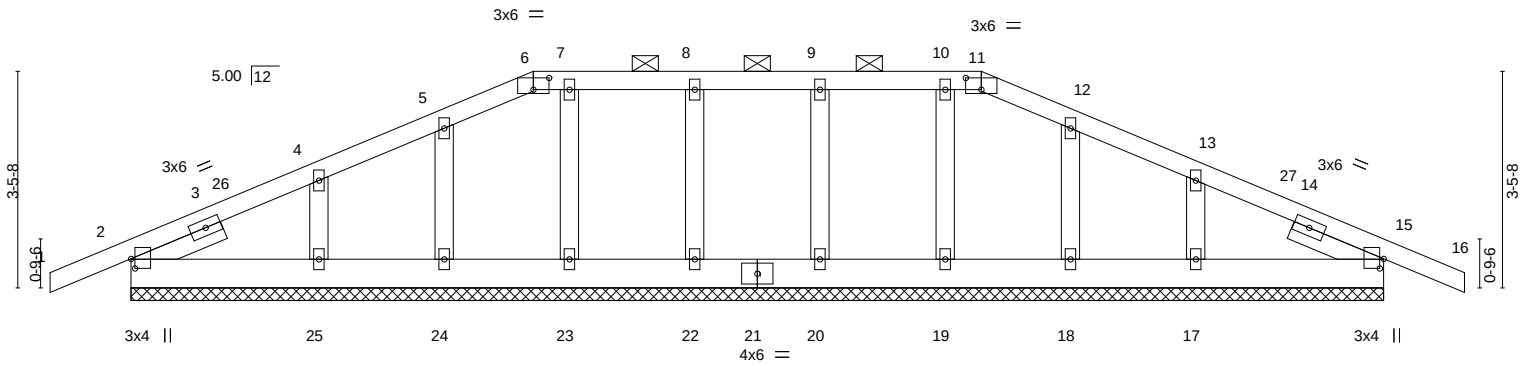
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	G06	GABLE	1	1	I40248538
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:54 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-Az_UBxJaDooS8Pwjj5E_2zmEfb_N9b8uitA3BTzldaZ

-1-3-8 1-3-8 | 6-5-1 6-5-1 | 13-6-15 7-1-13 | 20-0-0 6-5-1 | 21-3-8 1-3-8

Scale = 1:36.8



20-0-0
20-0-0

Plate Offsets (X,Y)-- [2:0-1-13,0-0-12], [6:0-3-0,0-2-4], [11:0-3-0,0-2-4], [15:0-1-13,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.00	16	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	16	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	15	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 114 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.2 1-6-9, Right 2x4 SP No.2 1-6-9

BRACING-

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

REACTIONS. All bearings 20-0-0.
(lb) - Max Horz 2=-97(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 22, 23, 24, 20, 19, 18 except 2=-123(LC 8), 25=-174(LC 12), 15=-125(LC 9), 17=-169(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 22, 23, 24, 25, 20, 19, 18, 15, 17

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

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-3-8 to 1-8-8, Exterior(2N) 1-8-8 to 6-5-1, Corner(3R) 6-5-1 to 9-5-1, Exterior(2N) 9-5-1 to 13-6-15, Corner(3R) 13-6-15 to 16-6-15, Exterior(2N) 16-6-15 to 21-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22, 23, 24, 20, 19, 18 except (jt=lb) 2=123, 25=174, 15=125, 17=169.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	M01	GABLE	8	1	I40248539
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:55 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-e9YsOHJC_6wImYVvHplDaBJPq_KBu1v1xXwcjwzldaY

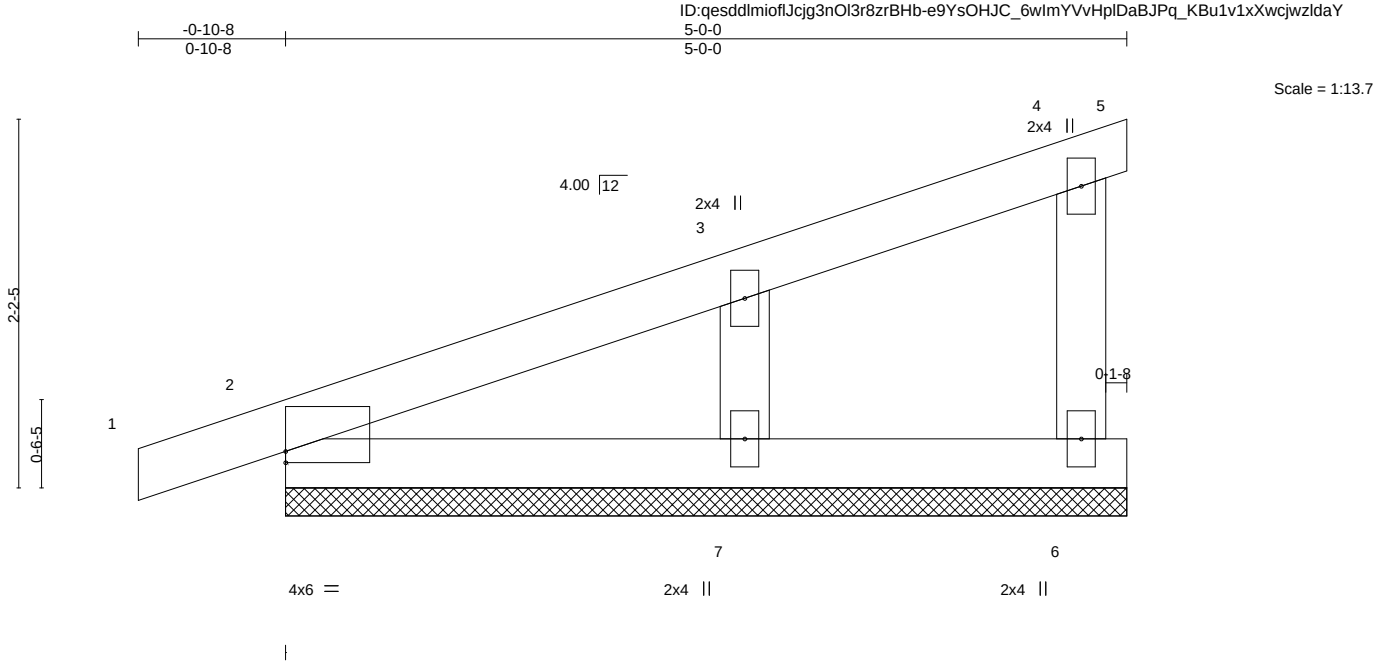


Plate Offsets (X,Y)-- [2:0-0-0,0-0-13]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.16	Horz(CT)	-0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 20 lb	FT = 20%

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

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

REACTIONS. All bearings 5-0-0.
(lb) - Max Horz 2=143(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 2=-108(LC 8), 7=-154(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 5, 6, 2, 7

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-313/150
WEBS 3-7=-228/542

NOTES-
1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 5, 6 except (jt=lb) 2=108, 7=154.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	M02	Monopitch	40	1	I40248540
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:55 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-e9YsOHJC_6wImYVvHplDaBJIZ_JQu3Q1xXwcjwzldaY

-0-10-8 5-0-0
0-10-8 5-0-0

Scale = 1:13.7

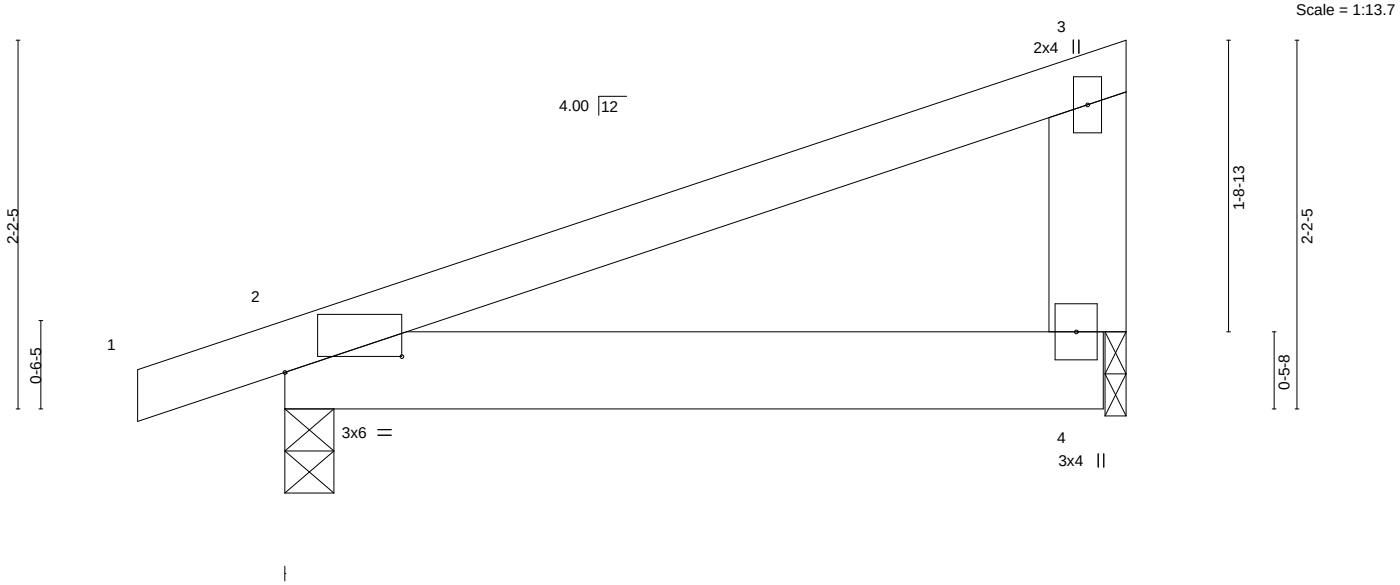


Plate Offsets (X,Y)-- [2:0-8-5,0-1-2]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	0.02	2-4	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 24 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=253/0-3-8, 4=178/0-1-8
Max Horz 2=134(LC 8)
Max Uplift 2=-250(LC 8), 4=-195(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-177/280

NOTES-
1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-9-4 zone; cantilever left exposed ; end vertical left 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
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=250, 4=195.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	M03	Monopitch	16	1	I40248541
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:56 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-7M6EcdKqlQ29Ni35rWGS7OsO7OeldWgAABf9GMzldaX

-0-10-8 6-0-0
0-10-8 6-0-0

Scale: 3/4"=1'

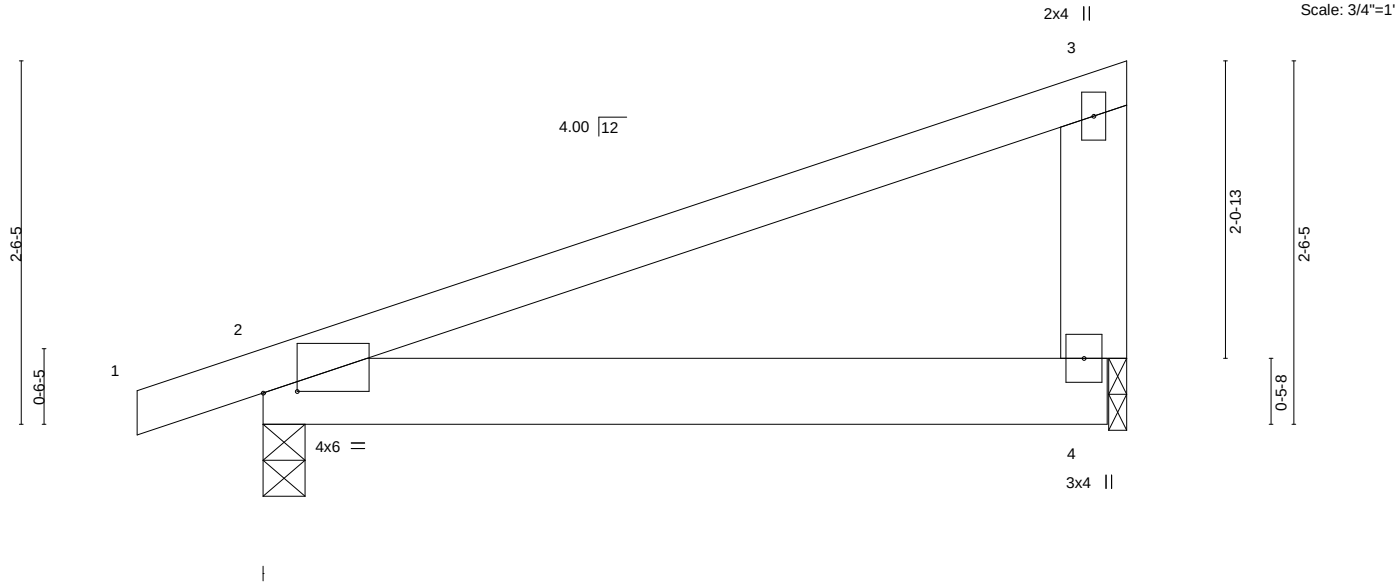


Plate Offsets (X,Y)-- [2:0-2-13,0-0-2]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	0.03	2-4	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.03	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 29 lb	FT = 20%

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

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

REACTIONS. (lb/size) 2=292/0-3-8, 4=219/0-1-8
Max Horz 2=157(LC 8)
Max Uplift 2=-284(LC 8), 4=-239(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-208/343

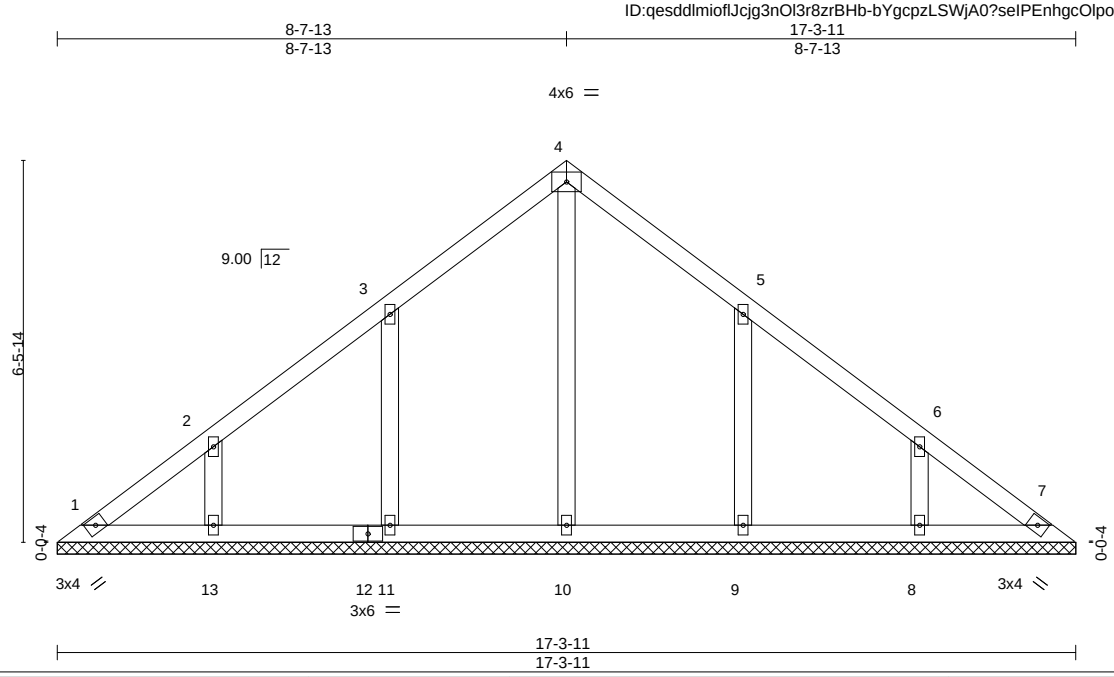
NOTES-
1) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-9-4 zone; cantilever left exposed ; end vertical left exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=284, 4=239.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V01	GABLE	6	1	I40248542 Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:57 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-bYgcpzLSWjA0?seIPEnhgcOlpo?2My2KOrPjoozldaW



LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	7	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
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 17-3-11.
(lb) - Max Horz 1=-274(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 11=-275(LC 12), 13=-240(LC 12), 9=-275(LC 13), 8=-240(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=322(LC 22), 11=388(LC 19), 13=322(LC 19), 9=387(LC 20), 8=323(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-259/209
WEBS 3-11=-261/313, 2-13=-222/267, 5-9=-260/313, 6-8=-222/268

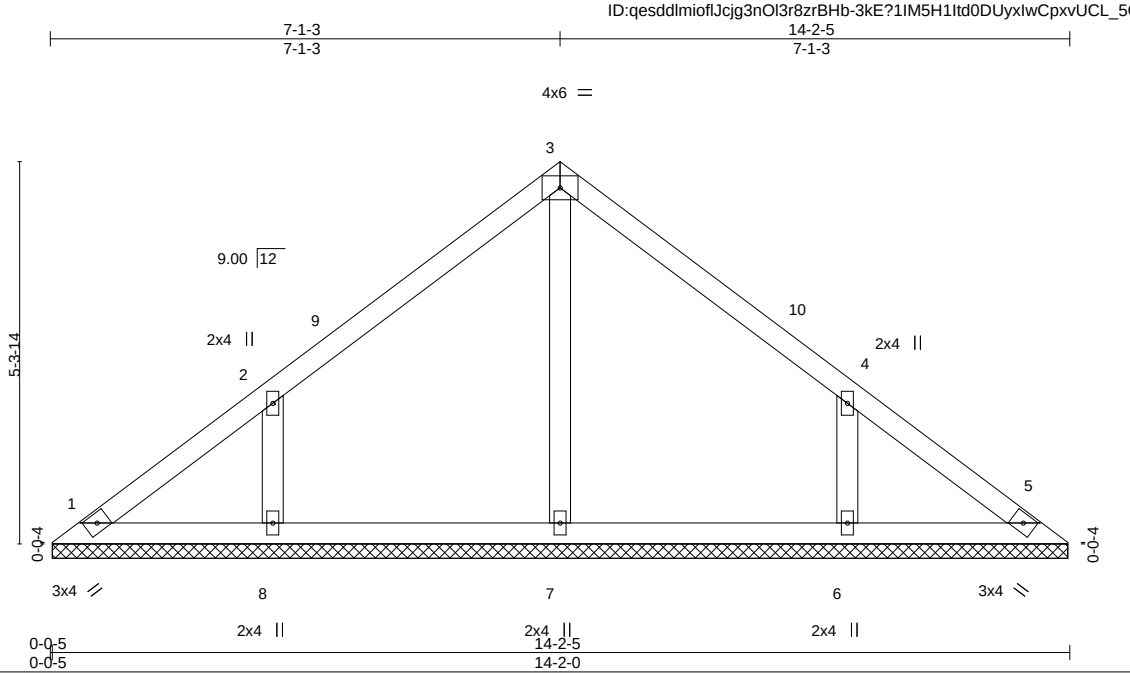
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 8-7-13, Exterior(2R) 8-7-13 to 11-7-13, Interior(1) 11-7-13 to 16-10-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 1, 7 except (jt=lb) 11=275, 13=240, 9=275, 8=240.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V02	Valley	4	1	I40248543
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:58 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-3kE?1IM5H1Itd0DUyxIwCpxvUCL_5ONTdV8GKFzldaV



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 58 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 14-1-11.
(lb) - Max Horz 1=-222(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-345(LC 12), 6=-345(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=257(LC 19), 8=397(LC 19), 6=396(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-334/385, 4-6=-334/384

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 7-1-3, Exterior(2R) 7-1-3 to 10-1-3, Interior(1) 10-1-3 to 13-9-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=345, 6=345.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V03	GABLE	4	1	I40248544
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:55:59 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-XxoNEeNj2LQkEAogWfp9l1U5XchPqrpds9upshzldaU

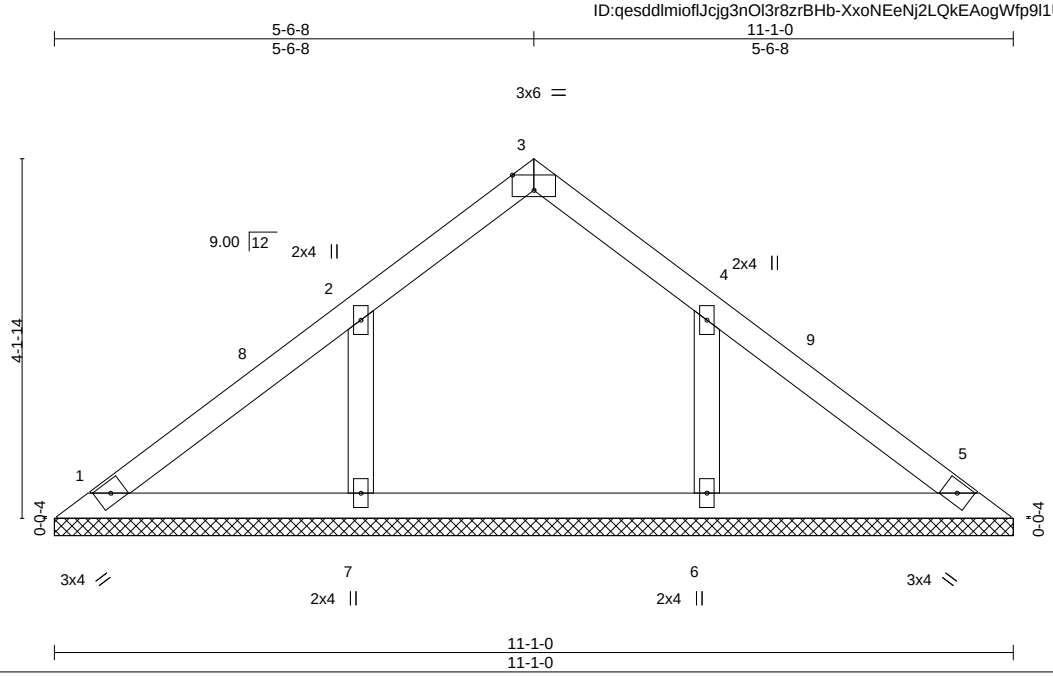


Plate Offsets (X,Y)-- [3:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 42 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 11-1-0.
(lb) - Max Horz 1=-170(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) except 7=-258(LC 12), 6=-256(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=340(LC 19), 6=337(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-7=-286/345, 4-6=-286/344

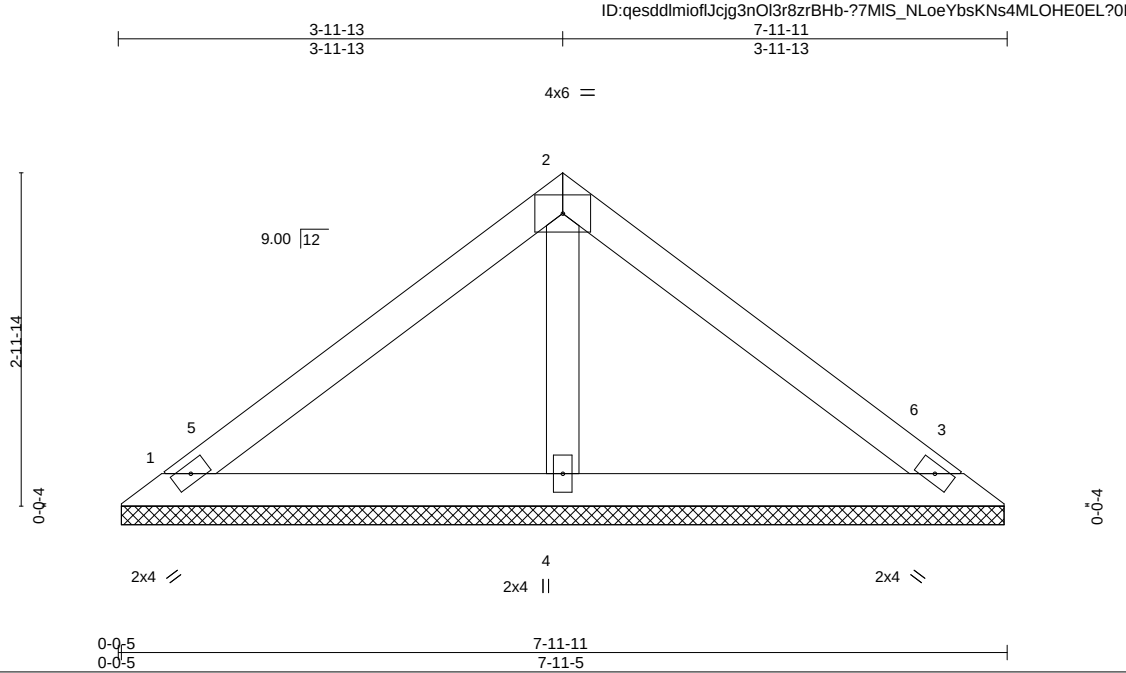
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-6-8, Interior(1) 3-6-8 to 5-6-8, Exterior(2R) 5-6-8 to 8-6-8, Interior(1) 8-6-8 to 10-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 258 lb uplift at joint 7 and 256 lb uplift at joint 6.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V04	Valley	4	1	I40248545
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:00 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-?7MlS_NLoeYbsKNs4MLOHE0EL?0lZJnm4pdNP7zldaT



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 29 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=145/7-11-0, 3=145/7-11-0, 4=278/7-11-0
Max Horz 1=-118(LC 8)
Max Uplift 1=-77(LC 12), 3=-93(LC 13), 4=-84(LC 12)
Max Grav 1=145(LC 1), 3=151(LC 20), 4=278(LC 1)

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

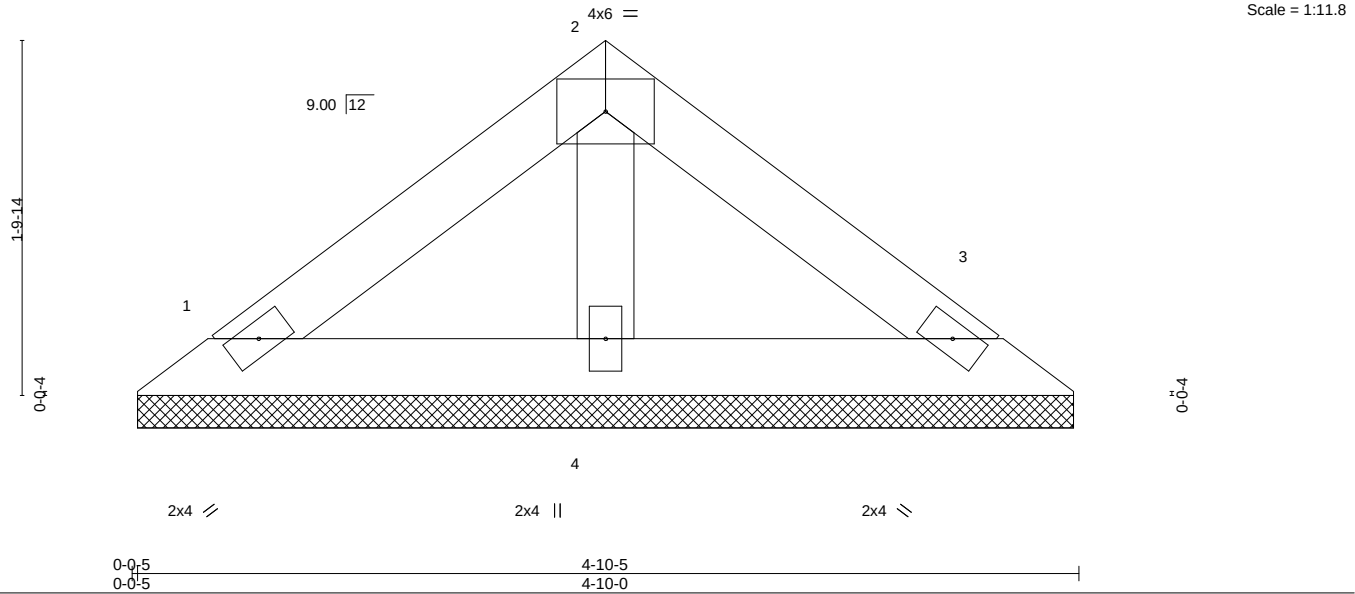
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 3-11-13, Exterior(2R) 3-11-13 to 6-11-13 , Interior(1) 6-11-13 to 7-6-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 1, 93 lb uplift at joint 3 and 84 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V05	Valley	4	1	I40248546
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:00 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-?7MIS_NLoeYbsKNs4MLOHE0GC?1fZJ7m4pdNP7zldaT



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 16 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 or 4-10-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=89/4-9-11, 3=89/4-9-11, 4=141/4-9-11
Max Horz 1=-66(LC 8)
Max Uplift 1=-53(LC 12), 3=-62(LC 13), 4=-28(LC 12)
Max Grav 1=89(LC 1), 3=91(LC 20), 4=141(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 1, 62 lb uplift at joint 3 and 28 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V06	GABLE	4	1	I40248547
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:01 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-TJv7fKOzZygSUTy3e3sdqSZSgPM1IlXvJTNwxZzldaS

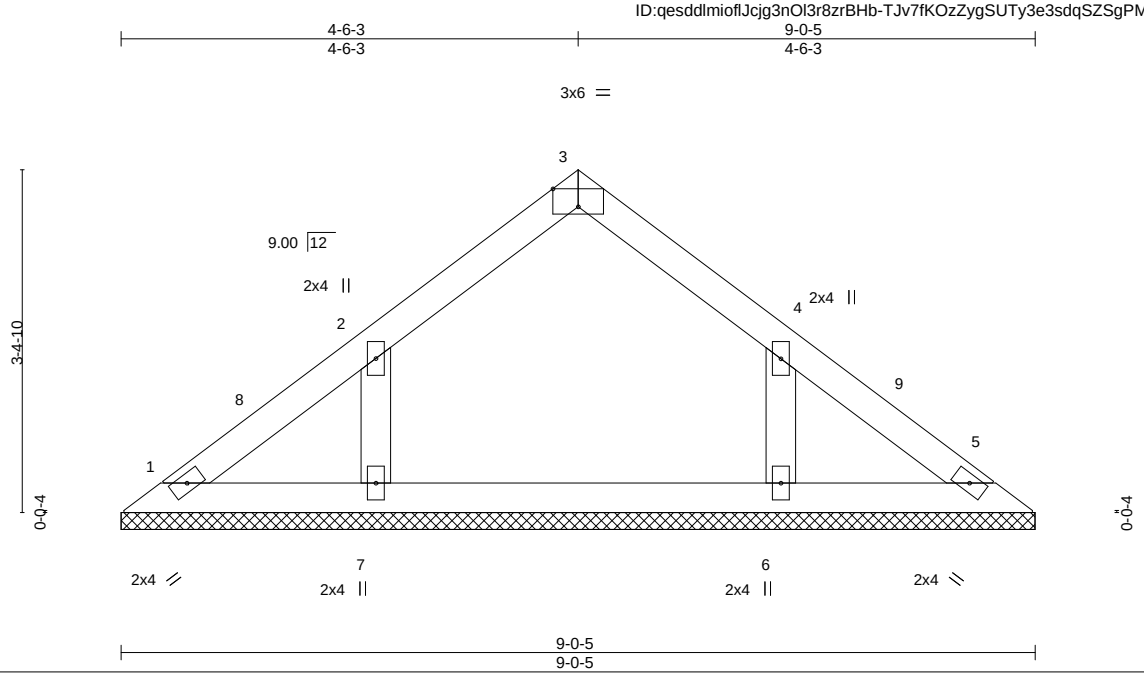


Plate Offsets (X,Y)-- [3:0-3-0,Edge], [4:0-0-0,0-0-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 33 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 9-0-5.
(lb) - Max Horz 1=136(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 7=-189(LC 12), 6=-187(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=269(LC 19), 6=267(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-7=-230/296, 4-6=-230/296

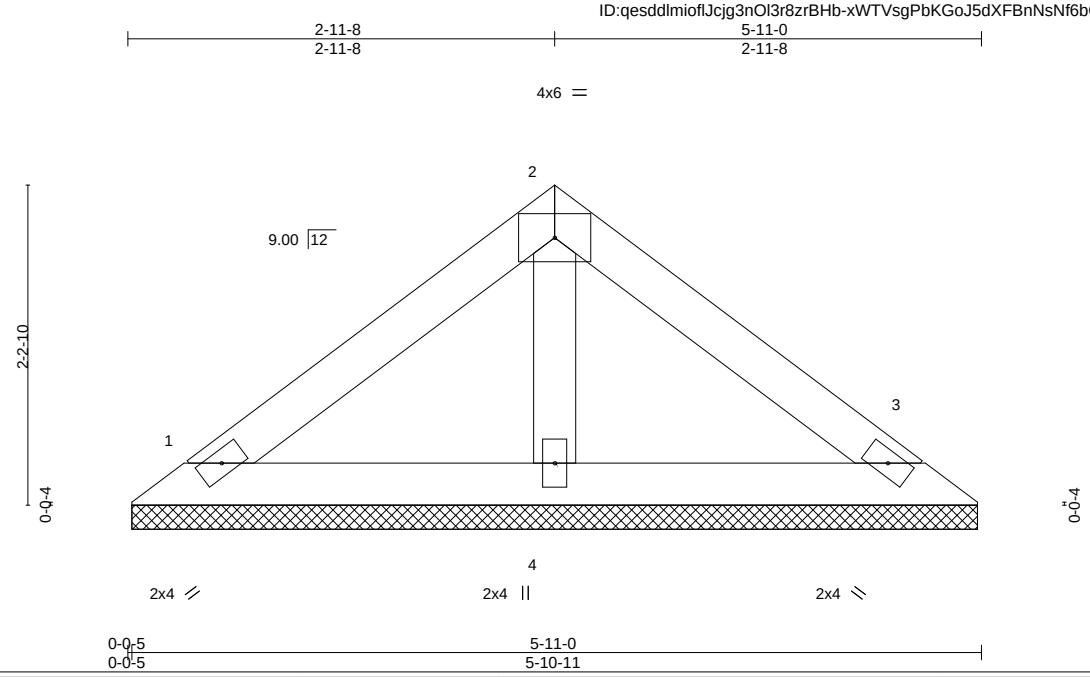
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 4-6-3, Exterior(2R) 4-6-3 to 7-6-3, Interior(1) 7-6-3 to 8-7-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 7=189, 6=187.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V07	Valley	4	1	I40248548
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:02 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-xWTVsgPbKGoJ5dXFBnNsNf6bQpil1DV3Y76UT0zldaR



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 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 or 5-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=112/5-10-5, 3=112/5-10-5, 4=179/5-10-5
Max Horz 1=-84(LC 8)
Max Uplift 1=-67(LC 12), 3=-78(LC 13), 4=-35(LC 12)
Max Grav 1=112(LC 1), 3=116(LC 20), 4=179(LC 1)

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

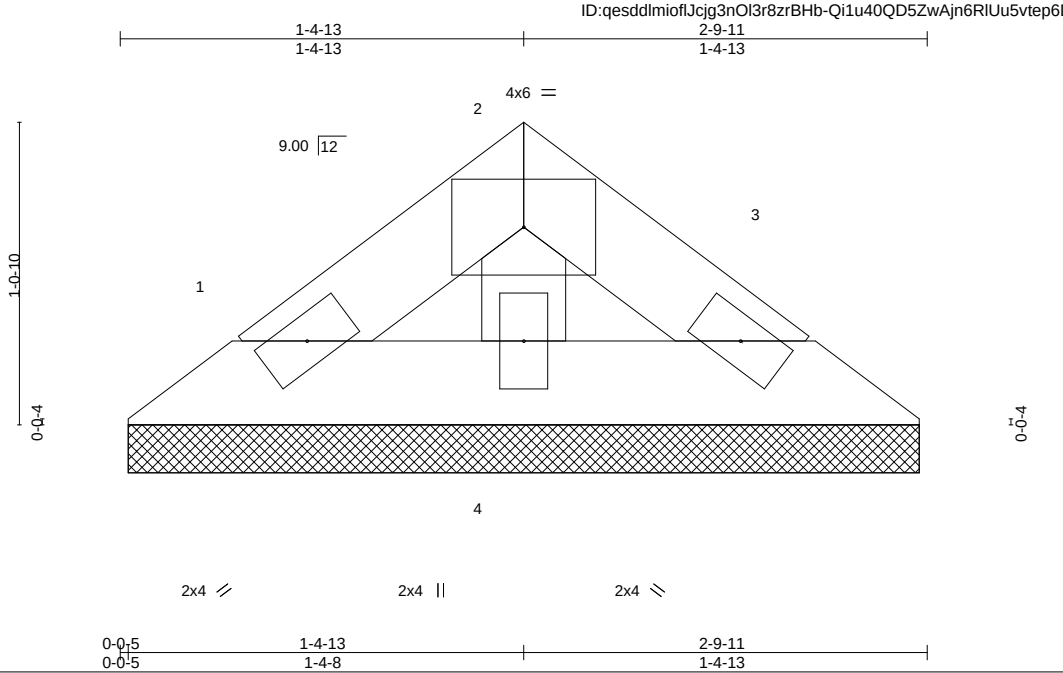
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V08	Valley	4	1	I40248549
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:03 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-Qi1u40QD5ZwAjn6RlUu5vtep6D3rmg7Cnns1?SzldaQ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-9-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=43/2-9-0, 3=43/2-9-0, 4=68/2-9-0
Max Horz 1=-32(LC 8)
Max Uplift 1=-26(LC 12), 3=-30(LC 13), 4=-13(LC 12)
Max Grav 1=43(LC 1), 3=44(LC 20), 4=68(LC 1)

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

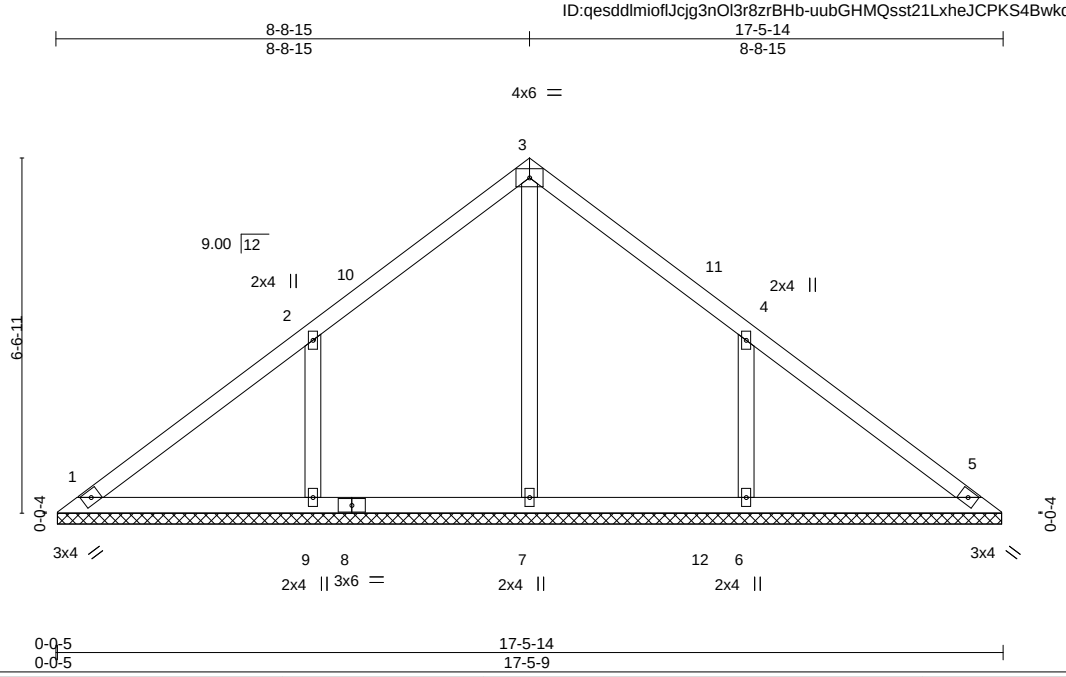
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V09	Valley	4	1	I40248550
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:04 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-uubGHMQsst21LxheJCPKS4BwkdNWV5UM?RbaYuzldaP



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 75 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 17-5-4.
(lb) - Max Horz 1=-277(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 9=-428(LC 12), 6=-428(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=366(LC 22), 9=587(LC 19), 6=586(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-392/466, 4-6=-392/466

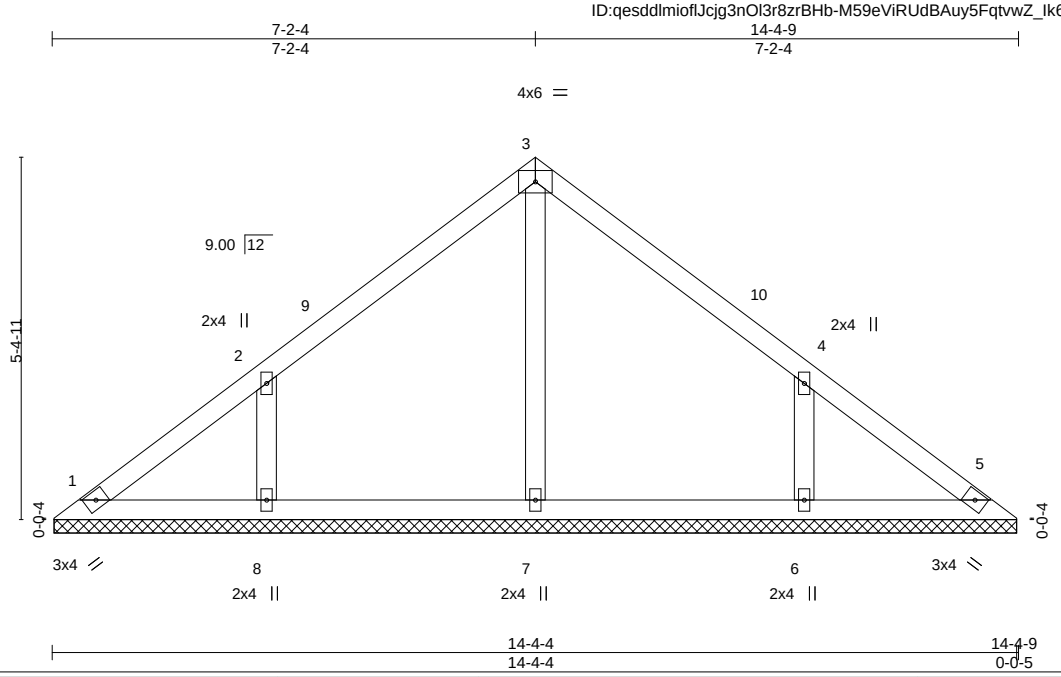
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 8-8-15, Exterior(2R) 8-8-15 to 11-8-15, Interior(1) 11-8-15 to 17-0-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 9=428, 6=428.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V10	Valley	4	1	I40248551
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:05 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-M59eViRUdBAuy5FqtvwZ_Ik6k0keEZ5VE5L84LzIdaO



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 59 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 14-3-14.
(lb) - Max Horz 1=-225(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-349(LC 12), 6=-348(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=256(LC 19), 8=401(LC 19), 6=401(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-335/388, 4-6=-335/388

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-2-4, Interior(1) 3-2-4 to 7-2-4, Exterior(2R) 7-2-4 to 10-2-4, Interior(1) 10-2-4 to 13-11-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=349, 6=348.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V11	GABLE	4	1	I40248552
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:06 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-qHj0i1S6OUJlaFq0QdRoXVGIhQ30z0XfTl4hcnzldaN

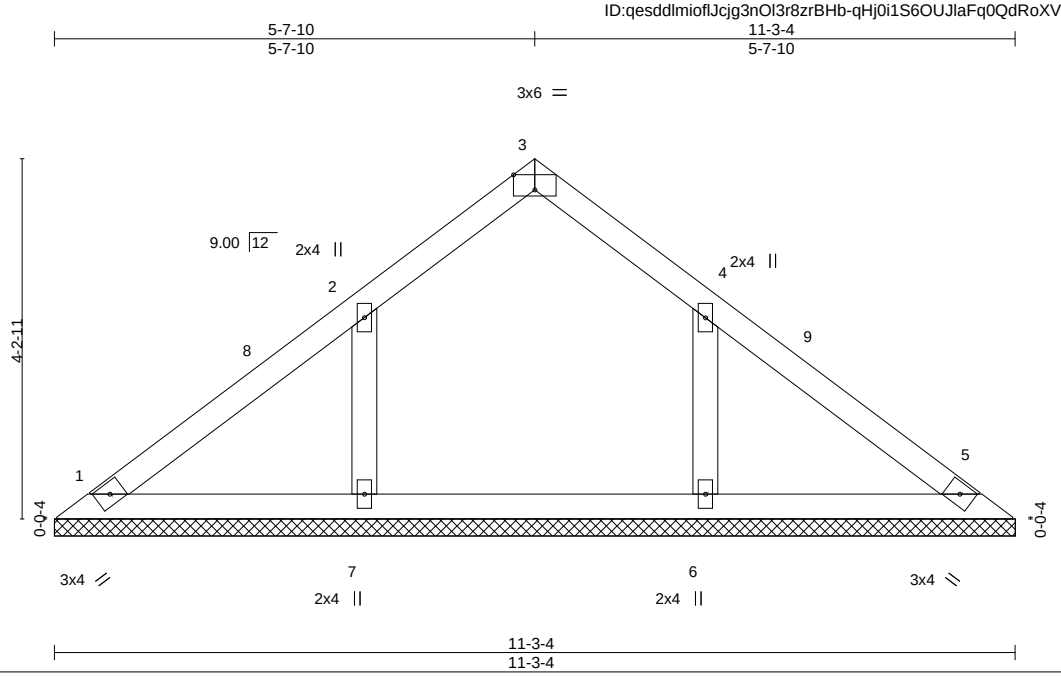


Plate Offsets (X,Y)-- [3:0-3-0,Edge], [4:0-0-0,0-0-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 43 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 11-3-4.
(lb) - Max Horz 1=-173(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) except 7=-266(LC 12), 6=-263(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=347(LC 19), 6=344(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-7=-291/349, 4-6=-291/349

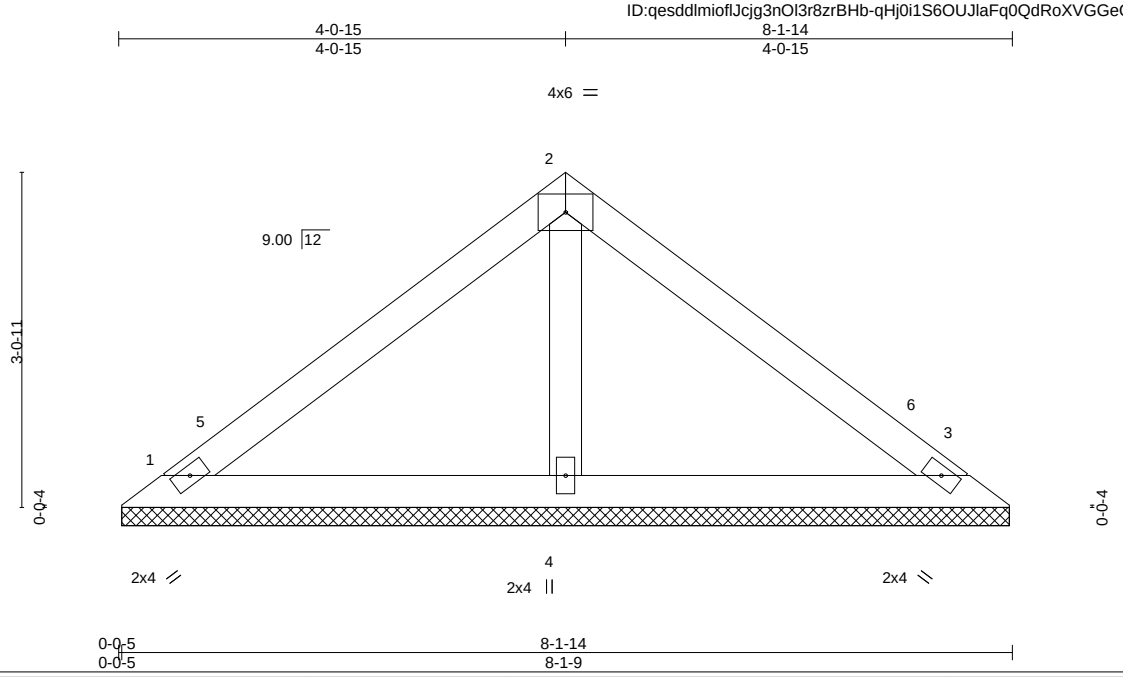
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-7-10, Interior(1) 3-7-10 to 5-7-10, Exterior(2R) 5-7-10 to 8-7-10, Interior(1) 8-7-10 to 10-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 266 lb uplift at joint 7 and 263 lb uplift at joint 6.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V12	Valley	4	1	I40248553
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:06 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-qHj0i1S6OUJlaFq0QdRoXVGGeQ2bz1FfTl4hcnzldaN



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 29 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=149/8-1-4, 3=149/8-1-4, 4=285/8-1-4
Max Horz 1=-121(LC 8)
Max Uplift 1=-79(LC 12), 3=-95(LC 13), 4=-87(LC 12)
Max Grav 1=149(LC 1), 3=155(LC 20), 4=285(LC 1)

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

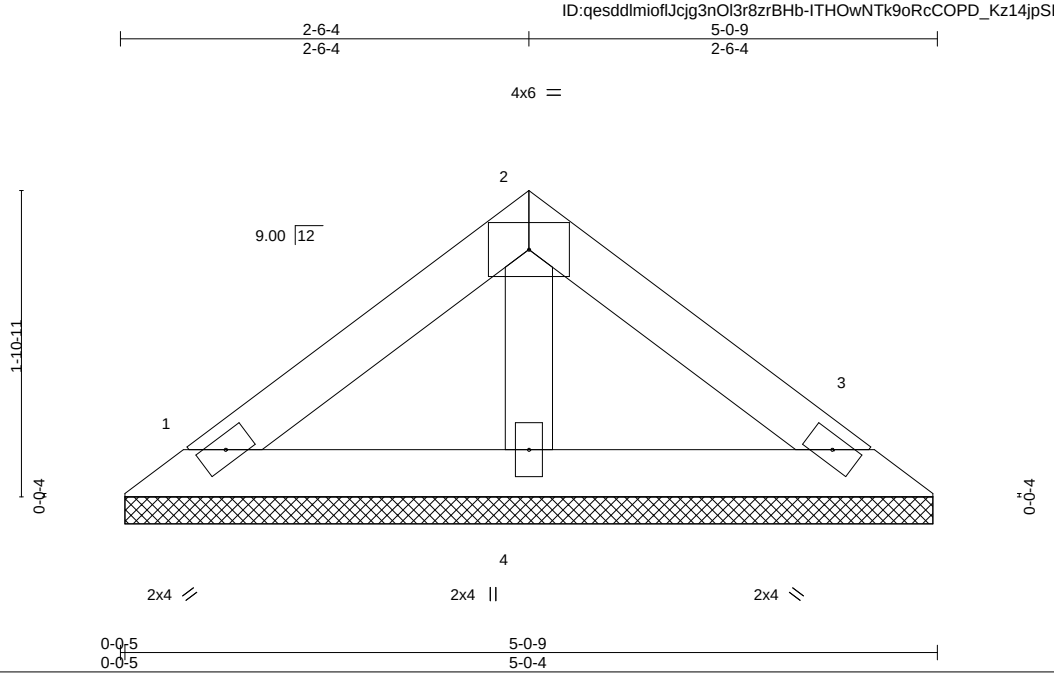
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 4-0-15, Exterior(2R) 4-0-15 to 7-0-15, Interior(1) 7-0-15 to 7-8-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 1, 95 lb uplift at joint 3 and 87 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V13	Valley	4	1	I40248554
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:07 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-ITHOwNTk9oRcCOPD_Kz14jpSDqQEiUqohPqF8DzIdaM



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 17 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 or 5-0-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=93/4-11-14, 3=93/4-11-14, 4=148/4-11-14
Max Horz 1=-69(LC 8)
Max Uplift 1=-56(LC 12), 3=-65(LC 13), 4=-29(LC 12)
Max Grav 1=93(LC 1), 3=96(LC 20), 4=148(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint 1, 65 lb uplift at joint 3 and 29 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V14	GABLE	4	1	I40248555
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:08 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-mfrm7jTMw6ZSqY_PY2UGcwMesElgRwFxw3ZohfzIdaL

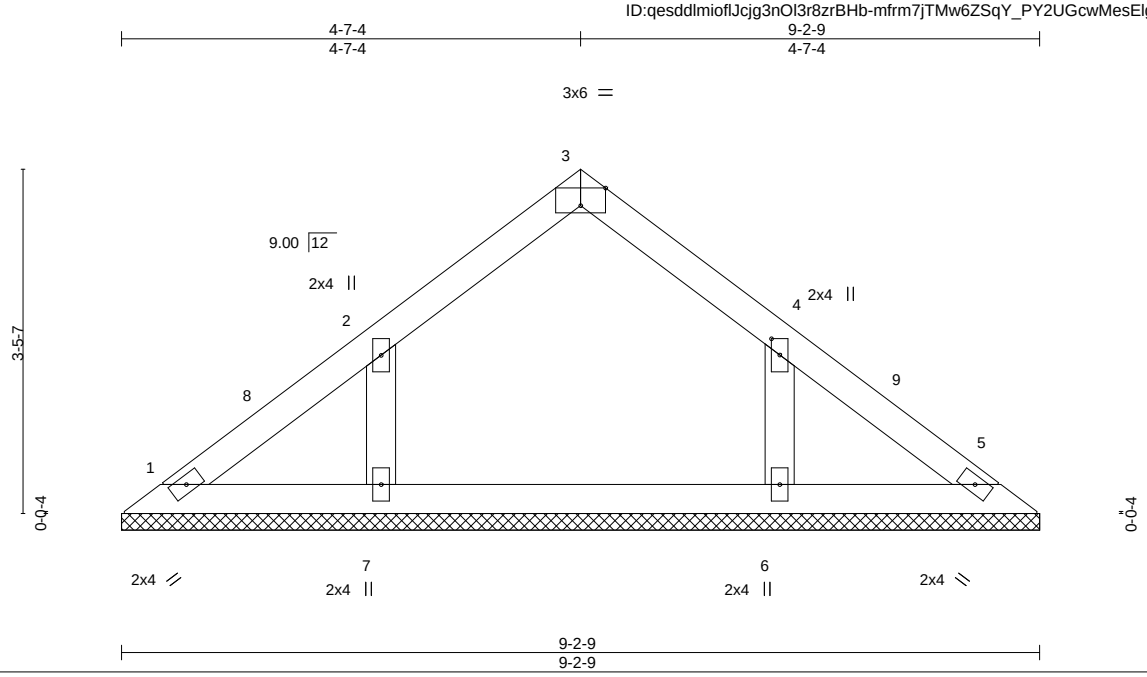


Plate Offsets (X,Y)-- [3:0-3-0,Edge], [4:0-1-15,0-1-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-S							Weight: 33 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 9-2-9.
(lb) - Max Horz 1=-139(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 7=-195(LC 12), 6=-193(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=275(LC 19), 6=272(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-7=-234/300, 4-6=-234/300

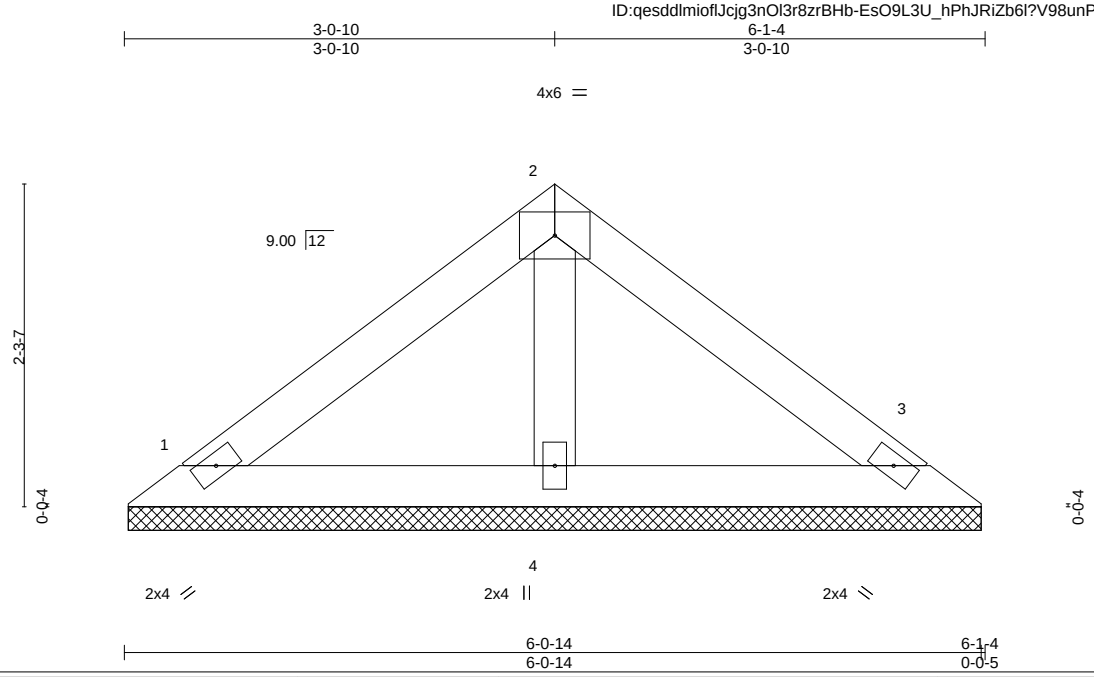
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior(1) 3-5-4 to 4-7-4, Exterior(2R) 4-7-4 to 7-7-4, Interior(1) 7-7-4 to 8-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 7=195, 6=193.
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.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V15	Valley	4	1	I40248556
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:09 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-EsO9L3U_hPhJRiZb6l?V98unPe5JAOD59jJLD6zldaK



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	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	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-P							Weight: 21 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 or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=116/6-0-9, 3=116/6-0-9, 4=185/6-0-9
Max Horz 1=-87(LC 8)
Max Uplift 1=-70(LC 12), 3=-81(LC 13), 4=-36(LC 12)
Max Grav 1=116(LC 1), 3=120(LC 20), 4=185(LC 1)

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

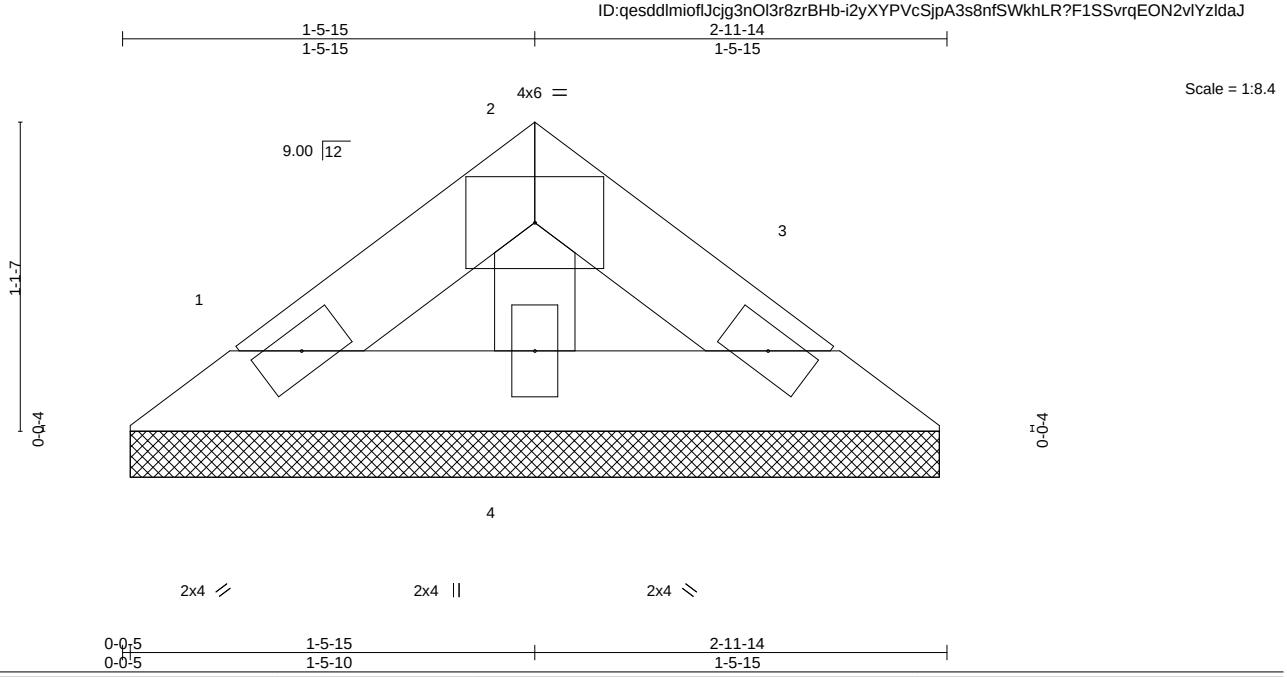
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

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

Job	Truss	Truss Type	Qty	Ply	H&H/Cardinal/
2233821	V16	Valley	4	1	I40248557
					Job Reference (optional)

Builders FirstSource, Sumter, SC - 29153, 8.240 s Dec 6 2019 MiTek Industries, Inc. Thu Feb 13 06:56:10 2020 Page 1
ID:qesddlmioflJcjg3nOl3r8zrBHb-i2yXYPVcSjpA3s8nfSWkhLR?F1SSvrqEON2vlYzldaJ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-11-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 1=47/2-11-4, 3=47/2-11-4, 4=75/2-11-4
Max Horz 1=-35(LC 8)
Max Uplift 1=-28(LC 12), 3=-33(LC 13), 4=-15(LC 12)
Max Grav 1=47(LC 1), 3=49(LC 20), 4=75(LC 1)

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

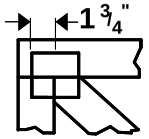
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

February 13,2020

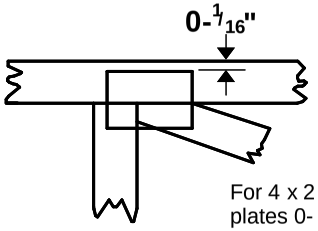
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

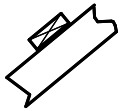
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

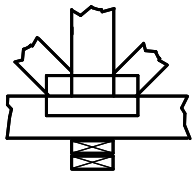
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

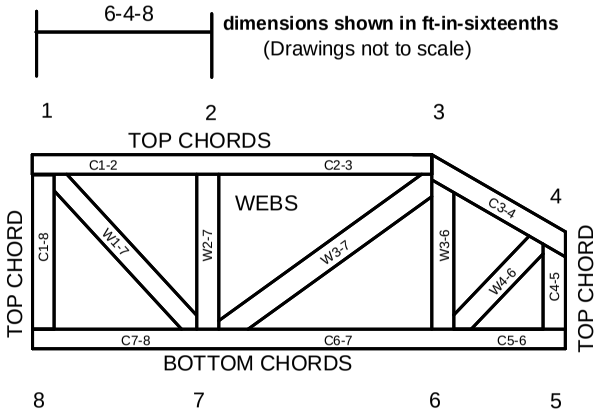


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

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.