ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02003-24593
1055 Serenity

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 2383 (Dunn, NC).

Pages or sheets covered by this seal: T37046641 thru T37046666

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

North Carolina COA: C-0844

April 18,2025

ORegan, Philip

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	A01SE	Common Structural Gable	1	1	T37046641
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:24

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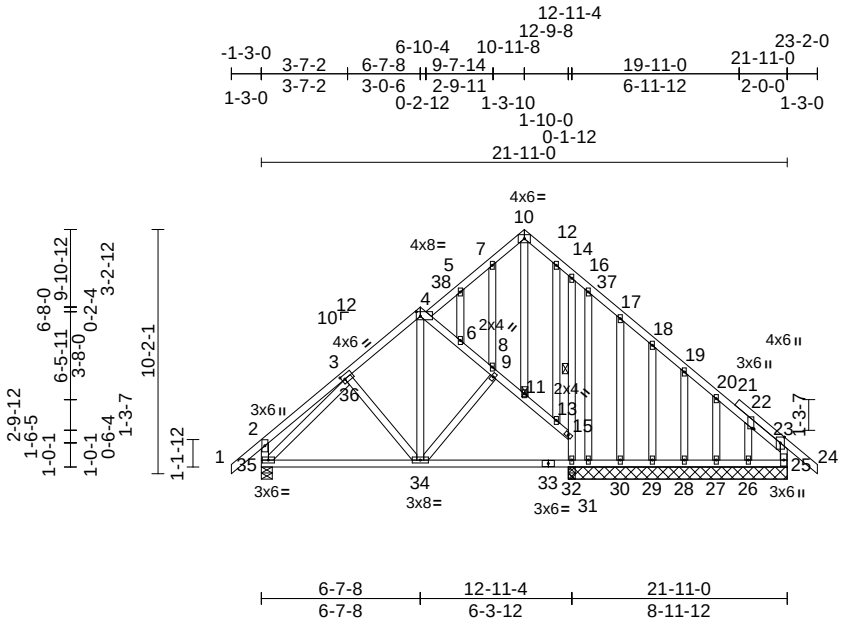

Scale = 1:96

Plate Offsets (X, Y): [3:0-1-8,0-2-0], [4:0-2-0,0-2-4], [22:0-0-5,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.05	34-35	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.10	34-35	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.01	25	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 207 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 4-34,32-14:2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 11-10,13-12,31-16,30-17:2x4 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 14-32
JOINTS	1 Brace at Jt(s): 11

REACTIONS (size) 25=9-1-8, 26=9-1-8, 27=9-1-8, 28=9-1-8, 29=9-1-8, 30=9-1-8, 31=9-1-8, 32=0-3-8, 35=0-5-8
Max Horiz 35=205 (LC 13)
Max Uplift 25=-69 (LC 11), 26=-161 (LC 15), 27=-16 (LC 14), 28=-53 (LC 15), 29=-44 (LC 15), 30=-49 (LC 15), 31=-216 (LC 5), 35=-99 (LC 14)
Max Grav 25=455 (LC 26), 26=94 (LC 13), 27=157 (LC 2), 28=101 (LC 27), 29=100 (LC 27), 30=116 (LC 27), 31=-2 (LC 11), 32=446 (LC 5), 35=662 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/48, 2-3=-260/86, 3-4=-517/113, 10-12=-249/149, 12-14=-270/130, 14-16=-230/142, 16-17=-285/124, 17-18=-300/99, 18-19=-306/76, 19-20=-317/71, 20-22=-291/66, 22-23=-381/86, 23-24=0/48, 2-35=-313/105, 4-5=-277/93, 5-7=-252/113, 7-10=-202/121, 4-6=-235/88, 6-8=-261/106, 8-9=-252/107, 9-11=-251/107, 11-13=-164/39, 13-15=-156/51, 23-25=-365/56
BOT CHORD	34-35=-126/511, 32-34=-80/377, 31-32=-59/259, 30-31=-59/259, 29-30=-59/259, 28-29=-59/259, 27-28=-59/259, 26-27=-59/259, 25-26=-59/259
WEBS	10-11=-105/145, 7-8=-1/52, 5-6=-37/25, 12-13=-20/41, 16-31=-27/61, 17-30=-71/61, 18-29=-78/52, 19-28=-75/56, 20-27=-109/32, 22-26=-47/107, 4-34=0/163, 3-36=-105/100, 34-36=-77/99, 35-36=-400/21, 9-34=-55/111, 15-32=-208/7, 14-15=-127/0

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-11-8, Exterior(2R) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

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13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 216 lb uplift at joint 31, 49 lb uplift at joint 30, 44 lb uplift at joint 29, 53 lb uplift at joint 28, 16 lb uplift at joint 27, 161 lb uplift at joint 26, 69 lb uplift at joint 25 and 99 lb uplift at joint 35.
14) 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.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046642
P02003-24593	A02	Common	6	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:26

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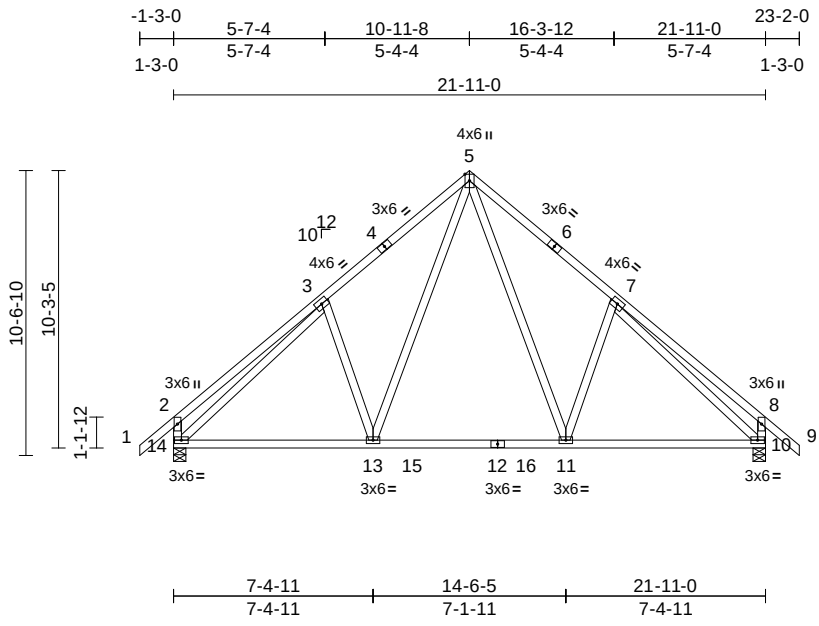

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.10	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.14	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 151 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 11-5,13-5,14-3,10-7:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-9-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 10=0-5-8, 14=0-5-8
Max Horiz 14=212 (LC 13)
Max Uplift 10=-116 (LC 15), 14=-116 (LC 14)
Max Grav 10=969 (LC 27), 14=969 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-322/148, 3-5=-938/219, 5-7=-938/219, 7-8=-322/148, 8-9=0/48, 2-14=-360/156, 8-10=-360/156
BOT CHORD 13-14=-109/808, 11-13=-15/566, 10-11=-31/719
WEBS 5-11=-152/516, 5-13=-152/515, 3-13=-203/200, 7-11=-203/200, 3-14=-800/39, 7-10=-800/39

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-11-8, Exterior(2R) 10-11-8 to 13-11-8, Interior (1) 13-11-8 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 116 lb uplift at joint 10 and 116 lb uplift at joint 14.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	A02A	Attic	5	1	Job Reference (optional)	T37046643

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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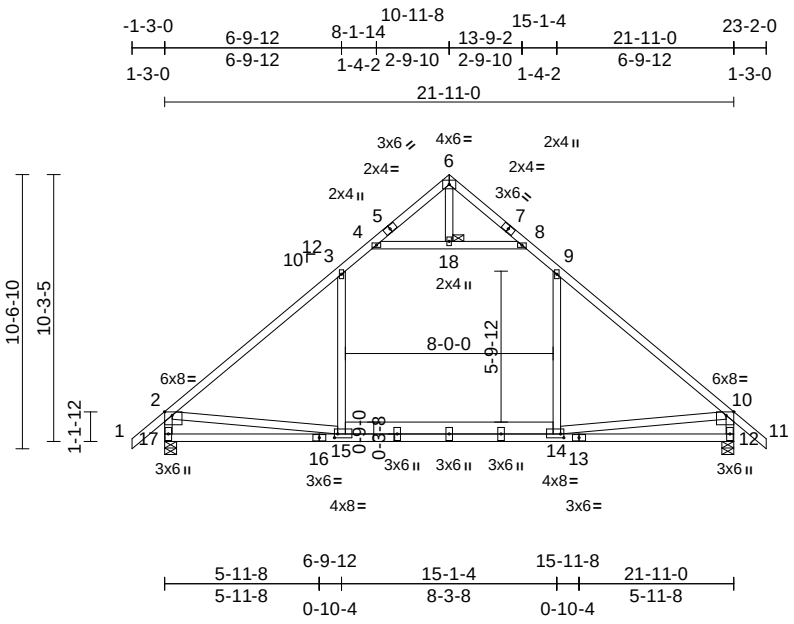

Scale = 1:88.7

Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-3-8,Edge], [14:0-1-8,0-1-12], [15:0-1-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.33	15-17	>777	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.40	15-17	>647	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS		Attic	-0.27	14-15	>368	360		
BCDL	10.0										Weight: 151 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 15-14:2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 9-14,3-15,4-8:2x4 SP No.1, 15-2,14-10:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-4-3 oc bracing.
JOINTS 1 Brace at Jt(s): 18

REACTIONS (size) 12=0-5-8, 17=0-5-8
Max Horiz 17=212 (LC 13)
Max Uplift 12=-92 (LC 15), 17=-92 (LC 14)
Max Grav 12=941 (LC 28), 17=941 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/48, 2-3=-1037/126, 3-4=-652/145, 4-6=-71/88, 6-8=-71/88, 8-9=-652/145, 9-10=-1037/126, 10-11=0/48, 2-17=-878/131, 10-12=-878/131
BOT CHORD 15-17=-314/525, 14-15=-11/739, 12-14=-194/371
WEBS 9-14=0/332, 3-15=0/332, 4-18=-751/175, 8-18=-751/175, 6-18=-1/4, 2-15=-134/560, 10-14=-140/565

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-11-8, Exterior(2R) 10-11-8 to 13-11-13, Interior (1) 13-11-13 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Bottom chord live load (20.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 14-15
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 17 and 92 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	A03	Hip	1	1	T37046644
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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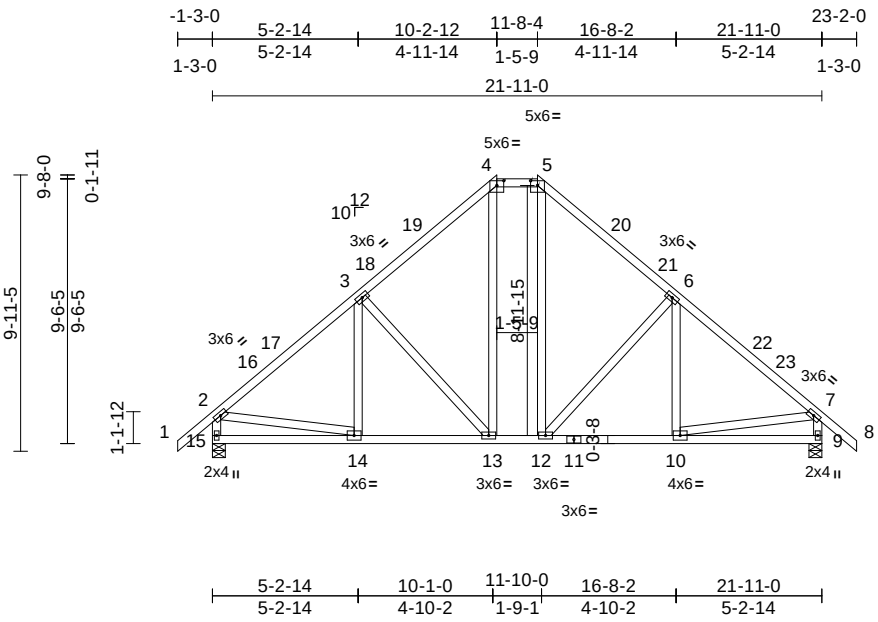

Scale = 1:82.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.05	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.07	13-14	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 158 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 13-4,13-3,12-5,12-6:2x4 SP No.2

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

REACTIONS (size) 9=0-5-8, 15=0-5-8
Max Horiz 15=199 (LC 15)
Max Uplift 9=-116 (LC 17), 15=-116 (LC 16)
Max Grav 9=875 (LC 2), 15=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-934/117, 3-4=-762/168, 4-5=-496/158, 5-6=-762/169, 6-7=-934/122, 7-8=0/48, 2-15=-827/139, 7-9=-827/142
BOT CHORD 14-15=-178/241, 13-14=-99/693, 12-13=-24/496, 10-12=-17/675, 9-10=-35/89
WEBS 6-10=-3/147, 3-14=-3/147, 4-13=-62/249, 3-13=-294/161, 5-12=-62/249, 6-12=-294/161, 2-14=-1/601, 7-10=-6/601

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-2-12, Exterior(2E) 10-2-12 to 11-8-4, Exterior(2R) 11-8-4 to 15-11-3, Interior (1) 15-11-3 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 116 lb uplift at joint 15 and 116 lb uplift at joint 9.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046645
P02003-24593	A04	Hip	1	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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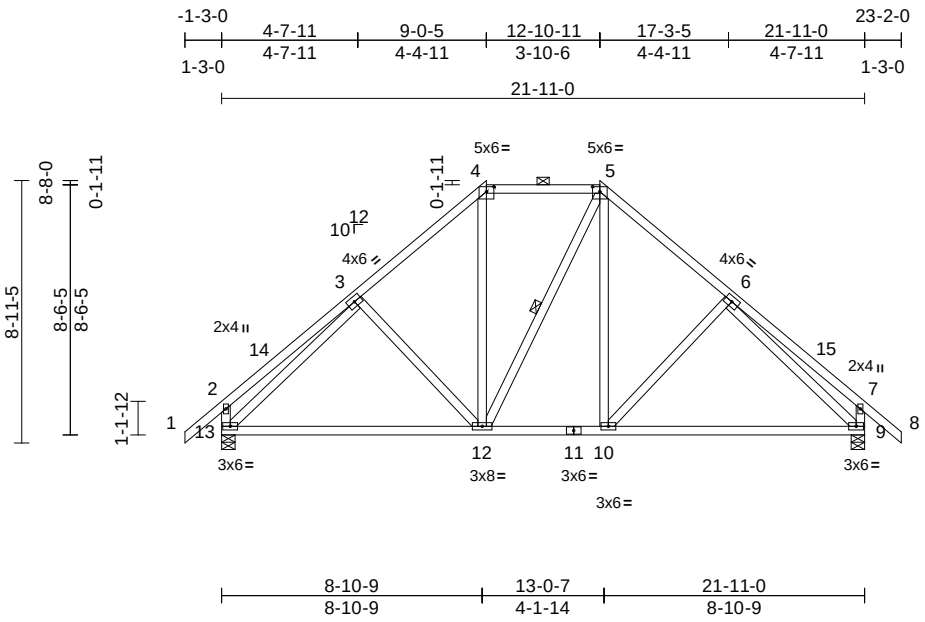

Scale = 1:78.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.16	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.33	9-10	>785	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 153 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 12-4,10-5,12-5:2x4 SP No.2

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

REACTIONS (size) 9=0-5-8, 13=0-5-8
Max Horiz 13=181 (LC 13)
Max Uplift 9=-112 (LC 15), 13=-112 (LC 14)
Max Grav 9=875 (LC 2), 13=875 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-257/95, 3-4=-757/162, 4-5=-518/162, 5-6=-757/165, 6-7=-257/95, 7-8=0/48, 2-13=-304/116, 7-9=-304/116
BOT CHORD 12-13=-109/601, 10-12=-24/517, 9-10=-34/596
WEBS 6-10=-146/148, 4-12=-51/267, 3-12=-145/148, 5-10=-67/267, 5-12=-85/86, 3-13=-673/75, 6-9=-672/86

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 9-0-5, Exterior(2E) 9-0-5 to 12-10-11, Exterior(2R) 12-10-11 to 17-5-1, Interior (1) 17-5-1 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 9 and 112 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046646
P02003-24593	A05	Hip	1	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:27
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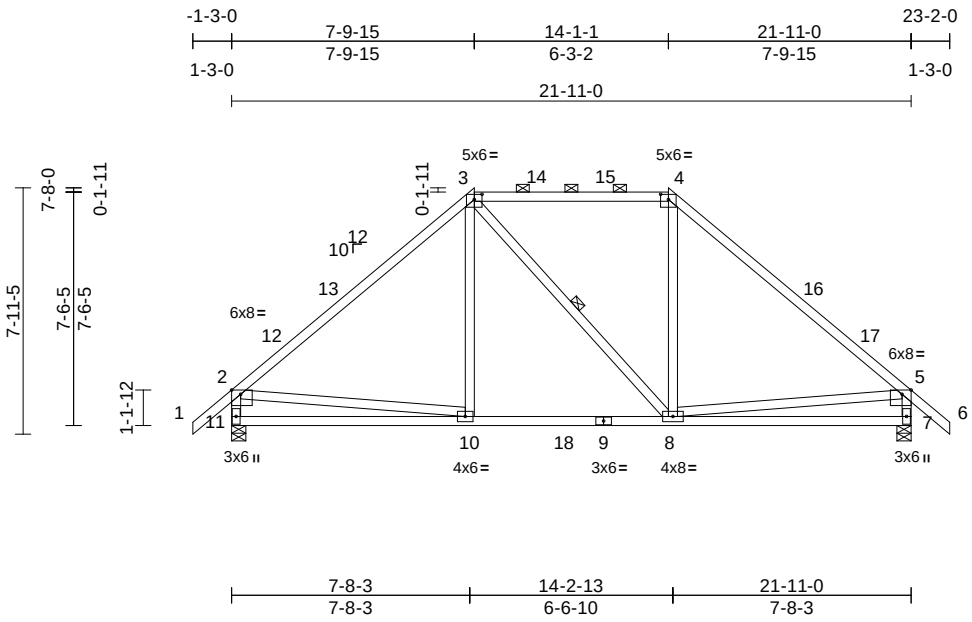

Scale = 1:74.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.09	7-8	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.18	7-8	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 136 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 11-2,7-5:2x4 SP No.3

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

REACTIONS (size) 7=0-5-8, 11=0-5-8
Max Horiz 11=-163 (LC 12)
Max Uplift 7=-107 (LC 15), 11=-107 (LC 14)
Max Grav 7=935 (LC 3), 11=942 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-954/137, 3-4=-634/160, 4-5=-942/137, 5-6=0/48, 2-11=-821/156, 5-7=-811/157
BOT CHORD 10-11=-258/493, 8-10=-84/666, 7-8=-189/378
WEBS 3-10=0/304, 4-8=-6/284, 3-8=-83/87, 2-10=-121/455, 5-8=-126/445

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 7-9-15, Exterior(2R) 7-9-15 to 12-0-13, Interior (1) 12-0-13 to 14-1-1, Exterior(2R) 14-1-1 to 18-4-0, Interior (1) 18-4-0 to 23-2-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 11 and 107 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046647
P02003-24593	A06	Hip	1	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:28

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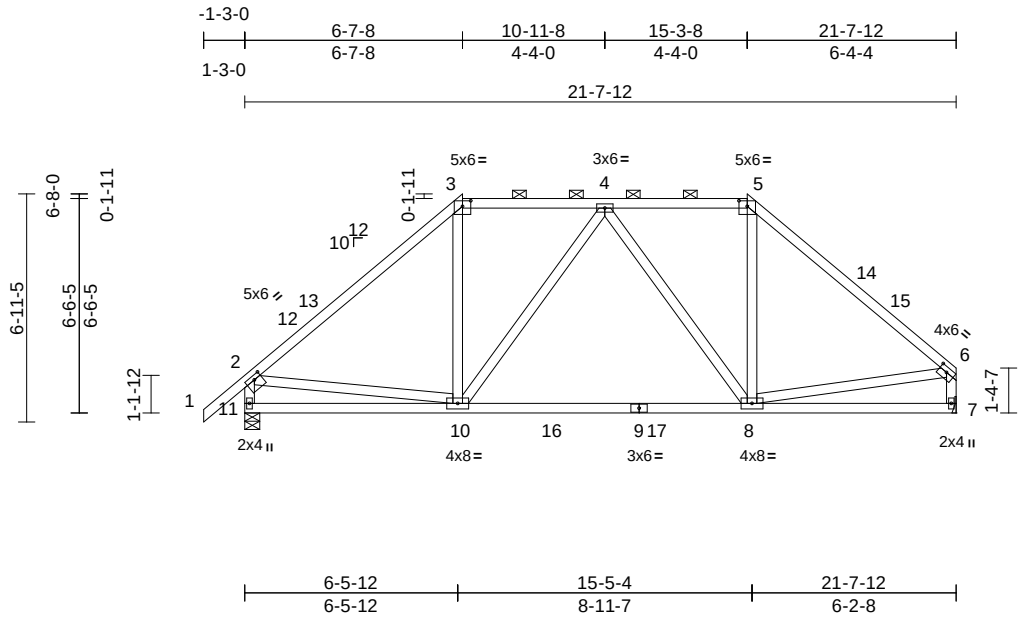

Scale = 1:70.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.21	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.32	8-10	>790	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.24	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 10-4,10-2,8-4:2x4 SP No.2

BRACING

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

REACTIONS (size) 7= Mechanical, 11=0-5-8
Max Horiz 11=139 (LC 11)
Max Uplift 7=-76 (LC 15), 11=-101 (LC 14)
Max Grav 7=866 (LC 3), 11=931 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-977/129, 3-4=-674/148, 4-5=-662/147, 5-6=-949/126, 2-11=-848/149, 6-7=-790/111
BOT CHORD 10-11=-197/318, 8-10=-118/736, 7-8=-71/121
WEBS 3-10=-26/374, 5-8=-28/360, 4-10=-199/110, 6-8=-75/576, 2-10=-96/559, 4-8=-216/111

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 6-7-8, Exterior(2R) 6-7-8 to 10-11-8, Interior (1) 10-11-8 to 15-3-8, Exterior(2R) 15-3-8 to 19-6-6, Interior (1) 19-6-6 to 21-6-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 11 and 76 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	A07	Hip	1	1	Job Reference (optional)	T37046648

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:28
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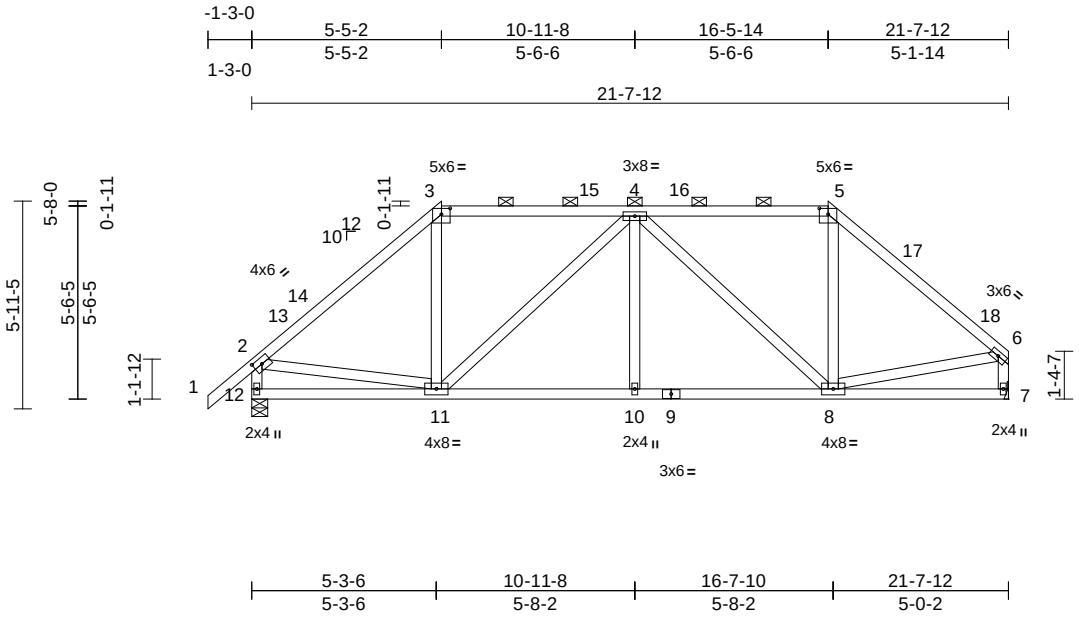

Scale = 1:65.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.02	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.06	8-10	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 11-4,8-4:2x4 SP No.2

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

REACTIONS (size) 7= Mechanical, 12=0-5-8
Max Horiz 12=121 (LC 11)
Max Uplift 7=-68 (LC 15), 12=-93 (LC 14)
Max Grav 7=788 (LC 2), 12=868 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-890/125, 3-4=-611/138, 4-5=-595/135, 5-6=-856/122, 2-12=-819/147, 6-7=-742/109
BOT CHORD 11-12=-144/210, 10-11=-152/841, 8-10=-152/841, 7-8=-47/80
WEBS 3-11=-22/310, 4-10=0/220, 5-8=-22/295, 4-11=-361/109, 6-8=-87/530, 2-11=-99/494, 4-8=-382/111

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 5-5-2, Exterior(2R) 5-5-2 to 9-8-1, Interior (1) 9-8-1 to 16-5-14, Exterior(2R) 16-5-14 to 20-8-13, Interior (1) 20-8-13 to 21-6-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 12 and 68 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	A08	Hip	1	1	Job Reference (optional)	T37046649

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:28

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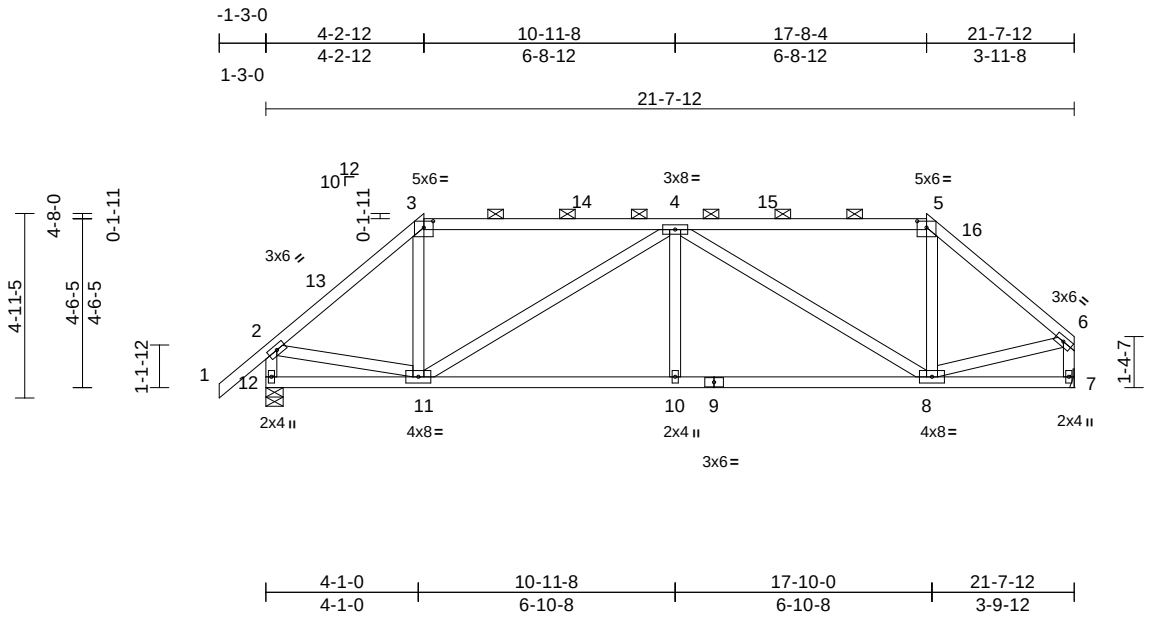

Scale = 1:61.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.05	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.10	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 125 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 11-4,8-4:2x4 SP No.2

BRACING

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

REACTIONS (size) 7= Mechanical, 12=0-5-8
Max Horiz 12=103 (LC 11)
Max Uplift 7=-90 (LC 10), 12=-94 (LC 11)
Max Grav 7=788 (LC 2), 12=868 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-886/127, 3-4=-633/122, 4-5=-610/115, 5-6=-843/122, 2-12=-837/137, 6-7=-761/102
BOT CHORD 11-12=-110/123, 10-11=-206/1069, 8-10=-206/1069, 7-8=-30/37
WEBS 3-11=-15/322, 4-10=0/284, 5-8=-13/302, 4-11=-545/138, 6-8=-96/599, 2-11=-103/606, 4-8=-573/141

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 4-2-12, Exterior(2R) 4-2-12 to 8-5-10, Interior (1) 8-5-10 to 17-8-4, Exterior(2E) 17-8-4 to 21-6-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 12 and 90 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	A09	Half Hip	1	1	T37046650
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:29 Page: 1
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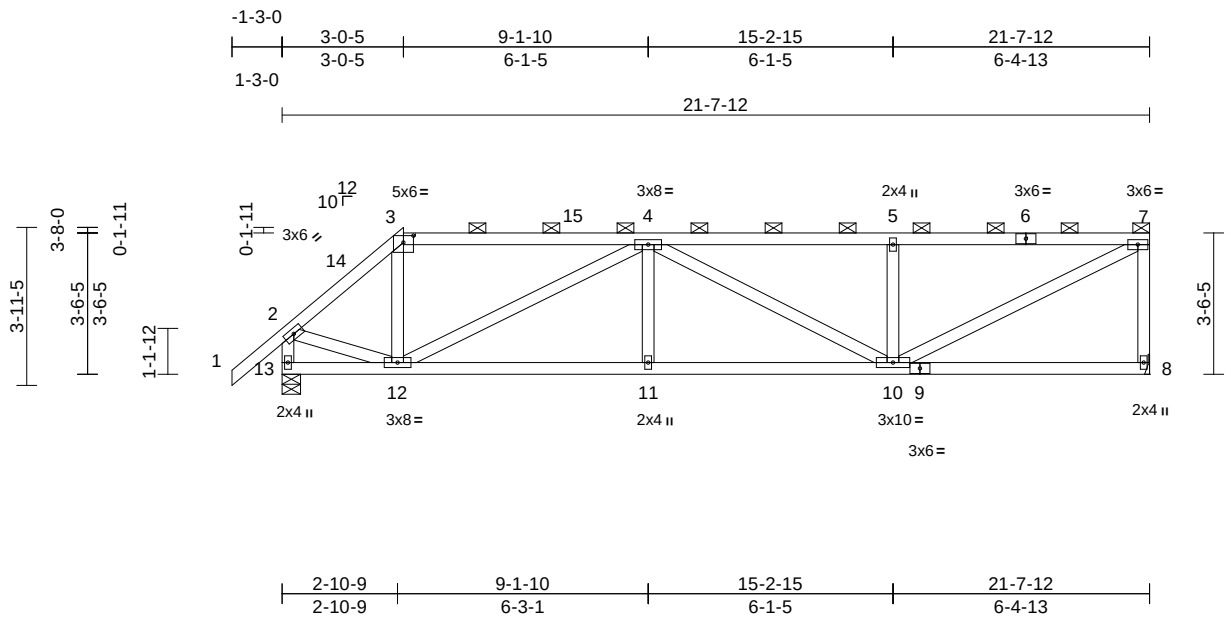


Scale = 1:57.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.06	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.12	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 120 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 10-7,12-4,10-4:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-13 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 12-13.

REACTIONS (size) 8= Mechanical, 13=0-5-8
Max Horiz 13=103 (LC 11)
Max Uplift 8=-157 (LC 11), 13=-118 (LC 11)
Max Grav 8=788 (LC 2), 13=868 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-838/140, 3-4=-607/124, 4-5=-1151/228, 5-7=-1151/228, 7-8=-729/172, 2-13=-857/133
BOT CHORD 12-13=-160/112, 11-12=-296/1333, 10-11=-296/1333, 8-10=-34/54
WEBS 7-10=-254/1258, 2-12=-105/664, 3-12=-19/322, 4-12=-833/186, 4-11=0/247, 4-10=-206/51, 5-10=-353/135

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 3-0-5, Exterior(2R) 3-0-5 to 7-3-4, Interior (1) 7-3-4 to 21-6-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 8 and 118 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

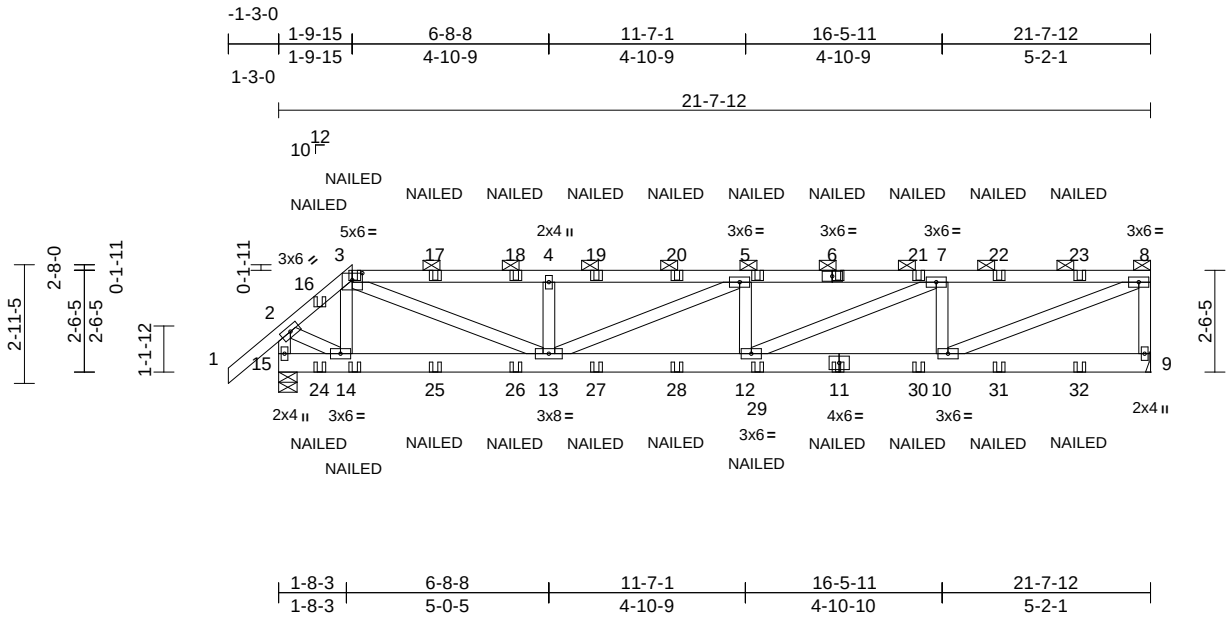
April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	A10G	Half Hip Girder	1	2	T37046651
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:29 Page: 1

ID:agx0Wb8D9TroIzkGGhgLiBzQ7iy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:57.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.07	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.12	12-13	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.44	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 264 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 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15.

REACTIONS (size) 9= Mechanical, 15=0-5-8
Max Horiz 15=73 (LC 7)
Max Uplift 9=-255 (LC 7), 15=-345 (LC 7)
Max Grav 9=1083 (LC 30), 15=1090 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-1013/295, 3-4=-2352/585, 4-5=-2351/585, 5-7=-2760/667, 7-8=-2026/488, 8-9=-996/264, 2-15=-1157/302
BOT CHORD 14-15=-71/52, 13-14=-275/817, 12-13=-685/2760, 10-12=-495/2026, 9-10=-31/62
WEBS 2-14=-250/916, 3-14=-308/84, 3-13=-378/1683, 4-13=-384/173, 5-13=-450/95, 5-12=-160/120, 7-12=-208/802, 7-10=-698/255, 8-10=-504/2136

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 9 and 345 lb uplift at joint 15.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-29, 2-3=-29, 3-8=-39, 9-15=-20
Concentrated Loads (lb)
Vert: 3=-50 (F), 6=-45 (F), 11=-24 (F), 14=-24 (F), 5=-45 (F), 16=5 (F), 17=-45 (F), 18=-45 (F), 19=-45 (F), 20=-45 (F), 21=-45 (F), 22=-45 (F), 23=-45 (F), 24=63 (F), 25=-24 (F), 26=-24 (F), 27=-24 (F), 28=-24 (F), 29=-24 (F), 30=-24 (F), 31=-24 (F), 32=-24 (F)

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	B01E	Common Supported Gable	1	1	T37046652
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:30 Page: 1
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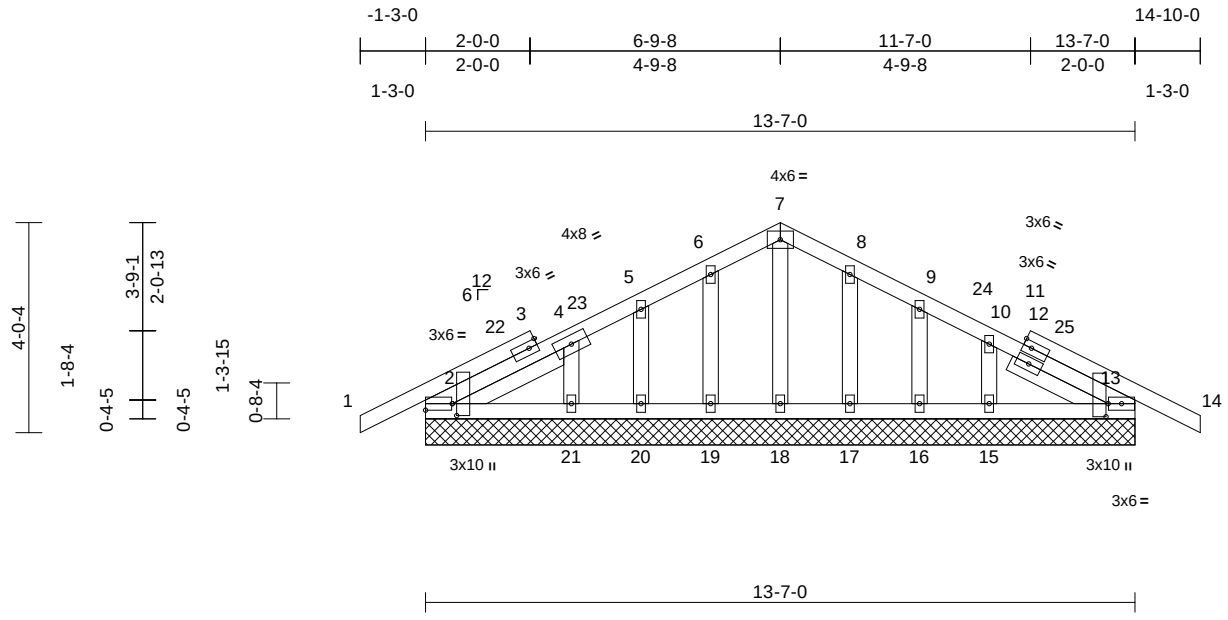


Scale = 1:44.1

Plate Offsets (X, Y): [2:0-2-12,0-1-0], [2:Edge,0-1-8], [13:0-3-0,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 82 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 2-4-10, Right 2x4 SP No.3 -- 2-0-8

BRACING

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

REACTIONS (size) 2=13-7-0, 13=13-7-0, 15=13-7-0, 16=13-7-0, 17=13-7-0, 18=13-7-0, 19=13-7-0, 20=13-7-0, 21=13-7-0
Max Horiz 2=-46 (LC 17)
Max Uplift 2=-37 (LC 16), 13=-43 (LC 17), 15=-31 (LC 17), 16=-32 (LC 17), 17=-27 (LC 17), 19=-28 (LC 16), 20=-32 (LC 16), 21=-28 (LC 16)
Max Grav 2=211 (LC 2), 13=213 (LC 2), 15=122 (LC 37), 16=92 (LC 37), 17=105 (LC 37), 18=88 (LC 33), 19=104 (LC 36), 20=95 (LC 36), 21=109 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/27, 2-4=-54/34, 4-5=-29/40, 5-6=-28/69, 6-7=-40/98, 7-8=-40/98, 8-9=-28/69, 9-10=-25/36, 10-13=-43/18, 13-14=0/27
BOT CHORD	2-21=-23/63, 20-21=-22/61, 19-20=-22/61, 18-19=-22/61, 17-18=-22/61, 16-17=-22/61, 15-16=-22/61, 13-15=-23/62
WEBS	7-18=-62/0, 6-19=-76/55, 5-20=-72/61, 4-21=-73/61, 8-17=-77/55, 9-16=-70/62, 10-15=-85/59

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-3-0 to 1-9-0, Exterior(2N) 1-9-0 to 6-9-8, Corner(3R) 6-9-8 to 9-9-8, Exterior(2N) 9-9-8 to 14-10-0 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) 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 2, 43 lb uplift at joint 13, 28 lb uplift at joint 19, 32 lb uplift at joint 20, 28 lb uplift at joint 21, 27 lb uplift at joint 17, 32 lb uplift at joint 16 and 31 lb uplift at joint 15.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

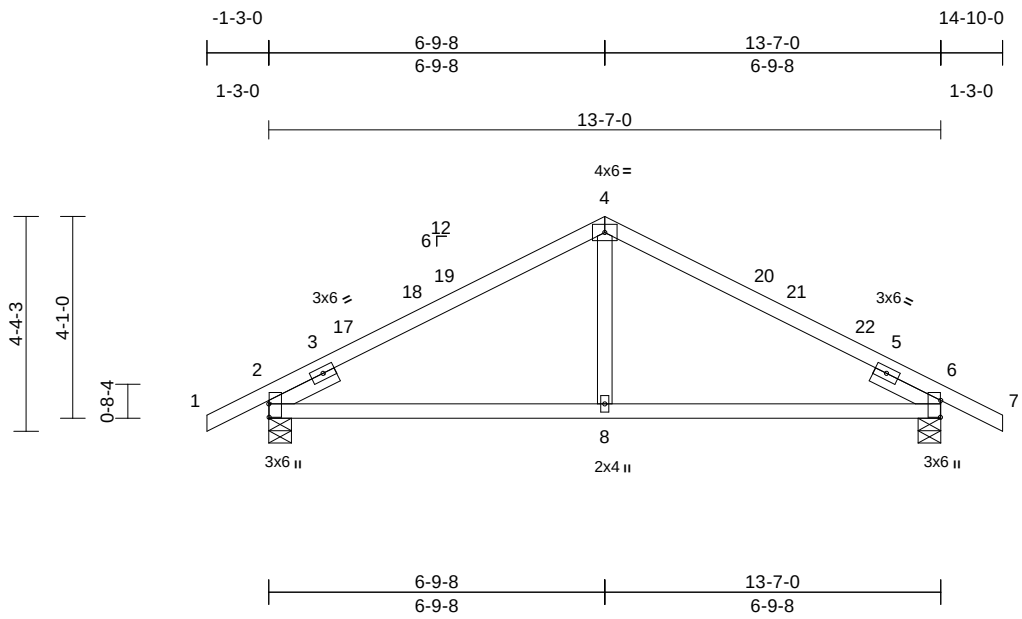
April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046653
P02003-24593	B02	Common	1	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:30
ID:TeMho8MzejtcU?Gme0NGY5zQ5ru-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.06	8-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.09	8-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 57 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=-50 (LC 17)
Max Uplift 2=-91 (LC 16), 6=-91 (LC 17)
Max Grav 2=570 (LC 2), 6=570 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-4=-627/194, 4-6=-627/194, 6-7=0/30
BOT CHORD	2-8=-143/504, 6-8=-146/504
WEBS	4-8=0/285

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 6-9-8, Exterior(2R) 6-9-8 to 9-9-8, Interior (1) 9-9-8 to 14-10-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 2 and 91 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	B03G	Common Girder	1	**2**	T37046654
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:31 Page: 1
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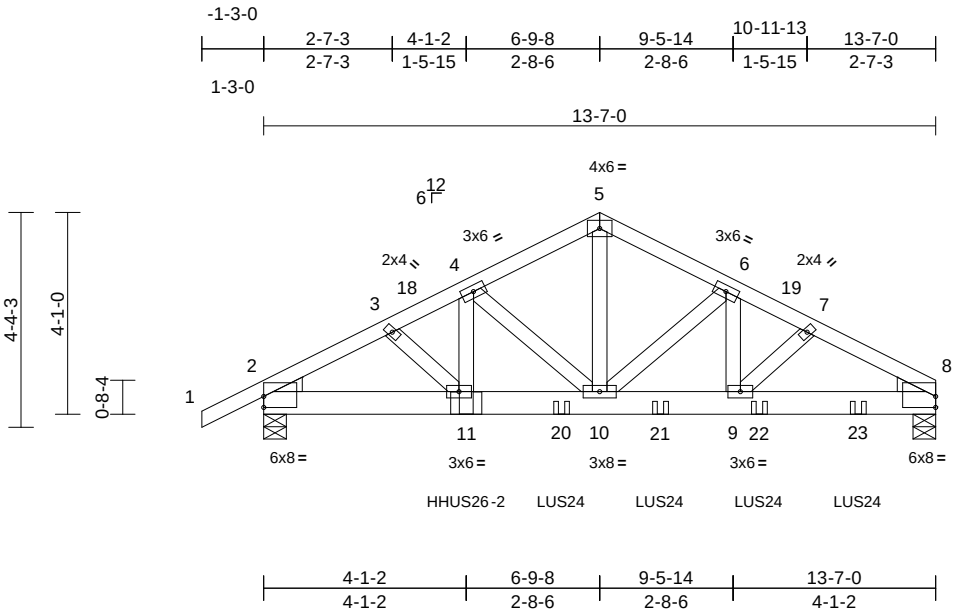

Scale = 1:46.6

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

Loading	(psf)	**Spacing**	2-0-0	**CSI**		**DEFL**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.05	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.09	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 169 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
Right: 2x4 SP No.3

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

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=57 (LC 16)
Max Uplift 2=-433 (LC 12), 8=-405 (LC 13)
Max Grav 2=2347 (LC 2), 8=2859 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-3907/714, 3-4=-3932/726, 4-5=-3272/569, 5-6=-3263/567, 6-7=-4202/632, 7-8=-4224/629
BOT CHORD 2-11=-639/3376, 10-11=-652/3547, 9-10=-522/3770, 8-9=-531/3699
WEBS 4-10=-877/254, 3-11=-50/275, 4-11=-177/678, 5-10=-460/2731, 6-9=-66/1035, 6-10=-1173/136, 7-9=-31/145

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 405 lb uplift at joint 8 and 433 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-2 from the left end to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 6-0-4 from the left end to 10-0-4 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent at 12-0-4 from the left end to connect truss(es) to back face of bottom chord.
16) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-29, 5-8=-29, 12-15=-20
Concentrated Loads (lb)
Vert: 11=-955 (B), 20=-611 (B), 21=-574 (B), 22=-562 (B), 23=-550 (B)

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	C01E	Common Supported Gable	1	1	Job Reference (optional)	T37046655

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:31

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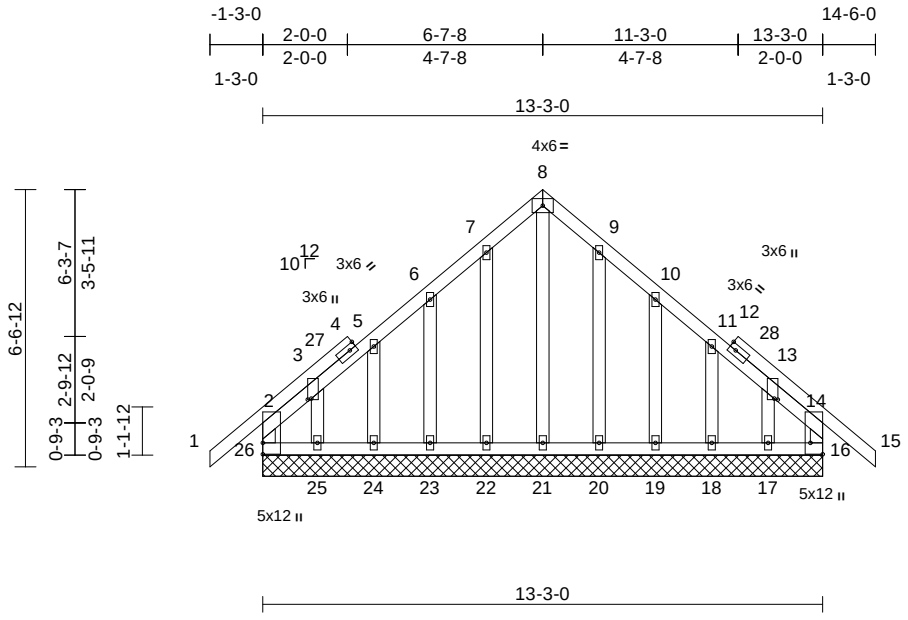

Scale = 1:54.5

Plate Offsets (X, Y): [3:0-0-5,0-1-0], [13:0-0-5,0-1-0], [16:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 104 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 16=13-3-0, 17=13-3-0, 18=13-3-0, 19=13-3-0, 20=13-3-0, 21=13-3-0, 22=13-3-0, 23=13-3-0, 24=13-3-0, 25=13-3-0, 26=13-3-0

Max Horiz 26=133 (LC 13)

Max Uplift 16=-46 (LC 11), 17=-72 (LC 15), 18=-36 (LC 15), 19=-53 (LC 15), 20=-34 (LC 15), 22=-35 (LC 14), 23=-53 (LC 14), 24=-35 (LC 14), 25=-79 (LC 14), 26=-69 (LC 10)

Max Grav 16=157 (LC 33), 17=93 (LC 13), 18=101 (LC 33), 19=105 (LC 27), 20=105 (LC 27), 21=133 (LC 29), 22=107 (LC 26), 23=105 (LC 26), 24=101 (LC 32), 25=108 (LC 12), 26=170 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-26=-145/105, 1-2=0/43, 2-3=-92/81, 3-5=-58/62, 5-6=-53/87, 6-7=-63/146, 7-8=-84/187, 8-9=-84/187, 9-10=-63/146, 10-11=-35/87, 11-13=-38/46, 13-14=-73/59, 14-15=0/43, 14-16=-145/104

BOT CHORD 25-26=-61/82, 24-25=-61/82, 23-24=-61/82, 22-23=-61/82, 21-22=-61/82, 20-21=-61/82, 19-20=-61/82, 18-19=-61/82, 17-18=-61/82, 16-17=-61/82

WEBS 8-21=-182/54, 7-22=-81/51, 6-23=-77/81, 5-24=-73/73, 3-25=-71/61, 9-20=-79/51, 10-19=-78/81, 11-18=-74/73, 13-17=-70/60

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-3-0 to 1-9-0, Exterior(2N) 1-9-0 to 6-7-8, Corner(3R) 6-7-8 to 9-7-8, Exterior(2N) 9-7-8 to 14-6-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 26, 46 lb uplift at joint 16, 35 lb uplift at joint 22, 53 lb uplift at joint 23, 35 lb uplift at joint 24, 79 lb uplift at joint 25, 34 lb uplift at joint 20, 53 lb uplift at joint 19, 36 lb uplift at joint 18 and 72 lb uplift at joint 17.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046656
P02003-24593	E01E	Monopitch Supported Gable	1	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:31 Page: 1
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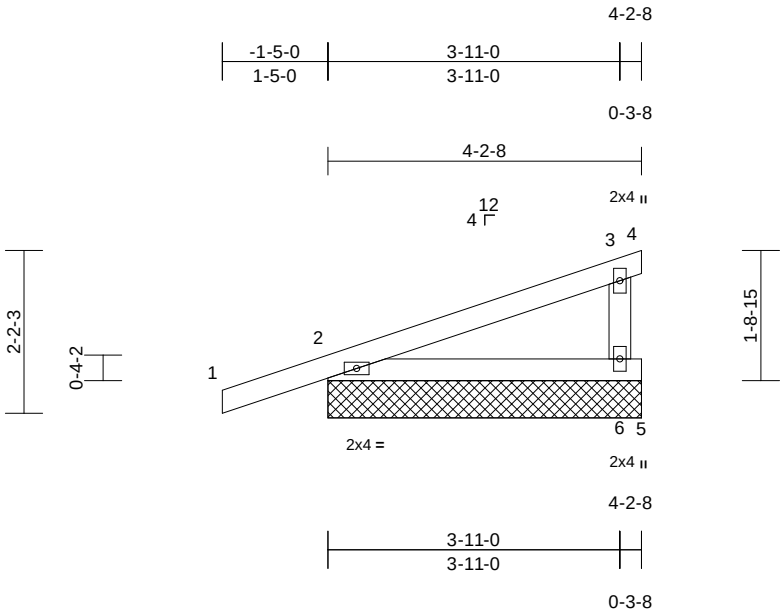

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 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 4-2-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=4-2-8, 4=4-2-8, 5=4-2-8, 6=4-2-8
Max Horiz 2=58 (LC 12)
Max Uplift 2=-67 (LC 12), 4=-195 (LC 2), 5=-94 (LC 7), 6=-106 (LC 16)
Max Grav 2=214 (LC 2), 4=62 (LC 16), 5=7 (LC 16), 6=459 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-94/33, 3-4=-67/66
BOT CHORD 2-6=-9/53, 5-6=0/0
WEBS 3-6=-315/356

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-5-0 to 1-7-0, Exterior(2N) 1-7-0 to 4-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 2, 94 lb uplift at joint 5, 195 lb uplift at joint 4, 106 lb uplift at joint 6 and 67 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046657
P02003-24593	E02	Monopitch	4	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:31
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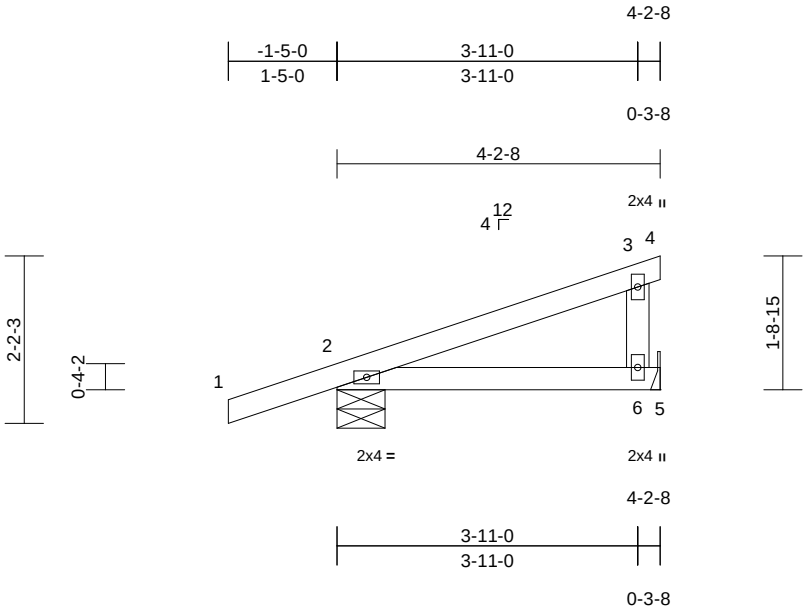

Scale = 1:30

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	6-9	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 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 4-2-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-7-8, 6= Mechanical
Max Horiz 2=58 (LC 12)
Max Uplift 2=-71 (LC 12), 6=-34 (LC 16)
Max Grav 2=235 (LC 2), 6=142 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-57/22, 3-4=-4/0
BOT CHORD 2-6=-4/65, 5-6=0/0
WEBS 3-6=-91/80

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-5-0 to 1-7-0, Interior (1) 1-7-0 to 4-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 2 and 34 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	E03E	Monopitch Supported Gable	1	1	Job Reference (optional)	T37046658

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:32

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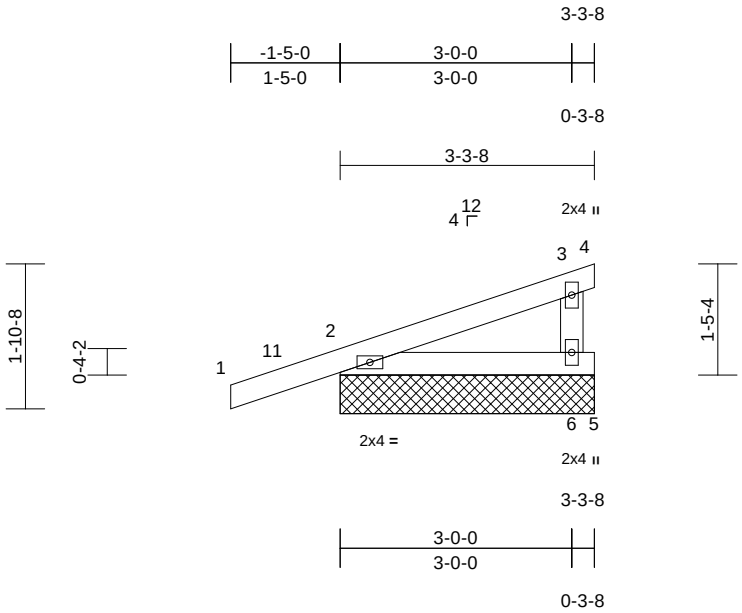

Scale = 1:29.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 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 3-3-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=3-3-8, 4=3-3-8, 5=3-3-8, 6=3-3-8
Max Horiz 2=50 (LC 12)
Max Uplift 2=-67 (LC 12), 4=-89 (LC 2), 5=-31 (LC 7), 6=-55 (LC 16)
Max Grav 2=193 (LC 2), 4=26 (LC 16), 5=4 (LC 16), 6=255 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-92/23, 3-4=-33/28
BOT CHORD 2-6=-20/60, 5-6=0/0
WEBS 3-6=-178/195

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-5-0 to 1-7-0, Exterior(2N) 1-7-0 to 3-3-8 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
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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 2, 31 lb uplift at joint 5, 89 lb uplift at joint 4, 55 lb uplift at joint 6 and 67 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	G01E	Common Supported Gable	1	1	Job Reference (optional)	T37046659

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

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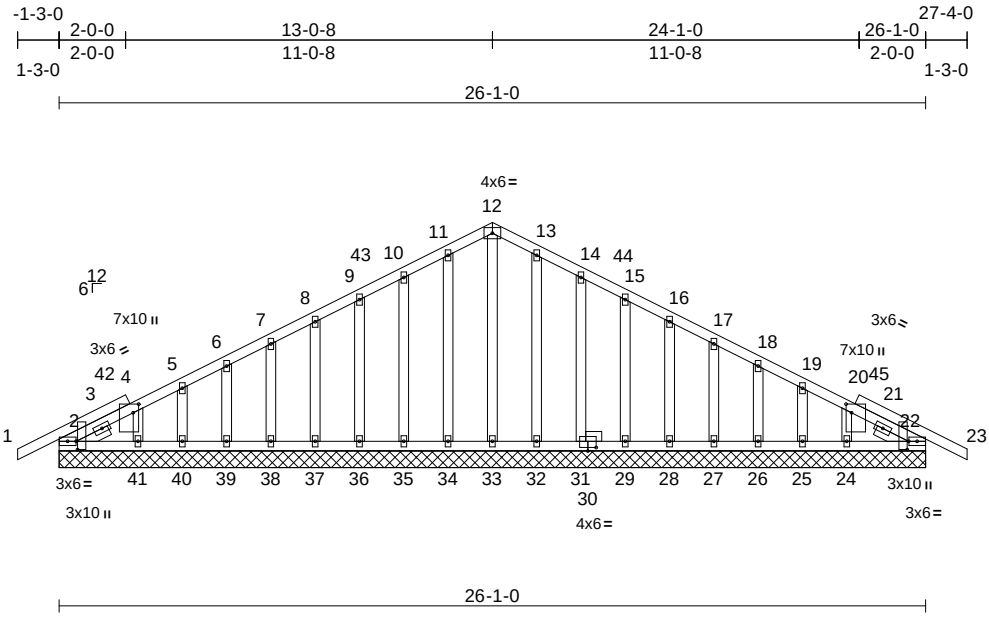

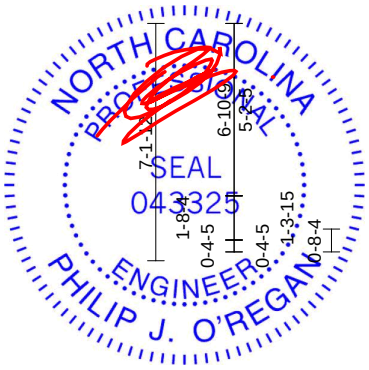

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Plate Offsets (X, Y): [2:0-3-0,0-0-8], [4:0-3-2,0-2-0], [20:0-3-2,0-2-0], [22:0-3-0,0-0-8], [30:0-3-0,0-1-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 186 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 33-12,30-30:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-0-8, Right 2x4 SP No.3 -- 1-0-8

BRACING

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

REACTIONS (size) 2=26-1-0, 22=26-1-0, 24=26-1-0, 25=26-1-0, 26=26-1-0, 27=26-1-0, 28=26-1-0, 29=26-1-0, 31=26-1-0, 32=26-1-0, 33=26-1-0, 34=26-1-0, 35=26-1-0, 36=26-1-0, 37=26-1-0, 38=26-1-0, 39=26-1-0, 40=26-1-0, 41=26-1-0

Max Horiz 2=-85 (LC 21)

Max Uplift 2=-24 (LC 12), 22=-16 (LC 13), 24=-40 (LC 17), 25=-26 (LC 17), 26=-28 (LC 17), 27=-29 (LC 17), 28=-29 (LC 17), 29=-28 (LC 17), 31=-32 (LC 17), 32=-20 (LC 17), 34=-23 (LC 16), 35=-31 (LC 16), 36=-28 (LC 16), 37=-29 (LC 16), 38=-29 (LC 16), 39=-28 (LC 16), 40=-21 (LC 16), 41=-40 (LC 16)

Max Grav 2=204 (LC 2), 22=204 (LC 2), 24=86 (LC 7), 25=102 (LC 2), 26=98 (LC 2), 27=99 (LC 37), 28=99 (LC 37), 29=99 (LC 2), 31=99 (LC 37), 32=102 (LC 37), 33=113 (LC 33), 34=102 (LC 36), 35=99 (LC 36), 36=99 (LC 2), 37=99 (LC 36), 38=99 (LC 36), 39=98 (LC 2), 40=102 (LC 2), 41=86 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-4=-97/44, 4-5=-69/44, 5-6=-54/52, 6-7=-43/62, 7-8=-34/74, 8-9=-41/86, 9-10=-53/106, 10-11=-66/131, 11-12=-76/150, 12-13=-76/150, 13-14=-66/131, 14-15=-53/106, 15-16=-41/82, 16-17=-29/59, 17-18=-22/35, 18-19=-26/17, 19-20=-32/12, 20-22=-68/25, 22-23=0/27

BOT CHORD 2-41=-40/95, 40-41=-39/93, 39-40=-39/93, 38-39=-39/93, 37-38=-39/93, 36-37=-39/93, 35-36=-39/93, 34-35=-39/93, 33-34=-39/93, 32-33=-39/93, 31-32=-39/93, 29-31=-39/93, 28-29=-39/93, 27-28=-39/93, 26-27=-39/93, 25-26=-39/93, 24-25=-39/93, 22-24=-40/95

WEBS 12-33=-89/28, 11-34=-75/31, 10-35=-73/46, 9-36=-72/41, 8-37=-72/42, 7-38=-72/42, 6-39=-72/42, 5-40=-75/40, 4-41=-61/45, 13-32=-75/31, 14-31=-73/46, 15-29=-72/41, 16-28=-72/42, 17-27=-72/42, 18-26=-72/42, 19-25=-75/42, 20-24=-52/41

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-3-0 to 1-9-0, Exterior(2N) 1-9-0 to 13-0-8, Corner(3R) 13-0-8 to 16-0-8, Exterior(2N) 16-0-8 to 27-4-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.

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Continued on page 2

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818 Soundside Road
Edenton, NC 27932

7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 2, 23 lb uplift at joint 34, 31 lb uplift at joint 35, 28 lb uplift at joint 36, 29 lb uplift at joint 37, 29 lb uplift at joint 38, 28 lb uplift at joint 39, 21 lb uplift at joint 40, 40 lb uplift at joint 41, 20 lb uplift at joint 32, 32 lb uplift at joint 31, 28 lb uplift at joint 29, 29 lb uplift at joint 28, 29 lb uplift at joint 27, 28 lb uplift at joint 26, 26 lb uplift at joint 25, 40 lb uplift at joint 24 and 16 lb uplift at joint 22.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046660
P02003-24593	G02	Common	3	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:32
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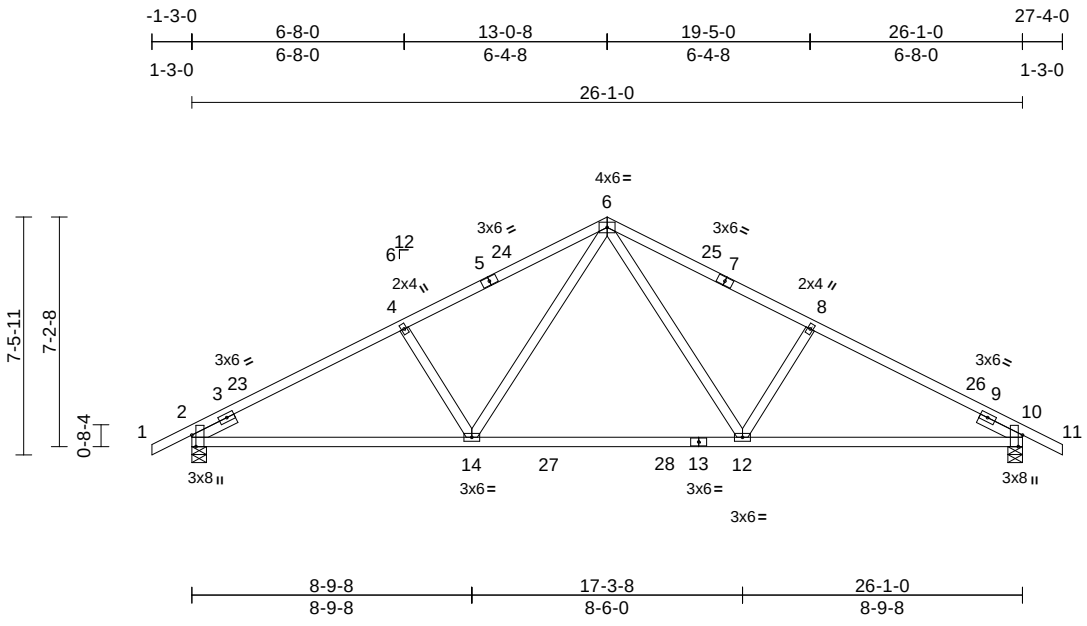

Scale = 1:72.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.23	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.36	12-14	>867	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 126 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 12-8,14-4:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-89 (LC 17)
Max Uplift 2=-155 (LC 16), 10=-155 (LC 17)
Max Grav 2=1113 (LC 3), 10=1113 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-4=-1677/255, 4-6=-1551/269, 6-8=-1551/269, 8-10=-1677/255, 10-11=0/30
BOT CHORD 2-14=-216/1451, 12-14=-70/1005, 10-12=-161/1451
WEBS 6-12=-112/638, 8-12=-318/168, 6-14=-112/638, 4-14=-318/168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8, Interior (1) 16-0-8 to 27-4-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 155 lb uplift at joint 2 and 155 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046661
P02003-24593	G03	Common	2	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:32
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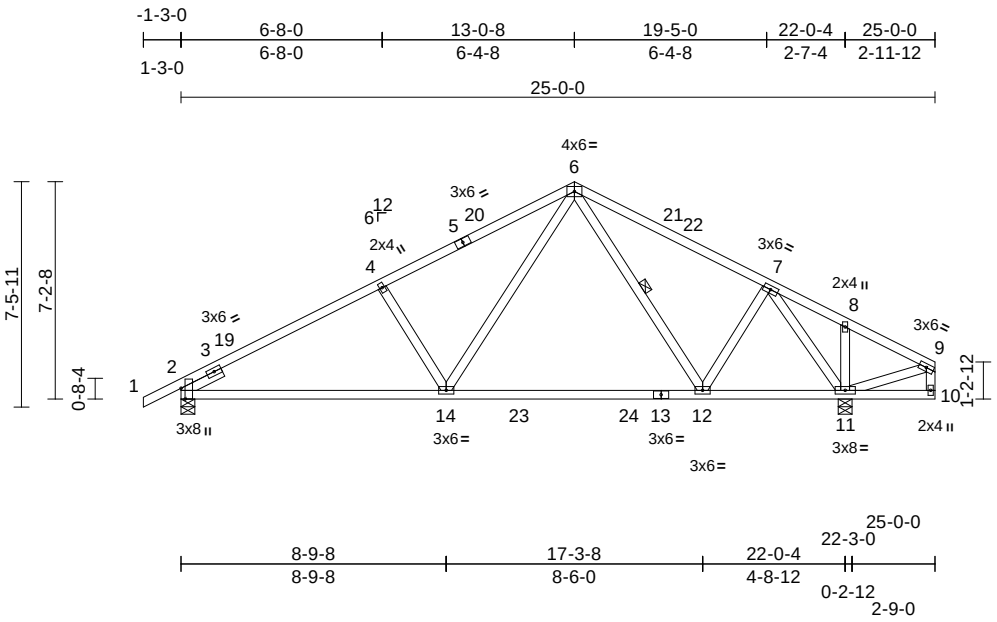

Scale = 1:76.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.19	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.30	12-14	>872	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 12-6,14-6:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-12

REACTIONS (size) 2=0-5-8, 11=0-5-8
Max Horiz 2=95 (LC 20)
Max Uplift 2=-142 (LC 16), 11=-140 (LC 17)
Max Grav 2=934 (LC 3), 11=1139 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-4=-1321/207, 4-6=-1194/221, 6-7=-825/164, 7-8=-33/182, 8-9=-61/159, 9-10=-24/56
BOT CHORD 2-14=-195/1149, 12-14=-56/675, 11-12=-54/515, 10-11=-24/25
WEBS 6-12=-78/98, 7-12=0/345, 6-14=-112/664, 4-14=-327/170, 7-11=-1112/185, 8-11=-88/39, 9-11=-151/91

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 13-0-8, Exterior(2R) 13-0-8 to 16-0-8, Interior (1) 16-0-8 to 24-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 2 and 140 lb uplift at joint 11.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	T37046662
P02003-24593	J01	Jack-Open	10	1	Job Reference (optional)	

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:33
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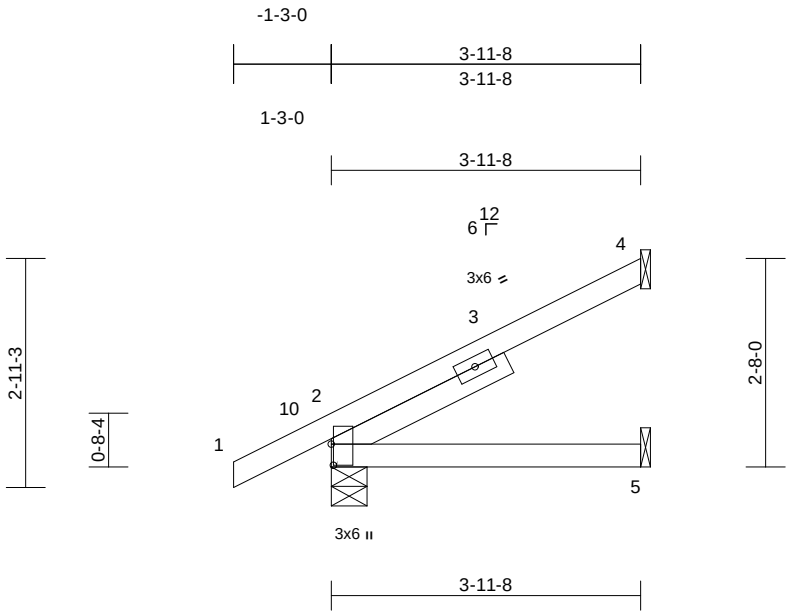


Scale = 1:29.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	5-8	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-11-8 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=71 (LC 16)
Max Uplift 2=-32 (LC 16), 4=-45 (LC 16)
Max Grav 2=222 (LC 2), 4=90 (LC 2), 5=65 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-4=-154/43
BOT CHORD	2-5=-107/61

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 3-10-12 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 4 and 32 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

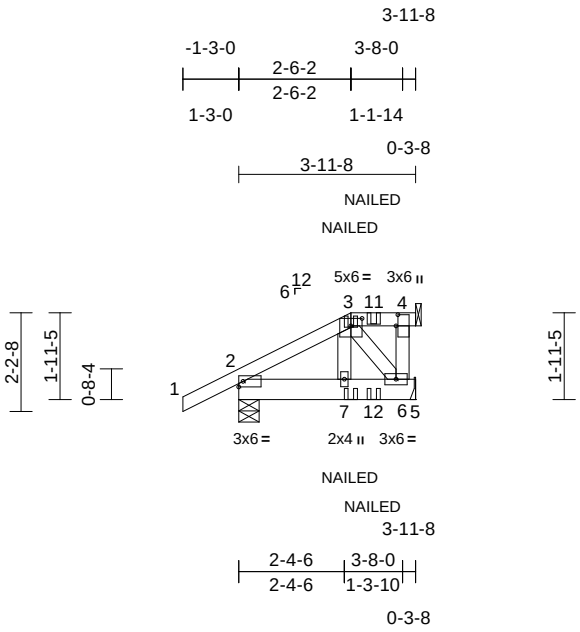
April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	J02G	Half Hip Girder	1	1	T37046663
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:33 ID:1zoPlFjCyDzX8rjaLvZgwJzQ7ko-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:51.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	7	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 24 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 3-11-8 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 6= Mechanical
Max Horiz 2=52 (LC 12)
Max Uplift 2=-76 (LC 12), 4=-19 (LC 8), 6=-210 (LC 52)
Max Grav 2=175 (LC 34), 4=25 (LC 41), 6=82 (LC 72)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/32, 2-3=-77/161, 3-4=0/0
BOT CHORD	2-7=-128/49, 6-7=-128/49, 5-6=0/0
WEBS	3-7=-48/44, 4-6=0/0, 3-6=-82/216

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 2, 19 lb uplift at joint 4 and 210 lb uplift at joint 6.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
16) "NAILED" indicates 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
17) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-29, 3-4=-39, 5-8=-20
Concentrated Loads (lb)
Vert: 7=42 (B), 3=73 (B), 11=19 (B), 12=21 (B)

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity	
P02003-24593	J03G	Jack-Open Girder	1	1	Job Reference (optional)	T37046664

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:33 Page: 1
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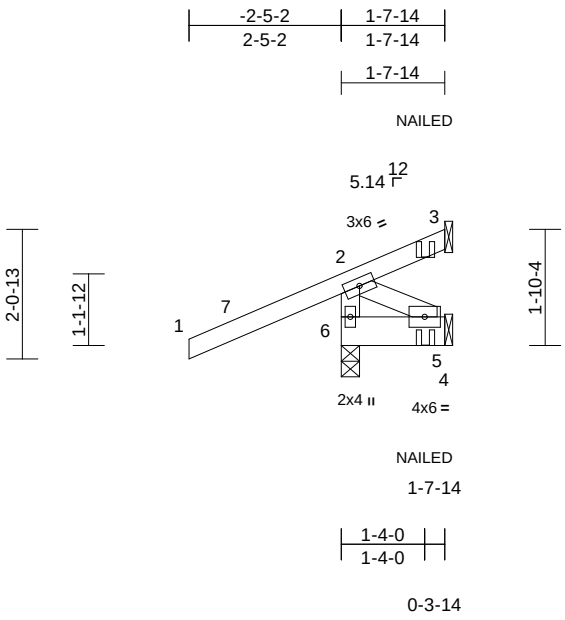

Scale = 1:36.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	0.00	6	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	5-6	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.01	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 6=0-3-8
Max Horiz 6=39 (LC 11)
Max Uplift 3=-198 (LC 45), 4=-49 (LC 12), 6=-90 (LC 8)
Max Grav 3=73 (LC 49), 4=9 (LC 55), 6=312 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-299/91, 1-2=0/55, 2-3=-63/17
BOT CHORD 5-6=-40/2, 4-5=0/0
WEBS 2-5=-2/46

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 6, 49 lb uplift at joint 4 and 198 lb uplift at joint 3.
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) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 35 lb down and 118 lb up at 2-9-4 on top chord, and 9 lb down and 64 lb up at 2-9-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-29, 2-3=-29, 4-6=-20
Concentrated Loads (lb)
Vert: 5=25 (B), 3=30 (B)

April 18,2025

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

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	J04	Jack-Open	1	1	T37046665
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:34
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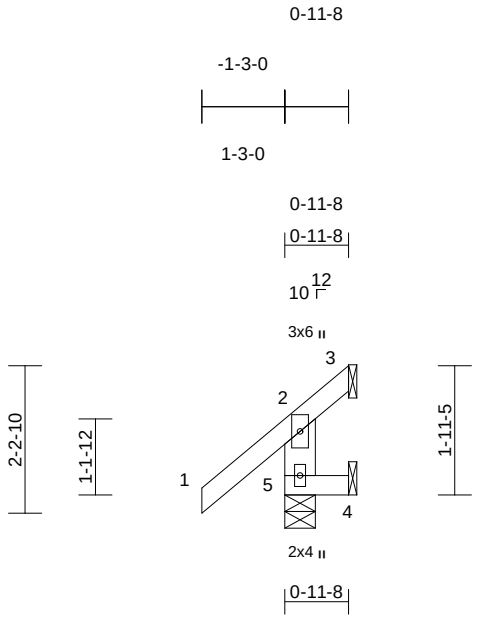

Scale = 1:34.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-5	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 8 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=40 (LC 11)
Max Uplift 3=-31 (LC 2), 4=-25 (LC 2), 5=-13 (LC 14)
Max Grav 3=6 (LC 10), 4=12 (LC 12), 5=189 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-149/139, 1-2=0/51, 2-3=-44/24
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 5, 25 lb uplift at joint 4 and 31 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

ENGINEERING BY TRENCO
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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1055 Serenity
P02003-24593	J05	Jack-Open	1	1	T37046666
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Thu Apr 17 14:09:34 Page: 1
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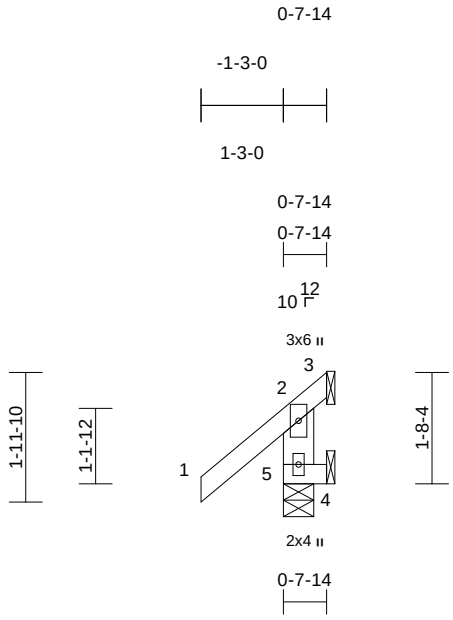

Scale = 1:35

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.00	5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 7 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-7-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=36 (LC 11)
Max Uplift 3=-78 (LC 2), 4=-50 (LC 2), 5=-26 (LC 14)
Max Grav 3=12 (LC 18), 4=11 (LC 12), 5=238 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-180/190, 1-2=0/51, 2-3=-64/45
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 5, 50 lb uplift at joint 4 and 78 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 18,2025

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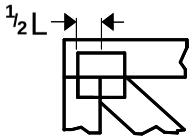
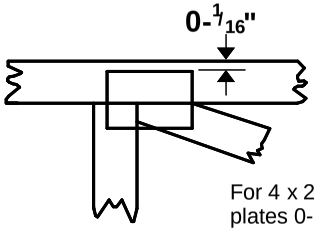
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

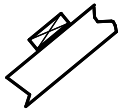
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

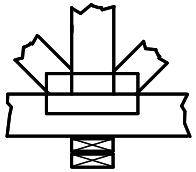
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

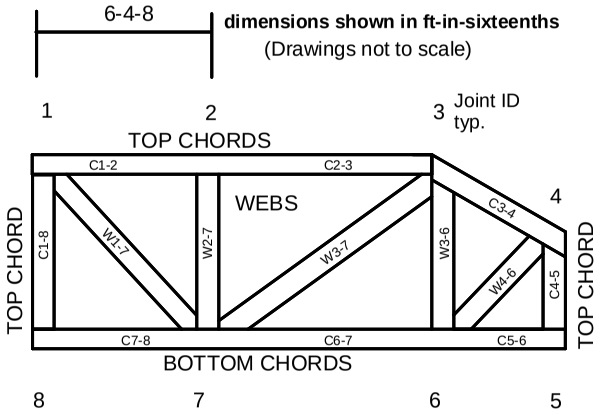


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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