ENGINEERING BY TRENCO
A MiTek Affiliate

RE: P05927-31414
915 Serenity

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: David Weekly Project Name: P05927-31414
Lot/Block: Model: A670 MADISON / ELEV A / RH
Address: 45 Rainbrook Cove Subdivision:
City: FUQUAY VARINA State: NC

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.8
Wind Code: ASCE 7-10 Wind Speed: 115 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 32 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I74684722	A01E	7/7/2025	21	I74684742	J01	7/7/2025
2	I74684723	A02SE	7/7/2025	22	I74684743	J02	7/7/2025
3	I74684724	A03	7/7/2025	23	I74684744	J03	7/7/2025
4	I74684725	A04	7/7/2025	24	I74684745	P01E	7/7/2025
5	I74684726	A05	7/7/2025	25	I74684746	P02	7/7/2025
6	I74684727	A06	7/7/2025	26	I74684747	P03	7/7/2025
7	I74684728	A07	7/7/2025	27	I74684748	P04	7/7/2025
8	I74684729	A08	7/7/2025	28	I74684749	P05E	7/7/2025
9	I74684730	A09	7/7/2025	29	I74684750	V01	7/7/2025
10	I74684731	A10	7/7/2025	30	I74684751	V02	7/7/2025
11	I74684732	A11	7/7/2025	31	I74684752	V03	7/7/2025
12	I74684733	A12	7/7/2025	32	I74684753	V04	7/7/2025
13	I74684734	A13	7/7/2025				
14	I74684735	A14G	7/7/2025				
15	I74684736	B01G	7/7/2025				
16	I74684737	B02	7/7/2025				
17	I74684738	B03	7/7/2025				
18	I74684739	B04E	7/7/2025				
19	I74684740	G01	7/7/2025				
20	I74684741	G01E	7/7/2025				

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

Truss Design Engineer's Name: Gilbert, Eric

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

North Carolina COA: C-0844

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

July 07, 2025

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	A01E	Common Supported Gable	1	1	I74684722 Job Reference (optional)

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

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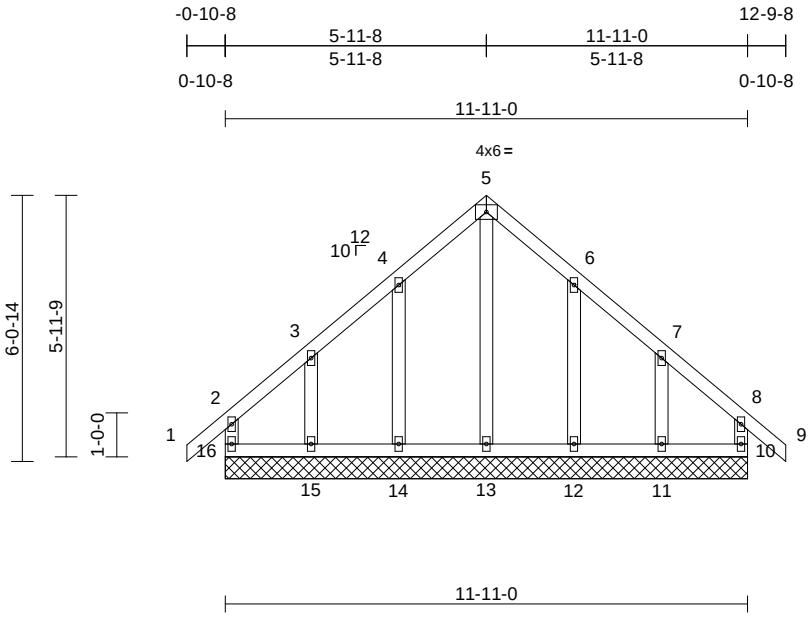

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 72 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 10=11-11-0, 11=11-11-0, 12=11-11-0, 13=11-11-0, 14=11-11-0, 15=11-11-0, 16=11-11-0
Max Horiz 16=-132 (LC 12)
Max Uplift 10=-36 (LC 11), 11=-99 (LC 15), 12=-65 (LC 15), 14=-63 (LC 14), 15=-97 (LC 14), 16=-48 (LC 10)
Max Grav 10=158 (LC 26), 11=209 (LC 27), 12=195 (LC 27), 13=192 (LC 29), 14=185 (LC 26), 15=189 (LC 26), 16=156 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-16=-127/64, 1-2=0/39, 2-3=-86/80, 3-4=-80/95, 4-5=-134/157, 5-6=-134/157, 6-7=-80/94, 7-8=-74/67, 8-9=0/39, 8-10=-122/62
BOT CHORD	15-16=-61/67, 14-15=-61/67, 13-14=-61/67, 12-13=-61/67, 11-12=-61/67, 10-11=-61/67
WEBS	5-13=-154/69, 4-14=-136/77, 3-15=-129/93, 6-12=-136/77, 7-11=-129/91

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-10-8 to 1-11-8, Exterior (2) 1-11-8 to 5-11-8, Corner (3) 5-11-8 to 8-11-8, Exterior (2) 8-11-8 to 12-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 2-0-0 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 48 lb uplift at joint 16, 36 lb uplift at joint 10, 63 lb uplift at joint 14, 97 lb uplift at joint 15, 65 lb uplift at joint 12 and 99 lb uplift at joint 11.
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=-51, 2-5=-51, 5-8=-51, 8-9=-51
   Trapezoidal Loads (lb/ft)
   Vert: 16=-20-to-15=-22 (F=-2), 15=-22 (F=-2)-to-14=-25 (F=-5), 14=-25 (F=-5)-to-13=-28 (F=-8), 13=-28 (F=-8)-to-12=-30 (F=-10), 12=-30 (F=-10)-to-11=-33 (F=-13), 11=-33 (F=-13)-to-10=-35 (F=-15)

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A02SE	Common Structural Gable	1	1	Job Reference (optional)	I74684723

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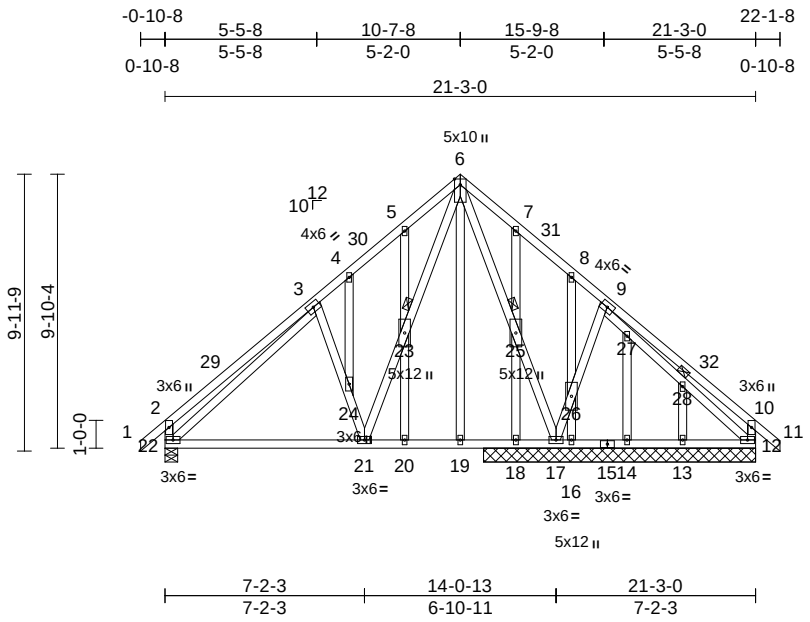

Scale = 1:82.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.06	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.13	21-22	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.01	12	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 204 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.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.
JOINTS 1 Brace at Jt(s): 23, 25, 28

REACTIONS (size) 12=9-9-8, 13=9-9-8, 14=9-9-8, 16=9-9-8, 17=9-9-8, 18=9-9-8, 22=0-5-8
Max Horiz 22=-205 (LC 12)
Max Uplift 12=-71 (LC 15), 14=-1 (LC 11), 16=-3 (LC 11), 17=-117 (LC 14), 18=-50 (LC 15), 22=-66 (LC 14)
Max Grav 12=345 (LC 2), 13=127 (LC 5), 14=101 (LC 5), 16=81 (LC 5), 17=601 (LC 2), 18=209 (LC 31), 22=642 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-367/184, 3-4=-485/133, 4-5=-455/160, 5-6=-500/212, 6-7=-195/173, 7-8=-144/127, 8-9=-167/112, 9-10=-265/186, 10-11=0/39, 2-22=-390/166, 10-12=-322/166
BOT CHORD 21-22=-89/460, 20-21=-42/225, 19-20=-42/225, 18-19=-42/227, 17-18=-42/227, 16-17=-2/118, 14-16=-2/118, 13-14=-2/118, 12-13=-2/118
WEBS 6-25=-409/34, 17-25=-450/37, 17-26=-300/227, 9-26=-260/195, 21-23=-161/459, 6-23=-182/500, 3-24=-213/154, 21-24=-240/176, 3-22=-296/20, 9-27=-159/114, 27-28=-128/99, 12-28=-125/94, 6-19=-21/76, 5-23=-113/57, 20-23=-70/35, 4-24=-29/23, 7-25=-155/65, 18-25=-127/76, 8-26=-2/8, 16-26=-35/51, 14-27=-41/20, 13-28=-4/7

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-5-2, Exterior (2) 10-5-2 to 13-5-2, Interior (1) 13-5-2 to 22-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 17, 66 lb uplift at joint 22, 71 lb uplift at joint 12, 50 lb uplift at joint 18, 3 lb uplift at joint 16 and 1 lb uplift at joint 14.
13) 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=-51, 2-6=-51, 6-10=-51, 10-11=-51
Trapezoidal Loads (lb/ft)

July 7,2025

Continued on page 2

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Edenton, NC 27932

Vert: 22=-20-to-21=-25 (F=-5), 21=-25 (F=-5)-to-20=-26 (F=-6), 20=-26 (F=-6)-to-19=-28 (F=-8), 19=-28 (F=-8)-to-18=-29 (F=-9), 18=-29 (F=-9)-to-17=-30 (F=-10), 17=-30 (F=-10)-to-16=-30 (F=-10), 16=-30 (F=-10)-to-15=-31 (F=-11), 15=-31 (F=-11)-to-14=-32 (F=-12), 14=-32 (F=-12)-to-13=-33 (F=-13), 13=-33 (F=-13)-to-12=-35 (F=-15)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A03	Common	5	1	Job Reference (optional)	I74684724

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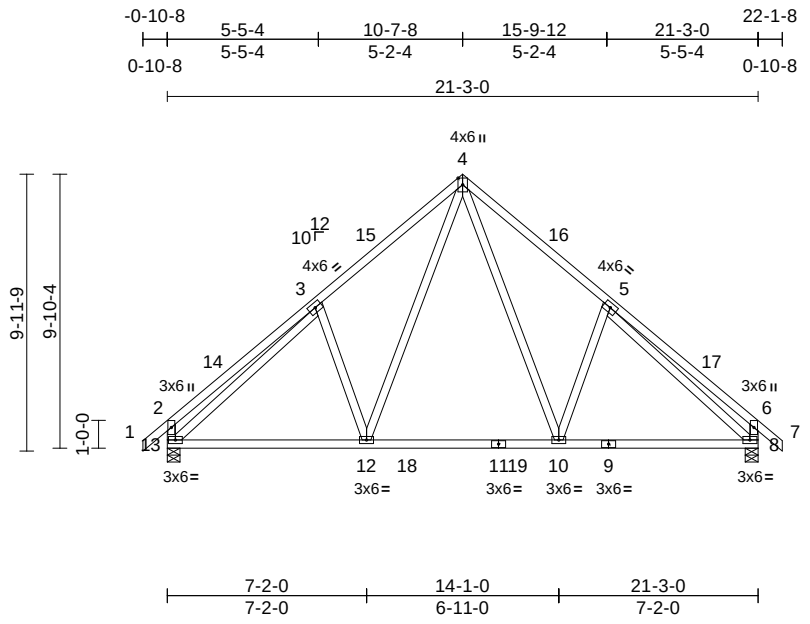

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.12	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.16	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 144 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 13=0-5-8
Max Horiz 13=208 (LC 13)
Max Uplift 8=-81 (LC 15), 13=-81 (LC 14)
Max Grav 8=900 (LC 2), 13=900 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-342/161, 3-4=-882/207, 4-5=-882/207, 5-6=-342/161, 6-7=0/39, 2-13=-365/147, 6-8=-365/147
BOT CHORD 12-13=-95/772, 10-12=0/532, 8-10=-14/680
WEBS 4-10=-146/462, 5-10=-236/193, 4-12=-146/461, 3-12=-236/193, 3-13=-742/12, 5-8=-742/11

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 22-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 81 lb uplift at joint 13 and 81 lb uplift at joint 8.

LOAD CASE(S) Standard

July 7,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A04	Common	3	1	Job Reference (optional)	I74684725

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

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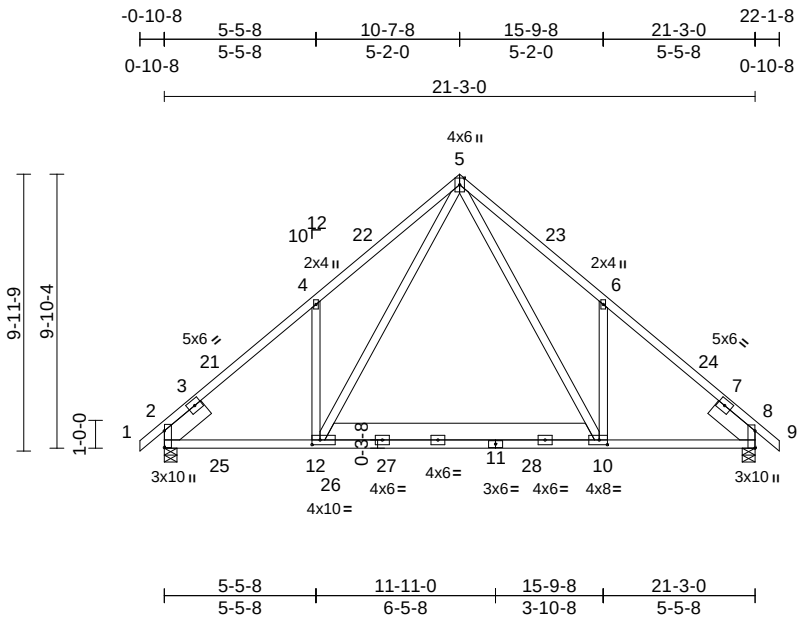

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Plate Offsets (X, Y): [2:0-7-3,0-0-1], [8:0-7-7,Edge], [10:0-3-8,0-2-0], [12:0-3-8,0-2-0]

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	0.50	Vert(LL)	-0.07	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.14	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.47	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 165 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 12-10:2x8 SP DSS
WEBS	2x4 SP No.2
SLIDER	Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-0-4 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=185 (LC 13)
Max Uplift 8=-61 (LC 15)
Max Grav 2=984 (LC 2), 8=921 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/34, 2-4=-1044/56, 4-5=-1095/218, 5-6=-1047/267, 6-8=-998/102, 8-9=0/34
BOT CHORD	2-12=-147/856, 10-12=0/534, 8-10=-41/724
WEBS	5-10=-231/596, 6-10=-304/230, 5-12=-153/673, 4-12=-308/226

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 22-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) 100.0lb AC unit load placed on the bottom chord, 4-0-0 from left end, supported at two points, 4-0-0 apart.
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 61 lb uplift at joint 8.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A05	Common	1	1	Job Reference (optional)	I74684726

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:15 Page: 1
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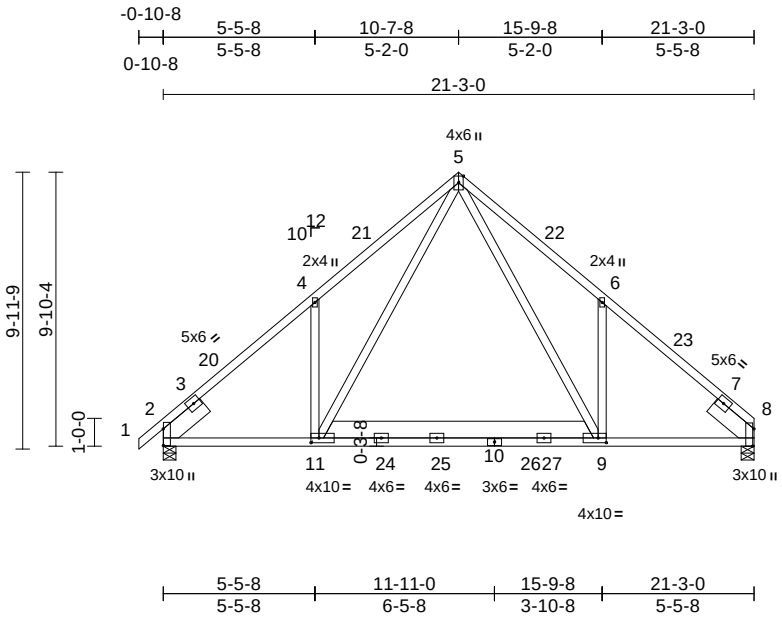

Scale = 1:82.9

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

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	0.53	Vert(LL)	-0.07	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.16	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 163 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-9:2x8 SP DSS
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-3 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=181 (LC 13)
Max Uplift 2=-36 (LC 14), 8=-11 (LC 15)
Max Grav 2=947 (LC 2), 8=905 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-1035/65, 4-5=-1081/233, 5-6=-1103/216, 6-8=-1056/52
BOT CHORD 2-11=-150/839, 9-11=0/537, 8-9=-40/761
WEBS 5-9=-166/666, 6-9=-301/235, 5-11=-194/632, 4-11=-300/234

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
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 11 lb uplift at joint 8 and 36 lb uplift at joint 2.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A06	Common	2	1	Job Reference (optional)	I74684727

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:15
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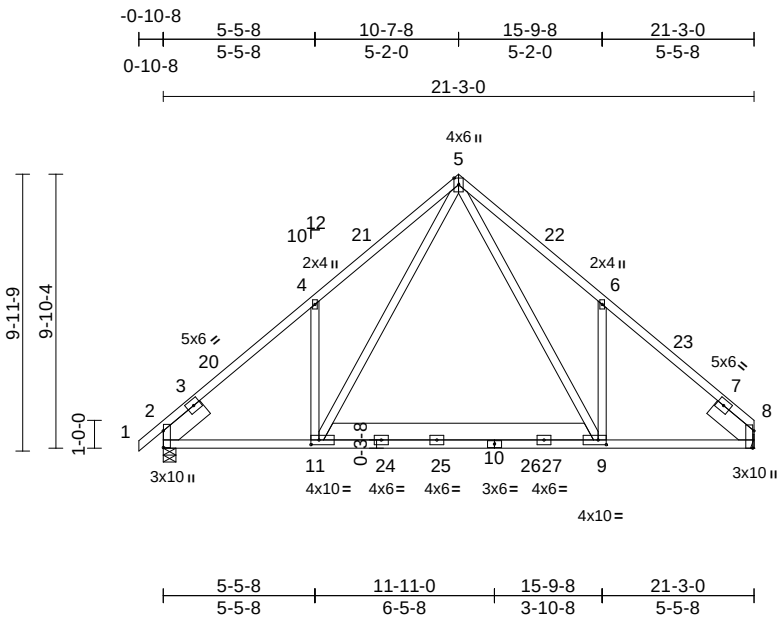

Scale = 1:82.9

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

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	0.53	Vert(LL)	-0.07	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.16	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 163 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 11-9:2x8 SP DSS
WEBS	2x4 SP No.2
SLIDER	Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

BRACING

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

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=181 (LC 13)
Max Uplift 2=-36 (LC 14), 8=-11 (LC 15)
Max Grav 2=947 (LC 2), 8=905 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/34, 2-4=-1035/65, 4-5=-1081/233, 5-6=-1103/216, 6-8=-1056/52
BOT CHORD	2-11=-150/839, 9-11=0/537, 8-9=-40/761
WEBS	5-9=-166/666, 6-9=-301/235, 5-11=-194/632, 4-11=-300/234

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) 100.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 4-0-0 apart.
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 11 lb uplift at joint 8 and 36 lb uplift at joint 2.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A07	Hip	1	1	Job Reference (optional)	I74684728

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:16 Page: 1
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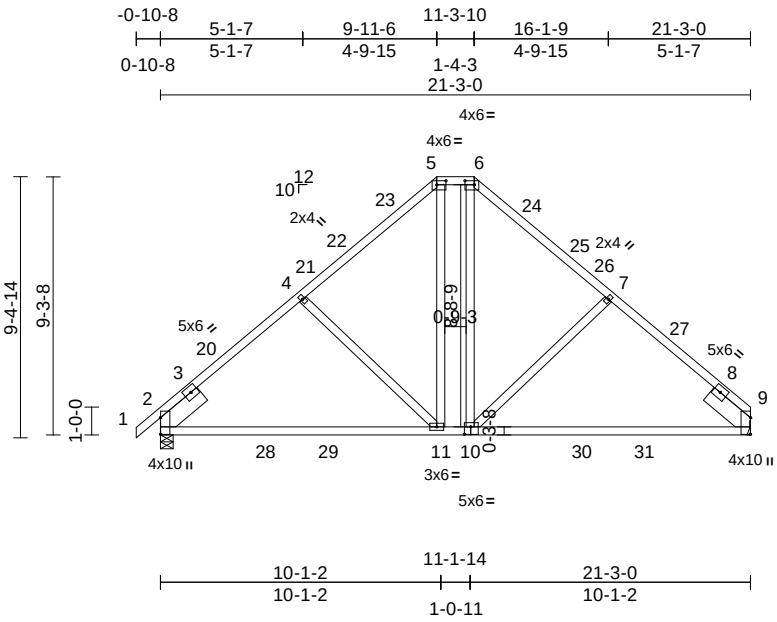

Scale = 1:83

Plate Offsets (X, Y): [2:0-7-3,0-0-1], [5:0-4-0,0-1-12], [6:0-4-0,0-1-12], [9:0-7-3,0-0-1], [10:0-2-12,0-3-4]

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	0.52	Vert(LL)	-0.15	11-18	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.30	11-18	>857	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 132 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

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

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=171 (LC 15)
Max Uplift 2=-78 (LC 16), 9=-66 (LC 17)
Max Grav 2=1201 (LC 39), 9=1155 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-1364/145, 4-5=-1079/171, 5-6=-704/165, 6-7=-1081/174, 7-9=-1365/148
BOT CHORD 2-11=-156/955, 9-11=-81/957
WEBS 4-11=-371/170, 5-11=-62/349, 6-10=-66/352, 7-10=-374/170

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-11-6, Exterior (2) 9-11-6 to 15-6-8, Interior (1) 15-6-8 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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, with BCDL = 10.0psf.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 9 and 78 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A08	Hip	1	1	Job Reference (optional)	I74684729

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:16
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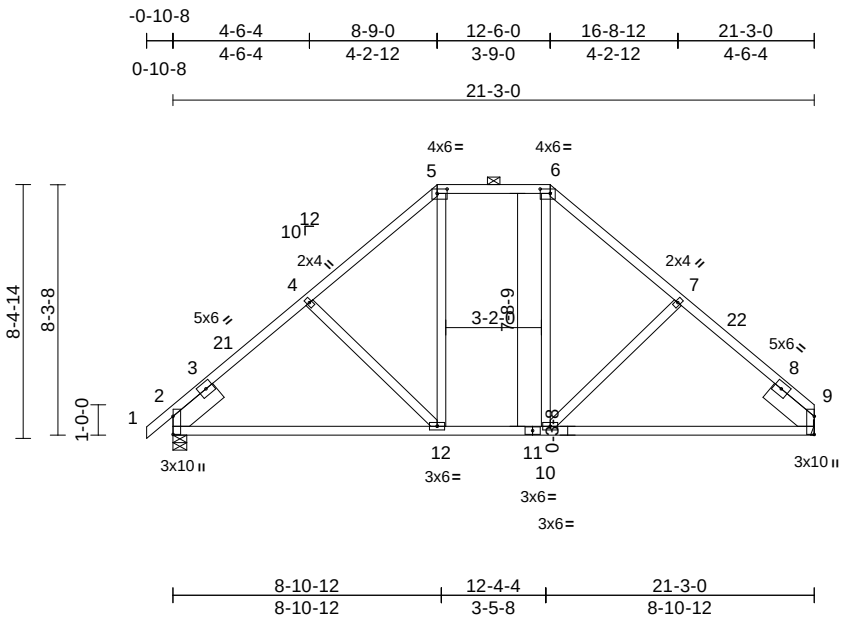

Scale = 1:76.3

Plate Offsets (X, Y): [2:0-7-3,0-0-1], [5:0-4-0,0-1-12], [6:0-4-0,0-1-12], [9:0-7-3,0-0-1]

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	0.29	Vert(LL)	-0.13	10-15	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.22	10-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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
SLIDER Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

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

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=151 (LC 13)
Max Uplift 2=-75 (LC 14), 9=-63 (LC 15)
Max Grav 2=904 (LC 2), 9=849 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-957/152, 4-5=-812/176, 5-6=-560/166, 6-7=-813/179, 7-9=-959/156
BOT CHORD 2-12=-125/721, 10-12=-19/571, 9-10=-80/684
WEBS 4-12=-215/158, 5-12=-42/286, 6-10=-45/287, 7-10=-220/158

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-9-0, Exterior (2) 8-9-0 to 16-10-0, Interior (1) 16-10-0 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 63 lb uplift at joint 9 and 75 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A09	Hip	1	1	Job Reference (optional)	I74684730

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

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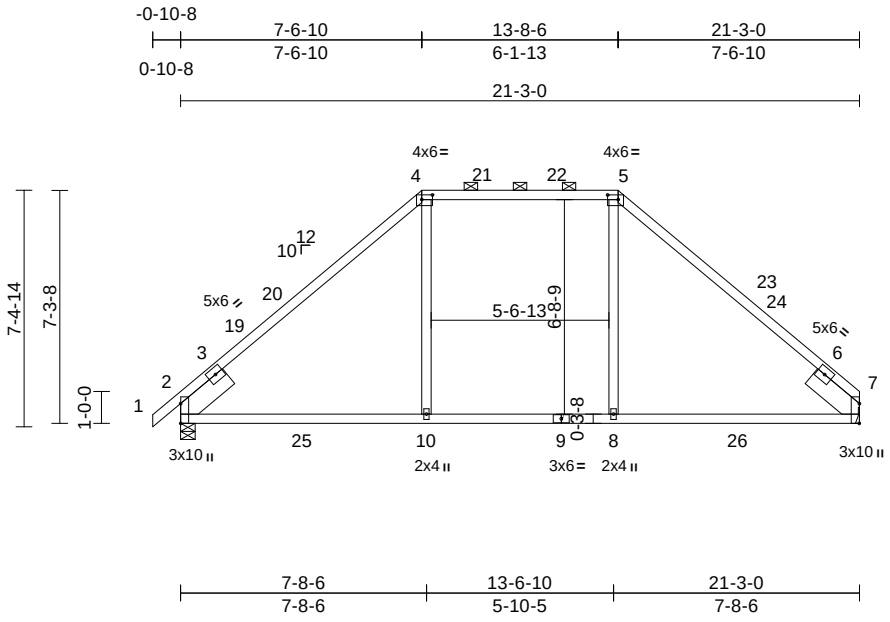


Scale = 1:72.1

Plate Offsets (X, Y): [2:0-7-7,Edge], [4:0-4-0,0-1-12], [5:0-4-0,0-1-12], [7:0-7-7,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	0.79	Vert(LL)	-0.35	8-13	>719	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.42	8-13	>611	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.09	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
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.2
SLIDER	Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

BRACING

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

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=132 (LC 13)
Max Uplift 2=-70 (LC 14), 7=-58 (LC 15)
Max Grav 2=993 (LC 3), 7=947 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/34, 2-4=-1077/159, 4-5=-749/172, 5-7=-1076/161
BOT CHORD	2-10=-207/742, 8-10=-36/749, 7-8=-138/742
WEBS	4-10=-14/365, 5-8=-14/365

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-6-10, Exterior (2) 7-6-10 to 11-9-8, Interior (1) 11-9-8 to 13-8-6, Exterior (2) 13-8-6 to 17-11-5, Interior (1) 17-11-5 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 58 lb uplift at joint 7 and 70 lb uplift at joint 2.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

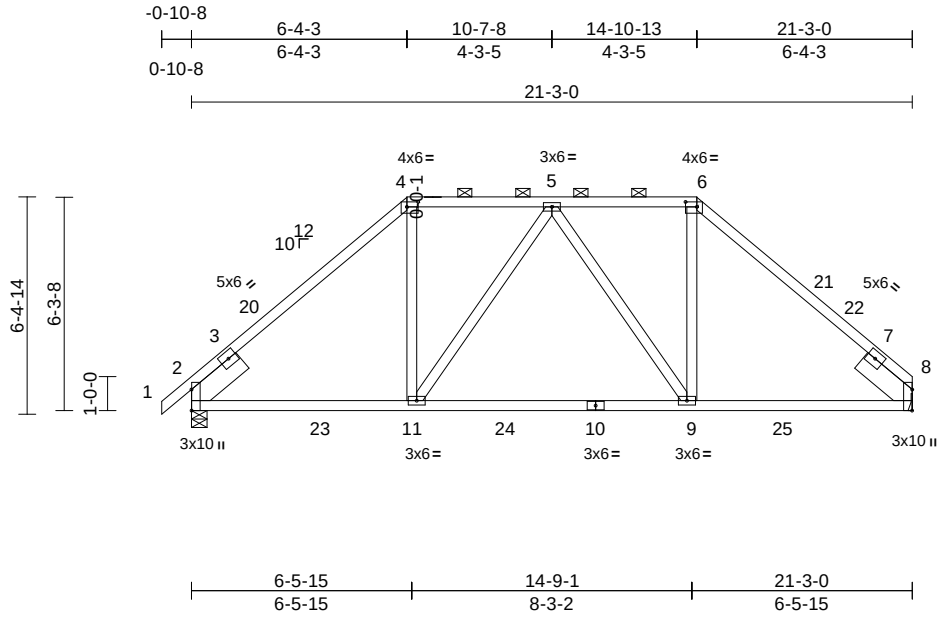
LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A10	Hip	1	1	Job Reference (optional)	I74684731

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:16 Page: 1
ID:7s7UzE3TU00mjwglw2z_dozxXR2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.9

Plate Offsets (X, Y): [2:0-7-7,Edge], [4:0-4-0,0-1-12], [6:0-4-0,0-1-12], [8:0-7-7,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	0.52	Vert(LL)	-0.12	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.23	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 121 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0, Right 2x8 SP DSS -- 1-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-9 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=113 (LC 13)
Max Uplift 2=-63 (LC 14), 8=-51 (LC 15)
Max Grav 2=909 (LC 3), 8=863 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-1003/150, 4-5=-701/163, 5-6=-703/162, 6-8=-1004/152
BOT CHORD 2-11=-160/692, 9-11=-82/781, 8-9=-105/694
WEBS 4-11=-27/400, 5-11=-235/112, 5-9=-232/112, 6-9=-27/399

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-4-3, Exterior (2) 6-4-3 to 10-7-8, Interior (1) 10-7-8 to 14-10-13, Exterior (2) 14-10-13 to 19-1-11, Interior (1) 19-1-11 to 21-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 51 lb uplift at joint 8 and 63 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A11	Half Hip	1	1	Job Reference (optional)	I74684732

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:17
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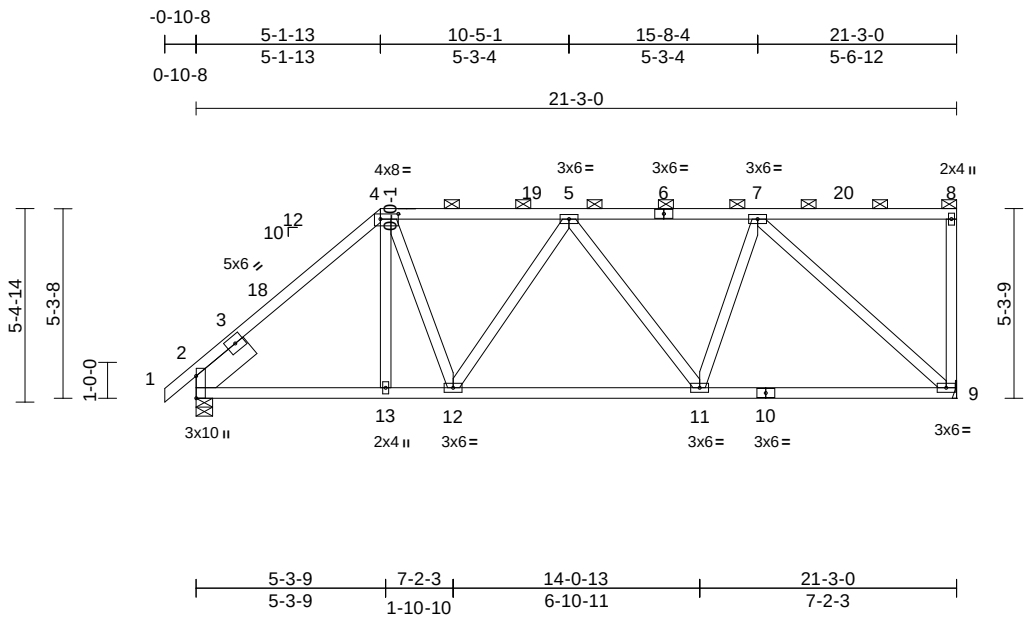

Scale = 1:64.4

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

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	0.38	Vert(LL)	-0.06	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.13	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 130 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=150 (LC 14)
Max Uplift 2=-61 (LC 11), 9=-131 (LC 11)
Max Grav 2=898 (LC 2), 9=845 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-954/131, 4-5=-785/127, 5-7=-804/116, 7-8=-16/1, 8-9=-144/43
BOT CHORD 2-13=-191/660, 12-13=-136/661, 11-12=-152/908, 9-11=-116/708
WEBS 7-9=-943/156, 4-13=-36/74, 4-12=-72/378, 5-12=-262/96, 5-11=-177/71, 7-11=-10/370

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 5-1-13, Exterior (2) 5-1-13 to 9-4-11, Interior (1) 9-4-11 to 21-1-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 131 lb uplift at joint 9 and 61 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A12	Half Hip	1	1	Job Reference (optional)	I74684733

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:17 Page: 1
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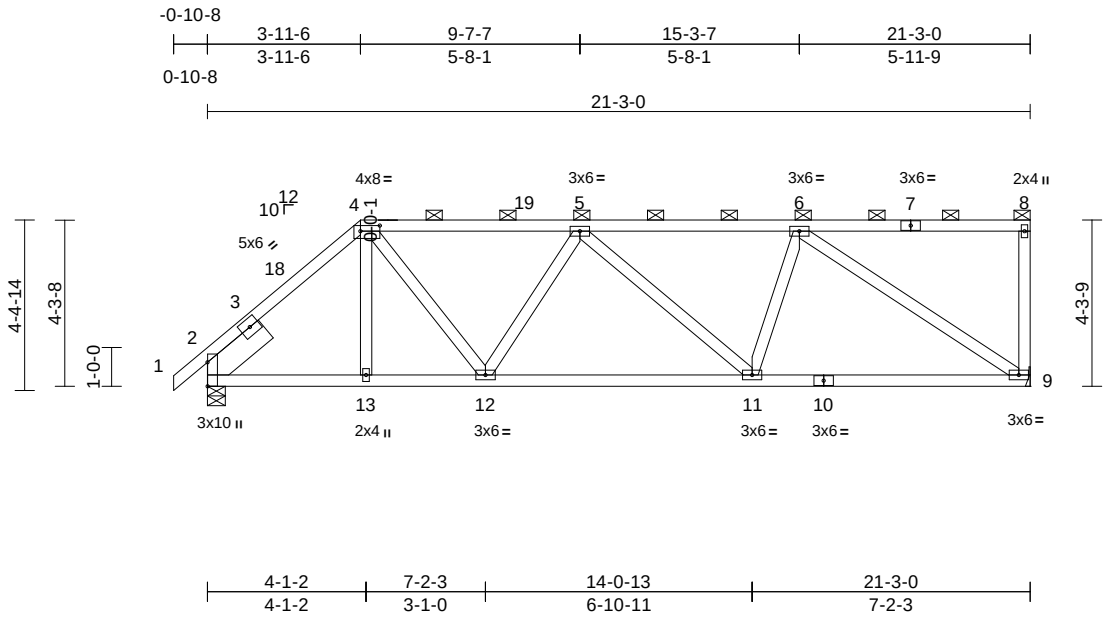

Scale = 1:59.5

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

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	0.43	Vert(LL)	-0.07	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.14	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 122 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0

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

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=120 (LC 14)
Max Uplift 2=-77 (LC 11), 9=-131 (LC 11)
Max Grav 2=898 (LC 2), 9=848 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-957/135, 4-5=-980/146, 5-6=-1016/148, 6-8=-25/3, 8-9=-156/46
BOT CHORD 2-13=-147/674, 12-13=-129/673, 11-12=-190/1136, 9-11=-151/938
WEBS 6-9=-1108/180, 4-13=-25/56, 4-12=-81/514, 5-12=-317/103, 5-11=-164/66, 6-11=0/355

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-6, Exterior (2) 3-11-6 to 8-2-5, Interior (1) 8-2-5 to 21-1-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 131 lb uplift at joint 9 and 77 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	A13	Half Hip	1	1	Job Reference (optional)	I74684734

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:17
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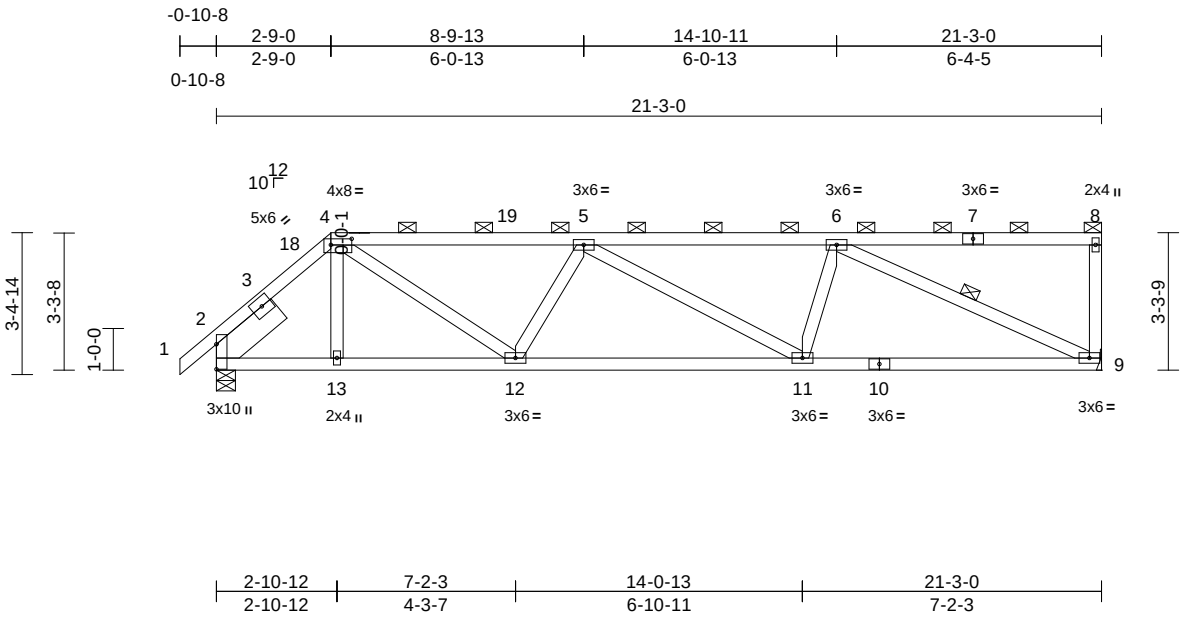

Scale = 1:55.3

Plate Offsets (X, Y): [2:0-7-3,0-0-1], [4:0-6-0,0-1-12]

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	0.49	Vert(LL)	-0.07	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.15	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 115 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x8 SP DSS -- 1-11-0

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

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=90 (LC 14)
Max Uplift 2=-93 (LC 11), 9=-130 (LC 11)
Max Grav 2=898 (LC 2), 9=850 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-4=-955/139, 4-5=-1331/198, 5-6=-1374/202, 6-8=-42/5, 8-9=-170/50
BOT CHORD 2-13=-123/676, 12-13=-122/675, 11-12=-248/1505, 9-11=-207/1314
WEBS 6-9=-1412/224, 4-13=-25/67, 4-12=-120/799, 5-12=-365/113, 5-11=-152/63, 6-11=0/337

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 2-9-0, Exterior (2) 2-9-0 to 6-11-15, Interior (1) 6-11-15 to 21-1-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 130 lb uplift at joint 9 and 93 lb uplift at joint 2.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	A14G	Half Hip Girder	1	2	I74684735 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:18 Page: 1
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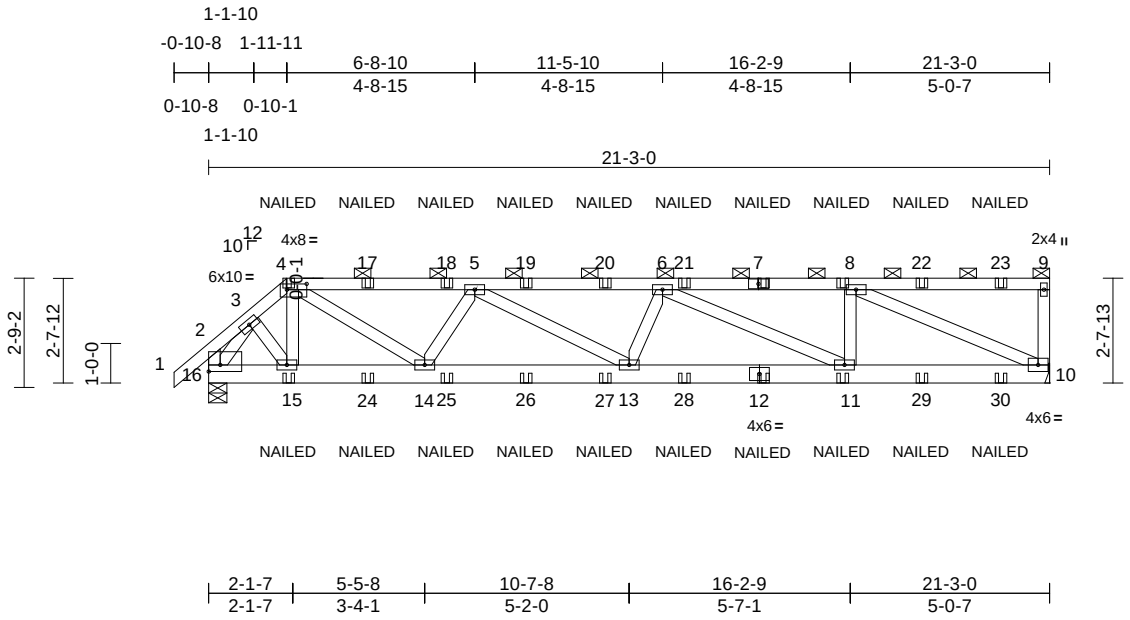

Scale = 1:58.2

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

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	0.21	Vert(LL)	-0.05	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.10	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.24	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 261 lb	FT = 20%

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

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

REACTIONS (size) 10= Mechanical, 16=0-5-8
Max Horiz 16=62 (LC 10)
Max Uplift 10=-234 (LC 7), 16=-214 (LC 7)
Max Grav 10=1158 (LC 2), 16=1203 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-227/70, 3-4=-1155/249, 4-5=-1990/402, 5-6=-2673/531, 6-8=-1981/398, 8-9=-57/15, 9-10=-176/67, 2-16=-295/72
BOT CHORD 15-16=-158/651, 14-15=-204/894, 13-14=-500/2325, 11-13=-555/2682, 10-11=-398/1981
WEBS 3-16=-1043/187, 4-15=-247/92, 3-15=-109/441, 4-14=-243/1309, 5-14=-692/205, 5-13=-42/404, 6-13=-26/121, 6-11=-778/174, 8-11=-17/544, 8-10=-2122/423

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 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) All plates are 3x6 (=) MT20 unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 234 lb uplift at joint 10 and 214 lb uplift at joint 16.
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=-51, 2-4=-51, 4-9=-61, 10-16=-20
Concentrated Loads (lb)
Vert: 4=-38 (B), 7=-27 (B), 12=-21 (B), 15=-35 (B), 11=-21 (B), 8=-27 (B), 17=-27 (B), 18=-27 (B), 19=-27 (B), 20=-27 (B), 21=-27 (B), 22=-27 (B), 23=-27 (B), 24=-21 (B), 25=-21 (B), 26=-21 (B), 27=-21 (B), 28=-21 (B), 29=-21 (B), 30=-21 (B)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	B01G	Common Girder	1	**2**	Job Reference (optional)	I74684736

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:18 Page: 1

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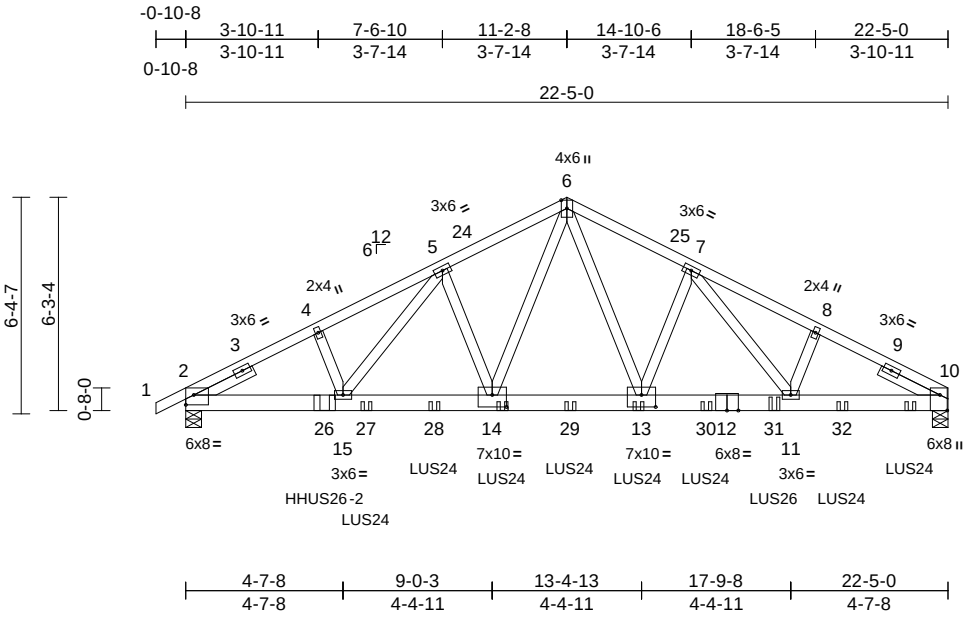

Scale = 1:67.8

Plate Offsets (X, Y): [2:Edge,0-3-8], [10:0-5-8,Edge], [13:0-5-0,0-4-4], [14:0-5-0,0-4-4]

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	0.86	Vert(LL)	-0.13	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.25	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 293 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.1 *Except* 6-10:2x4 SP No.2
BOT CHORD	2x6 SP DSS
WEBS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-11-0, Right 2x4 SP No.2 -- 1-11-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-10-13 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=86 (LC 36)
Max Uplift 2=-675 (LC 12), 10=-463 (LC 13)
Max Grav 2=4896 (LC 2), 10=5621 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/30, 2-4=-8390/1157, 4-5=-8297/1178, 5-6=-7057/907, 6-7=-6979/791, 7-8=-8175/819, 8-10=-8263/794
BOT CHORD	2-15=-1046/7320, 14-15=-828/6594, 13-14=-534/5097, 11-13=-614/6510, 10-11=-658/7247
WEBS	6-13=-271/3141, 7-13=-1010/136, 7-11=-72/1529, 8-11=-35/291, 6-14=-569/3335, 5-14=-1003/279, 5-15=-365/1453, 4-15=-58/403

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 0-8-0 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 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 463 lb uplift at joint 10 and 675 lb uplift at joint 2.
12) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-0 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 4-0-0 oc max. starting at 5-3-12 from the left end to 21-3-12 to connect truss(es) to front face of bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent at 17-3-12 from the left end to connect truss(es) to front face of bottom chord.
15) 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: 1-6=-51, 6-10=-51, 16-20=-20
Concentrated Loads (lb)
Vert: 13=-762 (F), 14=-825 (F), 18=-789 (F), 26=-1076 (F), 27=-830 (F), 28=-828 (F), 29=-774 (F), 30=-750 (F), 31=-1135 (F), 32=-788 (F)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	B02	Common	3	1	Job Reference (optional)	I74684737

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:19
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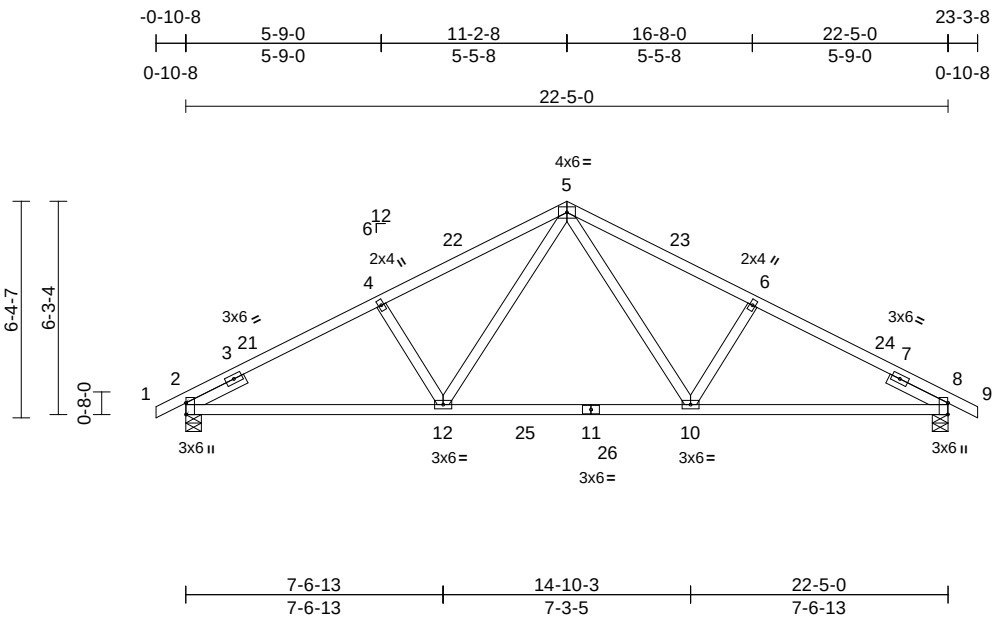

Scale = 1:67.8

Plate Offsets (X, Y): [2:0-4-1,Edge], [8:0-4-1,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)	-0.12	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.21	10-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 110 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-0, Right 2x4 SP No.2 -- 1-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-10 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=79 (LC 16)
Max Uplift 2=-103 (LC 16), 8=-103 (LC 17)
Max Grav 2=949 (LC 2), 8=949 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1410/169, 4-5=-1278/193, 5-6=-1278/193, 6-8=-1410/169, 8-9=0/23
BOT CHORD 2-12=-152/1216, 10-12=-35/845, 8-10=-90/1216
WEBS 5-10=-90/465, 6-10=-295/137, 5-12=-90/465, 4-12=-295/137

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-2-8, Exterior (2) 11-2-8 to 14-2-8, Interior (1) 14-2-8 to 23-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 103 lb uplift at joint 2 and 103 lb uplift at joint 8.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	B03	Roof Special	5	1	Job Reference (optional)	I74684738

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:19 Page: 1
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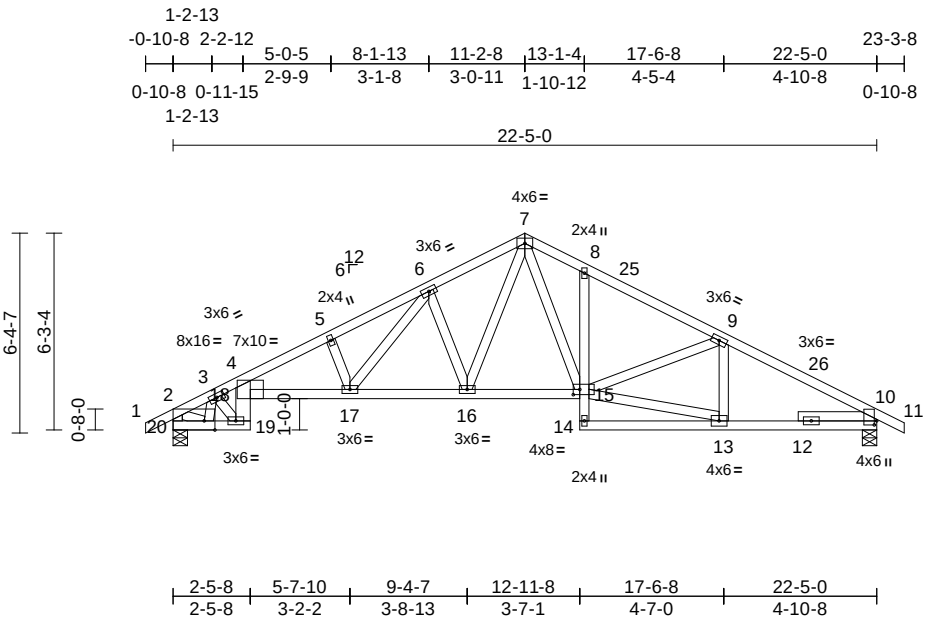

Scale = 1:73.4

Plate Offsets (X, Y): [2:0-4-1,Edge], [10:0-1-9,0-0-15], [15:0-2-8,0-2-0]

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	0.89	Vert(LL)	-0.13	17-18	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.26	17-18	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.16	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 137 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.2 *Except* 19-4:2x6 SP No.2, 18-15:2x4 SP No.1
WEBS 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 2-6-0

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

REACTIONS (size) 10=0-5-8, 20=0-5-8
Max Horiz 20=-76 (LC 21)
Max Uplift 10=-102 (LC 17), 20=-104 (LC 16)
Max Grav 10=943 (LC 2), 20=952 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-157/31, 3-4=-1197/130, 4-5=-2075/233, 5-6=-2051/264, 6-7=-1341/192, 7-8=-1376/213, 8-9=-1407/171, 9-10=-1434/159, 10-11=0/23, 2-20=-194/75
BOT CHORD 19-20=-157/956, 18-19=-25/86, 4-18=-12/175, 17-18=-232/1918, 16-17=-112/1327, 15-16=-35/993, 14-15=0/92, 8-15=-209/85, 13-14=-2/77, 10-13=-93/1225
WEBS 7-15=-121/590, 9-15=-95/92, 7-16=-98/518, 5-17=-430/116, 6-17=-137/755, 6-16=-457/129, 3-20=-1131/114, 3-19=-73/39, 9-13=-236/49, 13-15=-83/1177

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-15, Interior (1) 2-1-15 to 11-2-8, Exterior (2) 11-2-8 to 14-2-8, Interior (1) 14-2-8 to 23-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 102 lb uplift at joint 10 and 104 lb uplift at joint 20.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	B04E	Common Supported Gable	1	1	Job Reference (optional)	I74684739

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:19 Page: 1
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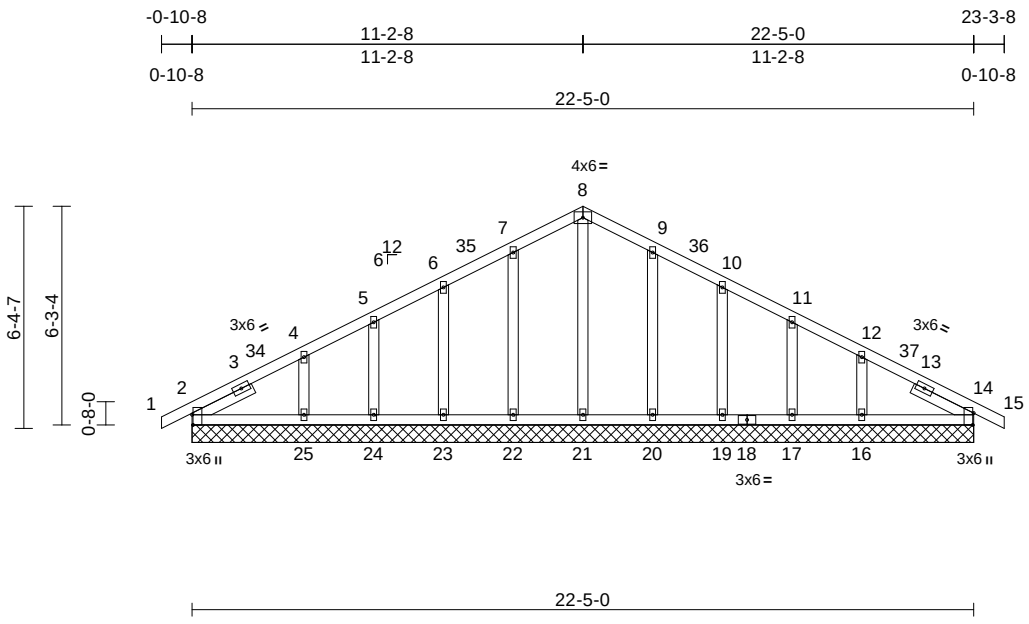

Scale = 1:66.1

Plate Offsets (X, Y): [2:0-3-8,Edge], [14:0-4-1,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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.06	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 126 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-0, Right 2x4 SP No.2 -- 1-11-0

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=22-5-0, 14=22-5-0, 16=22-5-0, 17=22-5-0, 19=22-5-0, 20=22-5-0, 21=22-5-0, 22=22-5-0, 23=22-5-0, 24=22-5-0, 25=22-5-0
Max Horiz 2=-79 (LC 21)
Max Uplift 2=-18 (LC 17), 14=-9 (LC 17), 16=-81 (LC 17), 17=-30 (LC 17), 19=-47 (LC 17), 20=-42 (LC 17), 22=-42 (LC 16), 23=-45 (LC 16), 24=-26 (LC 16), 25=-79 (LC 16)
Max Grav 2=199 (LC 2), 14=219 (LC 2), 16=289 (LC 35), 17=151 (LC 2), 19=191 (LC 2), 20=202 (LC 24), 21=143 (LC 33), 22=197 (LC 23), 23=177 (LC 2), 24=139 (LC 2), 25=247 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-93/49, 4-5=-89/76, 5-6=-79/107, 6-7=-81/146, 7-8=-90/182, 8-9=-90/183, 9-10=-81/148, 10-11=-79/108, 11-12=-87/78, 12-14=-114/48, 14-15=0/23
BOT CHORD 2-25=0/77, 24-25=0/77, 23-24=0/77, 22-23=0/77, 21-22=0/77, 20-21=0/77, 19-20=0/77, 17-19=0/77, 16-17=0/77, 14-16=0/77
WEBS 8-21=-92/11, 7-22=-145/105, 6-23=-123/68, 5-24=-104/49, 4-25=-168/102, 9-20=-145/105, 10-19=-124/68, 11-17=-102/48, 12-16=-175/105

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 11-2-8, Corner (3) 11-2-8 to 14-2-8, Exterior (2) 14-2-8 to 23-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 2-0-0 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 18 lb uplift at joint 2, 9 lb uplift at joint 14, 42 lb uplift at joint 22, 45 lb uplift at joint 23, 26 lb uplift at joint 24, 79 lb uplift at joint 25, 42 lb uplift at joint 20, 47 lb uplift at joint 19, 30 lb uplift at joint 17, 81 lb uplift at joint 16, 18 lb uplift at joint 2 and 9 lb uplift at joint 14.
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: 1-8=-51, 8-15=-51
Trapezoidal Loads (lb/ft)

July 7,2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Vert: 26=-20-to-28=-20 (F=0), 28=-20 (F=0)-to-25=-22 (F=-2), 25=-22 (F=-2)-to-24=-23 (F=-3), 24=-23 (F=-3)-to-23=-25 (F=-5), 23=-25 (F=-5)-to-22=-26 (F=-6), 22=-26 (F=-6)-to-21=-27 (F=-7), 21=-27 (F=-7)-to-20=-29 (F=-9), 20=-29 (F=-9)-to-19=-30 (F=-10), 19=-30 (F=-10)-to-18=-31 (F=-11), 18=-31 (F=-11)-to-17=-32 (F=-12), 17=-32 (F=-12)-to-16=-33 (F=-13), 16=-33 (F=-13)-to-32=-35 (F=-15), 32=-35 (F=-15)-to-30=-35 (F=-15)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	G01	Common	11	1	Job Reference (optional)	I74684740

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:20 Page: 1

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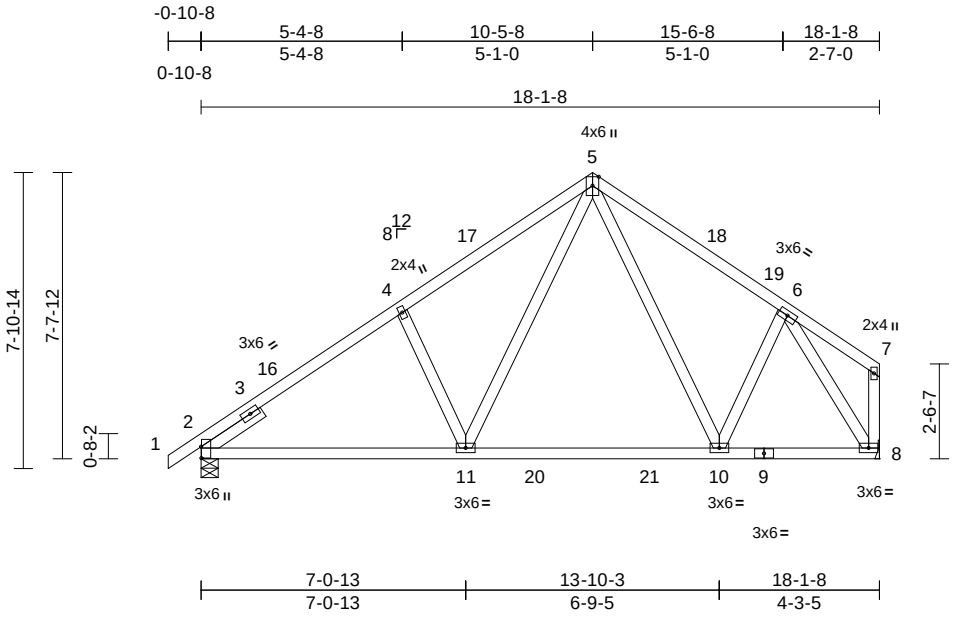

Scale = 1:61.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	-0.09	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.13	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 109 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-11-0

BRACING

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

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=140 (LC 14)
Max Uplift 2=-80 (LC 14), 8=-55 (LC 15)
Max Grav 2=773 (LC 2), 8=718 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-886/108, 4-5=-825/164, 5-6=-629/142, 6-7=-20/64, 7-8=-28/15
BOT CHORD	2-11=-165/779, 10-11=-35/461, 8-10=-42/408
WEBS	5-10=-64/123, 6-10=-25/177, 5-11=-113/489, 4-11=-275/152, 6-8=-773/81

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-5-8, Exterior (2) 10-5-8 to 13-5-8, Interior (1) 13-5-8 to 17-11-12 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 80 lb uplift at joint 2 and 55 lb uplift at joint 8.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	G01E	Common Supported Gable	1	1	I74684741 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:20 Page: 1
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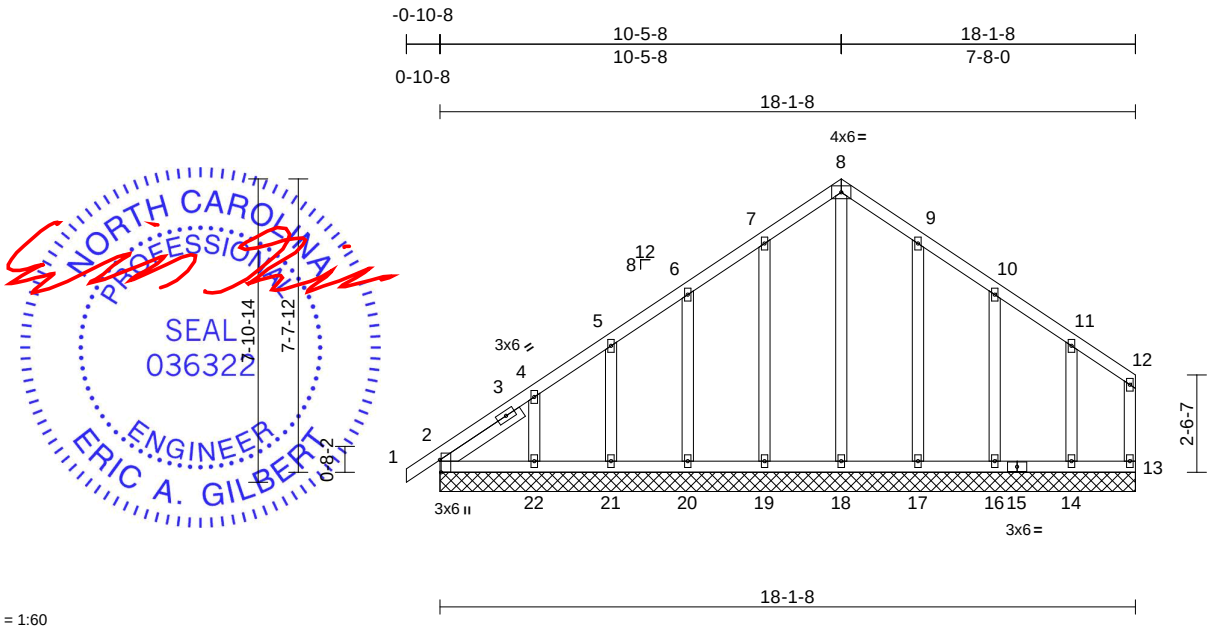

Scale = 1:60

Plate Offsets (X, Y): [2:0-3-14,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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 121 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-0

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

REACTIONS (size) 2=18-1-8, 13=18-1-8, 14=18-1-8, 16=18-1-8, 17=18-1-8, 18=18-1-8, 19=18-1-8, 20=18-1-8, 21=18-1-8, 22=18-1-8
Max Horiz 2=140 (LC 14)
Max Uplift 2=-55 (LC 10), 13=-4 (LC 15), 14=-64 (LC 15), 16=-57 (LC 15), 17=-52 (LC 15), 19=-54 (LC 14), 20=-56 (LC 14), 21=-44 (LC 14), 22=-89 (LC 14)
Max Grav 2=177 (LC 27), 13=63 (LC 2), 14=187 (LC 27), 16=191 (LC 27), 17=192 (LC 27), 18=215 (LC 29), 19=188 (LC 26), 20=176 (LC 26), 21=160 (LC 2), 22=218 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-143/151, 4-5=-122/115, 5-6=-109/114, 6-7=-97/142, 7-8=-135/167, 8-9=-135/159, 9-10=-97/112, 10-11=-58/62, 11-12=-25/27, 12-13=-40/12
BOT CHORD 2-22=-2/5, 21-22=-2/5, 20-21=-2/5, 19-20=-2/5, 18-19=-2/5, 17-18=-2/5, 16-17=-2/5, 14-16=-2/5, 13-14=-2/5
WEBS 8-18=-157/52, 7-19=-133/63, 6-20=-123/66, 5-21=-117/58, 4-22=-156/90, 9-17=-129/61, 10-16=-125/66, 11-14=-119/65

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-10-8 to 2-1-8, Exterior (2) 2-1-8 to 10-5-8, Corner (3) 10-5-8 to 13-5-8, Exterior (2) 13-5-8 to 17-11-12 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 13, 55 lb uplift at joint 2, 54 lb uplift at joint 19, 56 lb uplift at joint 20, 44 lb uplift at joint 21, 89 lb uplift at joint 22, 52 lb uplift at joint 17, 57 lb uplift at joint 16, 64 lb uplift at joint 14 and 55 lb uplift at joint 2.
13) 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: 1-8=-51, 8-12=-51
Trapezoidal Loads (lb/ft)
Vert: 23=-20-to-25=-20 (F=0), 25=-20 (F=0)-to-22=-22 (F=-2), 22=-22 (F=-2)-to-21=-24 (F=-4), 21=-24 (F=-4)-to-20=-25 (F=-5), 20=-25 (F=-5)-to-19=-27 (F=-7), 19=-27 (F=-7)-to-18=-29 (F=-9), 18=-29 (F=-9)-to-17=-30 (F=-10), 17=-30 (F=-10)-to-16=-32 (F=-12), 16=-32 (F=-12)-to-15=-32 (F=-12), 15=-32 (F=-12)-to-14=-33 (F=-13), 14=-33 (F=-13)-to-13=-35 (F=-15)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	J01	Jack-Open Girder	1	1	Job Reference (optional)	I74684742

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:20 Page: 1
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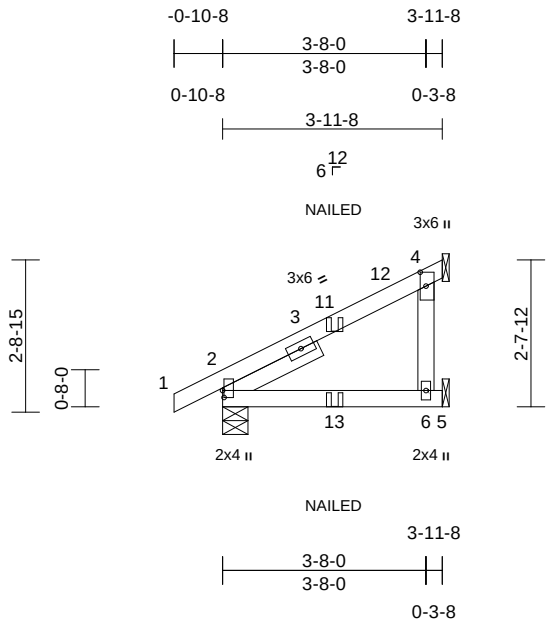

Scale = 1:41.5

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

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	0.23	Vert(LL)	0.01	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-11-0

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, 6= Mechanical
Max Horiz 2=67 (LC 12)
Max Uplift 2=-19 (LC 12), 4=-41 (LC 12), 6=-2 (LC 12)
Max Grav 2=206 (LC 2), 4=95 (LC 2), 6=77 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-134/35
BOT CHORD 2-6=-57/62, 5-6=0/0
WEBS 4-6=0/0

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; 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
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 19 lb uplift at joint 2, 41 lb uplift at joint 4 and 2 lb uplift at joint 6.
10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-51, 5-7=-20
Concentrated Loads (lb)
Vert: 11=-26 (F), 13=-3 (F)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	J02	Jack-Open	1	1	Job Reference (optional)	I74684743

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:20
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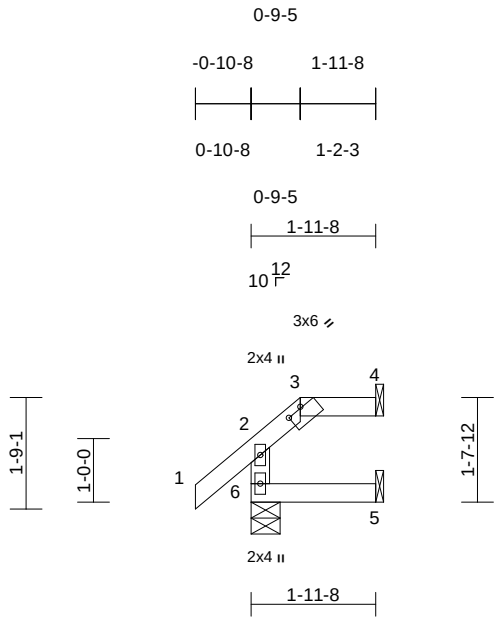

Scale = 1:36.2

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

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	0.12	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 9 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 1-11-8 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical, 6=0-5-8
Max Horiz 6=33 (LC 13)
Max Uplift 4=-18 (LC 13), 5=-2 (LC 13), 6=-11 (LC 16)
Max Grav 4=71 (LC 35), 5=33 (LC 7), 6=209 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-183/64, 1-2=0/64, 2-3=-56/9, 3-4=0/0
BOT CHORD 5-6=0/0

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 1-11-6 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 6, 18 lb uplift at joint 4 and 2 lb uplift at joint 5.
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

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	J03	Jack-Open	9	1	Job Reference (optional)	I74684744

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:20
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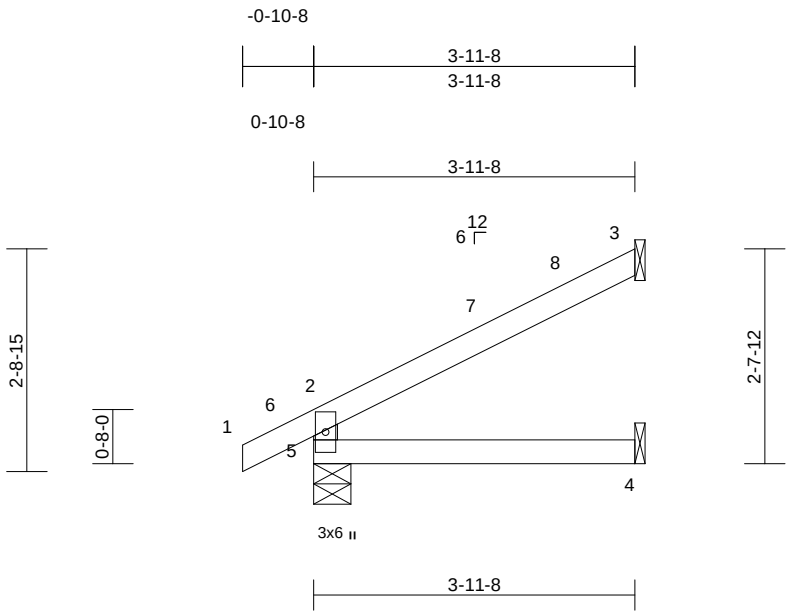

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
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.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-8 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=65 (LC 16)
Max Uplift 3=-44 (LC 16), 5=-18 (LC 16)
Max Grav 3=99 (LC 2), 4=70 (LC 7), 5=220 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-187/90, 1-2=0/27, 2-3=-62/34
BOT CHORD 4-5=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-10-8 to 2-1-8, Interior (1) 2-1-8 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
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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 18 lb uplift at joint 5 and 44 lb uplift at joint 3.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	P01E	Monopitch Supported Gable	1	1	Job Reference (optional)	I74684745

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:21 Page: 1
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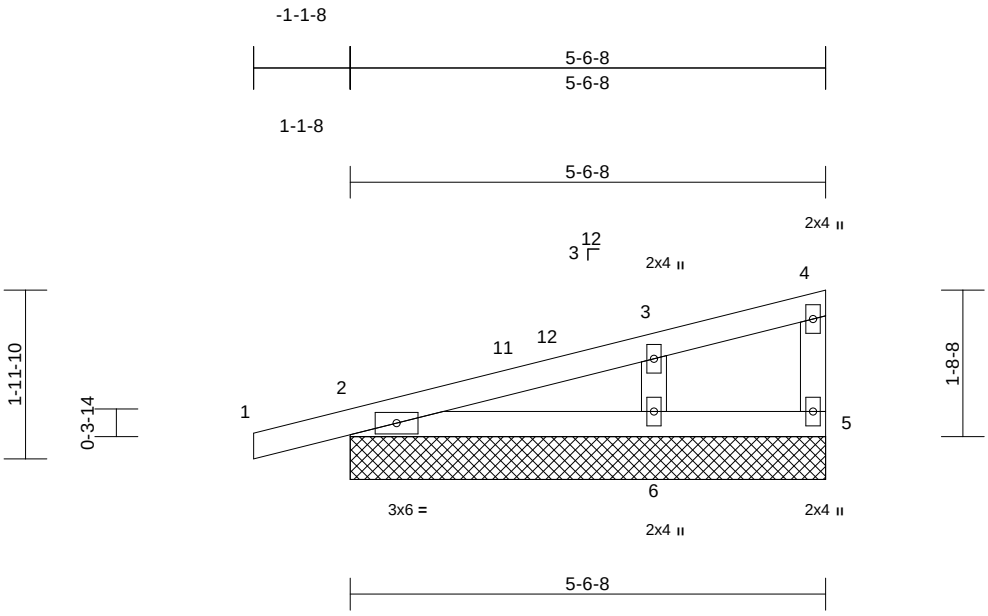

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-6-8 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=5-6-8, 5=5-6-8, 6=5-6-8
Max Horiz 2=52 (LC 12)
Max Uplift 2=-50 (LC 12), 5=-2 (LC 12), 6=-42 (LC 16)
Max Grav 2=207 (LC 2), 5=148 (LC 7), 6=348 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-3=-61/34, 3-4=-23/1, 4-5=-16/34
BOT CHORD	2-6=-21/56, 5-6=0/0
WEBS	3-6=-235/159

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-1-8 to 1-10-8, Exterior (2) 1-10-8 to 5-4-12 zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2, 2 lb uplift at joint 5, 42 lb uplift at joint 6 and 50 lb uplift at joint 2.
13) 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: 1-4=-51
Trapezoidal Loads (lb/ft)
Vert: 7=-20-to-9=-23 (F=-3), 9=-23 (F=-3)-to-10=-35 (F=-15), 10=35 (F=15)-to-6=30 (F=10), 6=-30 (F=-10)-to-5=-35 (F=-15)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	P02	Monopitch	5	1	I74684746
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:21 Page: 1
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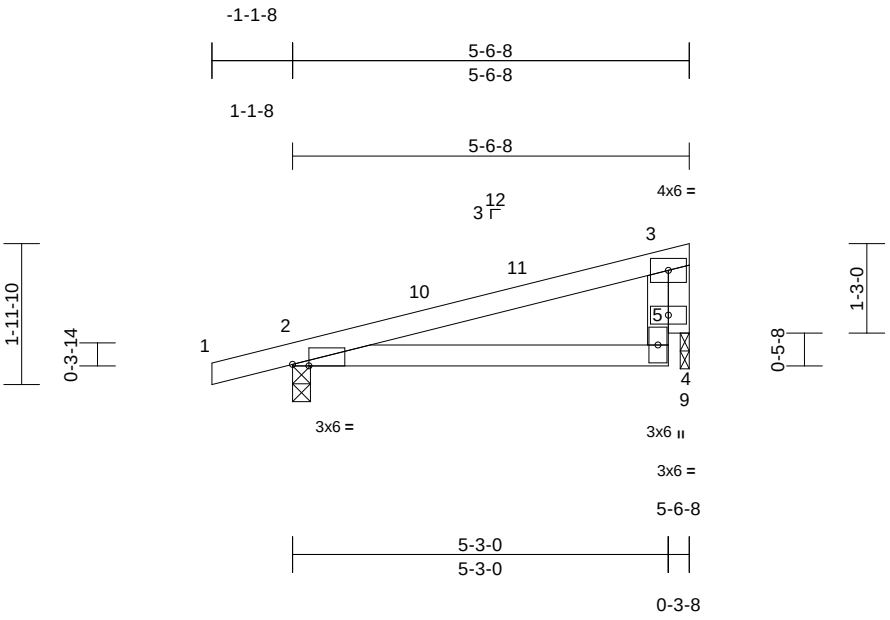

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Plate Offsets (X, Y): [2:0-2-12,Edge]

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	0.27	Vert(LL)	0.02	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.03	4-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 21 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 9=0-1-8
Max Horiz 2=45 (LC 12)
Max Uplift 2=-103 (LC 12), 9=-64 (LC 12)
Max Grav 2=293 (LC 2), 9=183 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-234/136, 4-5=-96/109, 3-5=-56/59
BOT CHORD 2-4=-146/214
WEBS 3-9=-114/102

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-1-8 to 1-10-8, Interior (1) 1-10-8 to 5-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 9.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 2 and 64 lb uplift at joint 9.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	P03	Monopitch	4	1	Job Reference (optional)	I74684747

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:21
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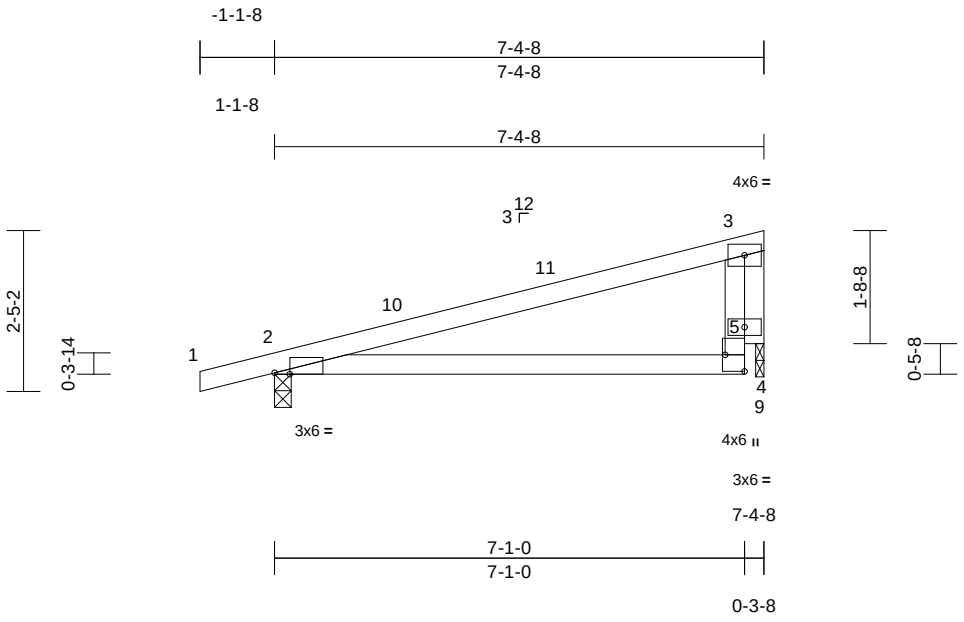

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Plate Offsets (X, Y): [2:0-2-12,Edge], [4:Edge,0-3-8]

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	0.54	Vert(LL)	0.08	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.11	4-8	>802	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 28 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 2=0-3-0, 9=0-1-8
Max Horiz 2=64 (LC 12)
Max Uplift 2=-125 (LC 12), 9=-91 (LC 12)
Max Grav 2=364 (LC 2), 9=258 (LC 2)

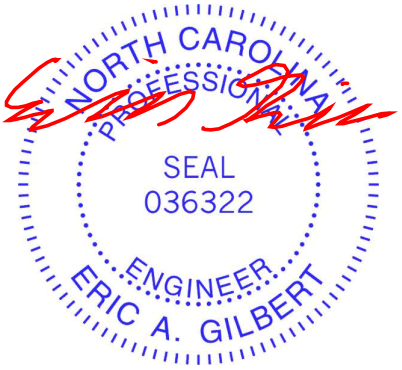
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/16, 2-3=-321/172, 4-5=-131/152, 3-5=-127/140
BOT CHORD	2-4=-186/290
WEBS	3-9=-206/179

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-1-8 to 1-10-8, Interior (1) 1-10-8 to 6-11-4 zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 125 lb uplift at joint 2 and 91 lb uplift at joint 9.

LOAD CASE(S) Standard



July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	P04	Monopitch	9	1	I74684748
					Job Reference (optional)

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

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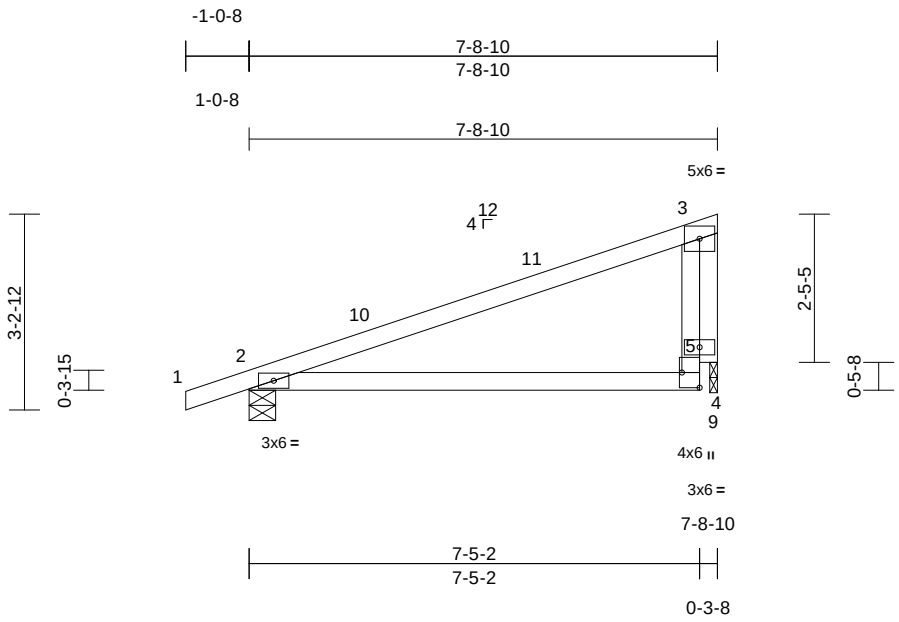

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Plate Offsets (X, Y): [4:Edge,0-3-8]

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	0.60	Vert(LL)	0.10	4-8	>884	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.13	4-8	>689	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 31 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-4, 9=0-1-8
Max Horiz 2=87 (LC 12)
Max Uplift 2=-122 (LC 12), 9=-102 (LC 12)
Max Grav 2=372 (LC 2), 9=273 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-276/130, 4-5=-140/162, 3-5=-173/197
BOT CHORD 2-4=-149/228
WEBS 3-9=-254/220

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 7-3-6 zone; cantilever left and right exposed ; end vertical left exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 2 and 102 lb uplift at joint 9.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	P05E	Monopitch Structural Gable	2	1	Job Reference (optional)	I74684749

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:21 Page: 1
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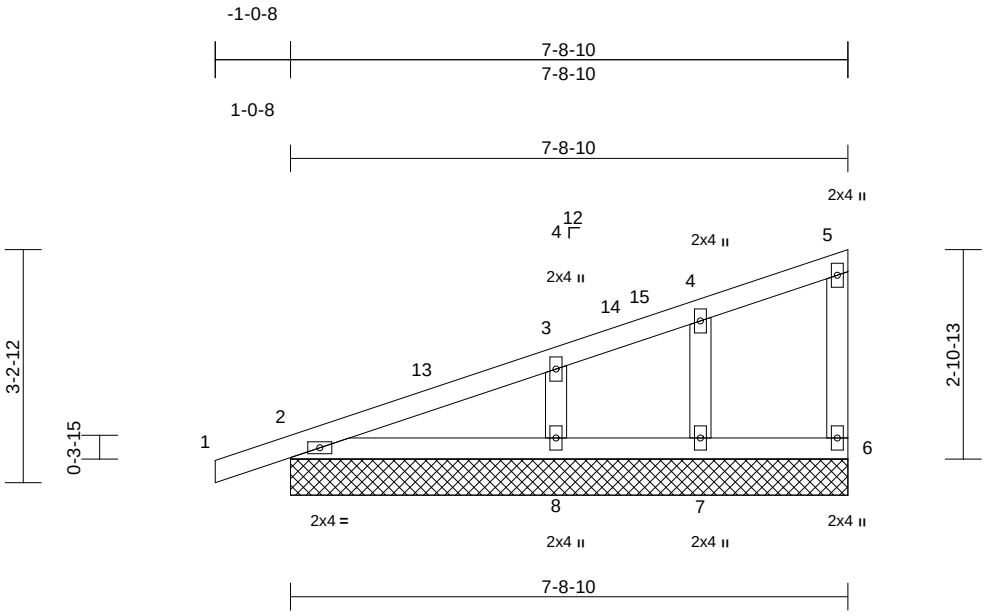

Scale = 1:31.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.02	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 33 lb	FT = 20%

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

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

REACTIONS (size) 2=7-8-10, 6=7-8-10, 7=7-8-10, 8=7-8-10
Max Horiz 2=90 (LC 15)
Max Uplift 2=-41 (LC 12), 6=-10 (LC 13), 7=-31 (LC 12), 8=-57 (LC 16)
Max Grav 2=198 (LC 2), 6=80 (LC 2), 7=156 (LC 23), 8=300 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/20, 2-3=-96/71, 3-4=-70/45, 4-5=-41/37, 5-6=-50/35
BOT CHORD 2-8=-35/45, 7-8=-35/38, 6-7=-35/38
WEBS 4-7=-107/69, 3-8=-189/61

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-8 to 1-11-8, Interior (1) 1-11-8 to 7-6-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 15.4 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) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss 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.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 2, 10 lb uplift at joint 6, 31 lb uplift at joint 7, 57 lb uplift at joint 8 and 41 lb uplift at joint 2.
13) 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: 1-5=-51
Trapezoidal Loads (lb/ft)
Vert: 9=-20-to-11=-22 (F=-2), 11=-22 (F=-2)-to-8=-27 (F=-7), 8=-27 (F=-7)-to-7=-31 (F=-11), 7=-31 (F=-11)-to-6=-35 (F=-15)

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	V01	Valley	1	1	Job Reference (optional)	I74684750

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:22 Page: 1
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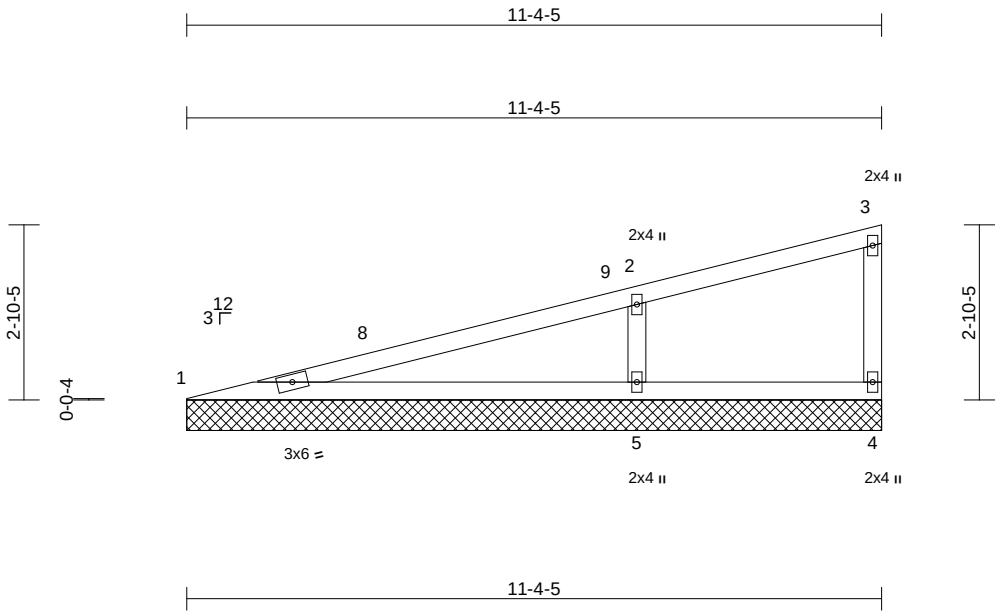

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.59	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 38 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=11-4-5, 4=11-4-5, 5=11-4-5
Max Horiz 1=81 (LC 12)
Max Uplift 1=-23 (LC 12), 4=-10 (LC 12), 5=-104 (LC 12)
Max Grav 1=241 (LC 2), 4=68 (LC 22), 5=604 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-675/82, 2-3=-43/10
BOT CHORD	1-5=-143/648, 4-5=0/0
WEBS	2-5=-400/117, 3-4=-67/41

NOTES

1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 11-3-9 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 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 10 lb uplift at joint 4, 23 lb uplift at joint 1 and 104 lb uplift at joint 5.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	V02	Valley	1	1	Job Reference (optional)	I74684751

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:22
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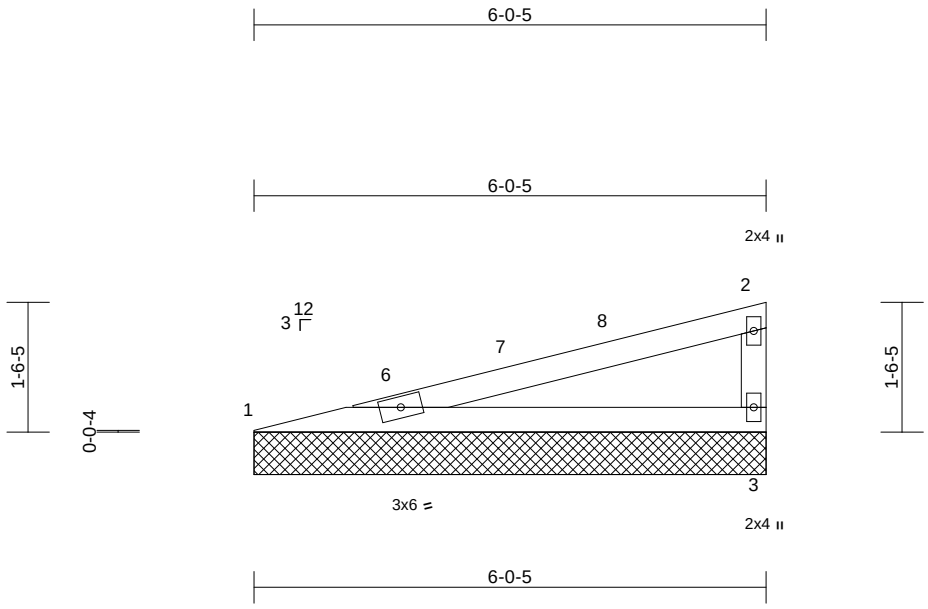

Scale = 1:27.1

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.51	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

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

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

REACTIONS (size) 1=6-0-5, 3=6-0-5
Max Horiz 1=41 (LC 12)
Max Uplift 1=-31 (LC 12), 3=-41 (LC 12)
Max Grav 1=235 (LC 2), 3=235 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-653/148
BOT CHORD 1-3=-190/627
WEBS 2-3=-144/68

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 5-11-9 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 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 41 lb uplift at joint 3 and 31 lb uplift at joint 1.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity	
P05927-31414	V03	Valley	1	1	Job Reference (optional)	I74684752

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

Run: 8.83 S Jun 11 2025 Print: 8.830 S Jun 11 2025 MiTek Industries, Inc. Fri Jul 04 14:24:22
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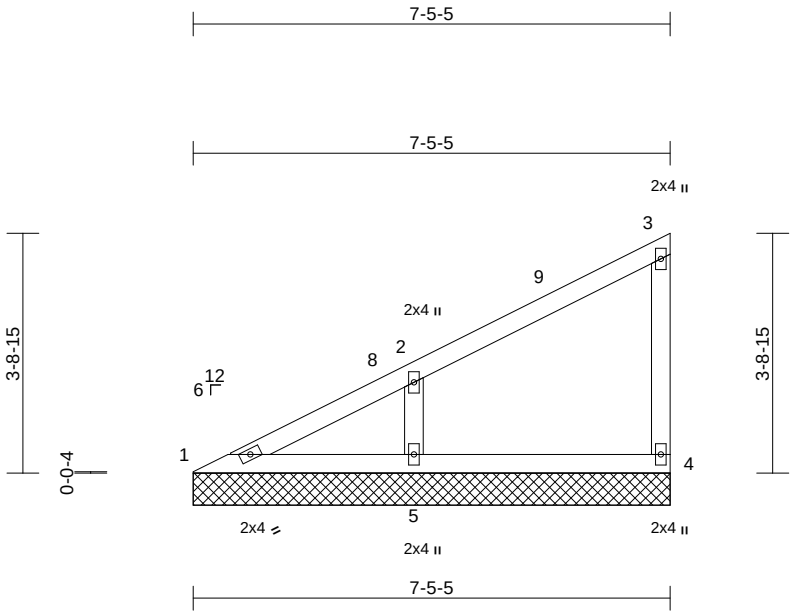

Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 29 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=7-5-5, 4=7-5-5, 5=7-5-5
Max Horiz 1=106 (LC 13)
Max Uplift 4=-19 (LC 13), 5=-84 (LC 16)
Max Grav 1=101 (LC 30), 4=120 (LC 2), 5=365 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-163/108, 2-3=-88/63, 3-4=-91/81
BOT CHORD	1-5=-56/129, 4-5=-46/50
WEBS	2-5=-262/147

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 7-4-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
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 4-0-0 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 19 lb uplift at joint 4 and 84 lb uplift at joint 5.

LOAD CASE(S) Standard

July 7,2025

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

Job	Truss	Truss Type	Qty	Ply	915 Serenity
P05927-31414	V04	Valley	1	1	I74684753
					Job Reference (optional)

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

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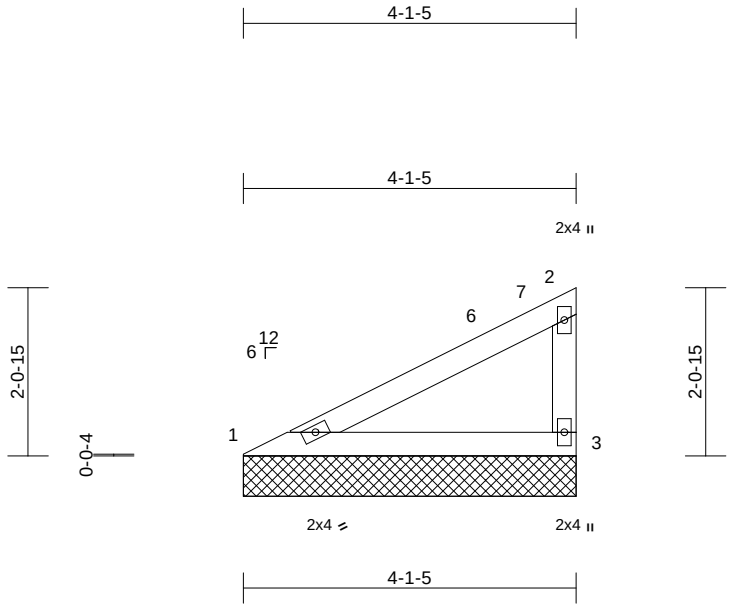


Scale = 1:28.5

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)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2015/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.2

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

REACTIONS (size) 1=4-1-5, 3=4-1-5
Max Horiz 1=55 (LC 13)
Max Uplift 1=-18 (LC 16), 3=-31 (LC 16)
Max Grav 1=159 (LC 2), 3=159 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-260/77, 2-3=-99/72
BOT CHORD 1-3=-131/226

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 4-0-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
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 4-0-0 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 31 lb uplift at joint 3 and 18 lb uplift at joint 1.

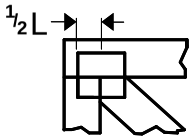
LOAD CASE(S) Standard

July 7,2025

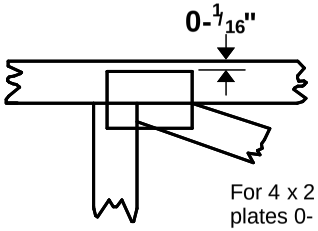
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

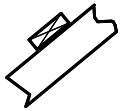
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

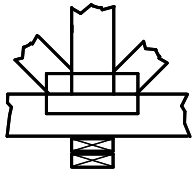
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

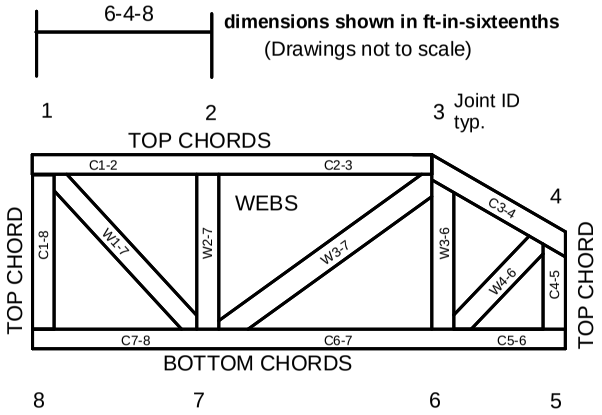


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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