ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02509-25343
903 Serenity

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

Pages or sheets covered by this seal: I73424066 thru I73424109

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

North Carolina COA: C-0844

May 14,2025

Gilbert, Eric

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	A01	Roof Special	9	1	Job Reference (optional)	I73424066

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:32 Page: 1
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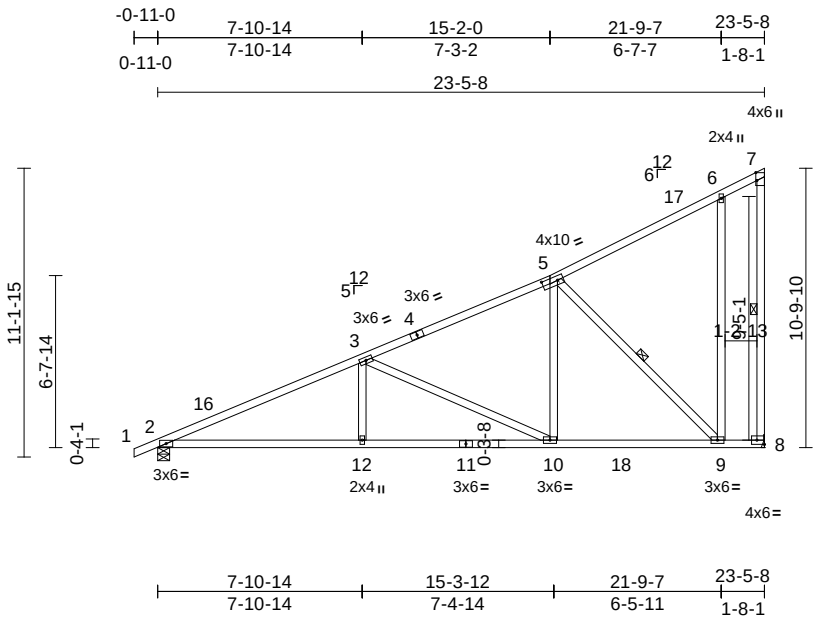

Scale = 1:89.1

Plate Offsets (X, Y): [5:0-7-4,0-2-0], [7:0-3-11,Edge], [8:Edge,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	0.88	Vert(LL)	-0.32	9-10	>866	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.66	9-10	>426	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 142 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP No.1
BOT CHORD 2x4 SP No.2 *Except* 11-8:2x4 SP DSS
WEBS 2x4 SP No.2 *Except* 3-12:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-13 oc bracing.
WEBS 1 Row at midpt 7-8, 5-9

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=324 (LC 16)
Max Uplift 2=-85 (LC 16), 8=-213 (LC 16)
Max Grav 2=989 (LC 2), 8=931 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-1772/110, 3-5=-994/32, 5-6=-175/0, 6-7=-27/114, 7-8=-345/64
BOT CHORD 2-12=-350/1588, 10-12=-350/1588, 9-10=-182/847, 8-9=-11/45
WEBS 3-12=0/306, 3-10=-827/186, 5-10=-68/647, 5-9=-1112/237, 6-9=-3/265

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) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 23-3-12 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 213 lb uplift at joint 8 and 85 lb uplift at joint 2.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	AE01	Roof Special Supported Gable	1	1	I73424067 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:33 Page: 1
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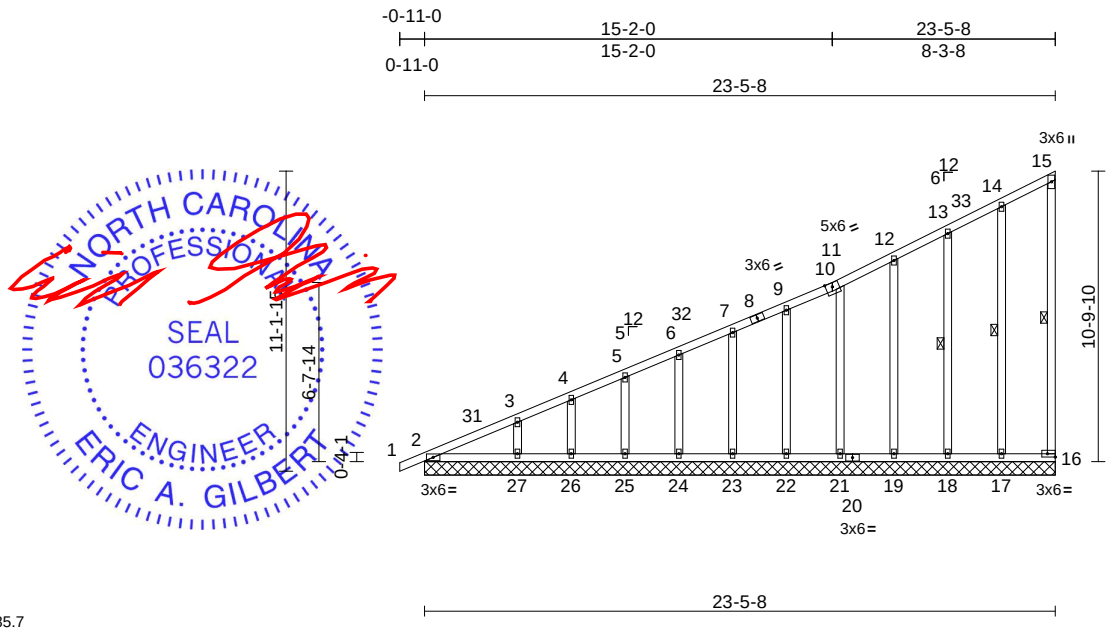

Scale = 1:85.7

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

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	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	16	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 166 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 17-14,18-13,19-12,21-11:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 15-16, 14-17, 13-18

REACTIONS (size) 2=23-5-8, 16=23-5-8, 17=23-5-8, 18=23-5-8, 19=23-5-8, 21=23-5-8, 22=23-5-8, 23=23-5-8, 24=23-5-8, 25=23-5-8, 26=23-5-8, 27=23-5-8
Max Horiz 2=337 (LC 15)
Max Uplift 16=-41 (LC 13), 17=-54 (LC 16), 18=-38 (LC 16), 19=-48 (LC 16), 21=-37 (LC 16), 22=-38 (LC 16), 23=-38 (LC 16), 24=-37 (LC 16), 25=-39 (LC 16), 26=-26 (LC 16), 27=-63 (LC 16)
Max Grav 2=198 (LC 31), 16=83 (LC 30), 17=205 (LC 2), 18=190 (LC 2), 19=190 (LC 2), 21=184 (LC 2), 22=199 (LC 23), 23=197 (LC 23), 24=173 (LC 2), 25=183 (LC 2), 26=127 (LC 2), 27=274 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-460/240, 3-4=-418/214, 4-5=-392/210, 5-6=-361/198, 6-7=-331/188, 7-9=-300/177, 9-10=-271/165, 10-11=-264/168, 11-12=-250/162, 12-13=-212/148, 13-14=-176/141, 14-15=-104/108, 15-16=-46/45
BOT CHORD 2-27=-121/143, 26-27=-121/143, 25-26=-121/143, 24-25=-121/143, 23-24=-121/143, 22-23=-121/143, 21-22=-121/143, 19-21=-121/143, 18-19=-121/143, 17-18=-121/143, 16-17=-121/143
WEBS 14-17=-146/166, 13-18=-120/78, 12-19=-121/61, 11-21=-119/58, 9-22=-141/54, 7-23=-141/56, 6-24=-119/54, 5-25=-125/57, 4-26=-97/46, 3-27=-181/89

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) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 23-3-12 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) 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 41 lb uplift at joint 16, 54 lb uplift at joint 17, 38 lb uplift at joint 18, 48 lb uplift at joint 19, 37 lb uplift at joint 21, 38 lb uplift at joint 22, 38 lb uplift at joint 23, 37 lb uplift at joint 24, 39 lb uplift at joint 25, 26 lb uplift at joint 26 and 63 lb uplift at joint 27.
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: 1-10=-43, 10-15=-43

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Continued on page 2

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Trapezoidal Loads (lb/ft)
Vert: 28=-20-to-30=-20 (F=0), 30=-20 (F=0)-to-27=-22 (F=-2), 27=-22 (F=-2)-to-26=-24 (F=-4), 26=-24 (F=-4)-to-25=-25 (F=-5), 25=-25 (F=-5)-to-24=-26 (F=-6), 24=-26 (F=-6)-to-23=-27 (F=-7), 23=-27 (F=-7)-to-22=-29 (F=-9), 22=-29 (F=-9)-to-21=-30 (F=-10), 21=-30 (F=-10)-to-20=-30 (F=-10), 20=-30 (F=-10)-to-19=-31 (F=-11), 19=-31 (F=-11)-to-18=-33 (F=-13), 18=-33 (F=-13)-to-17=-34 (F=-14), 17=-34 (F=-14)-to-16=-35 (F=-15)

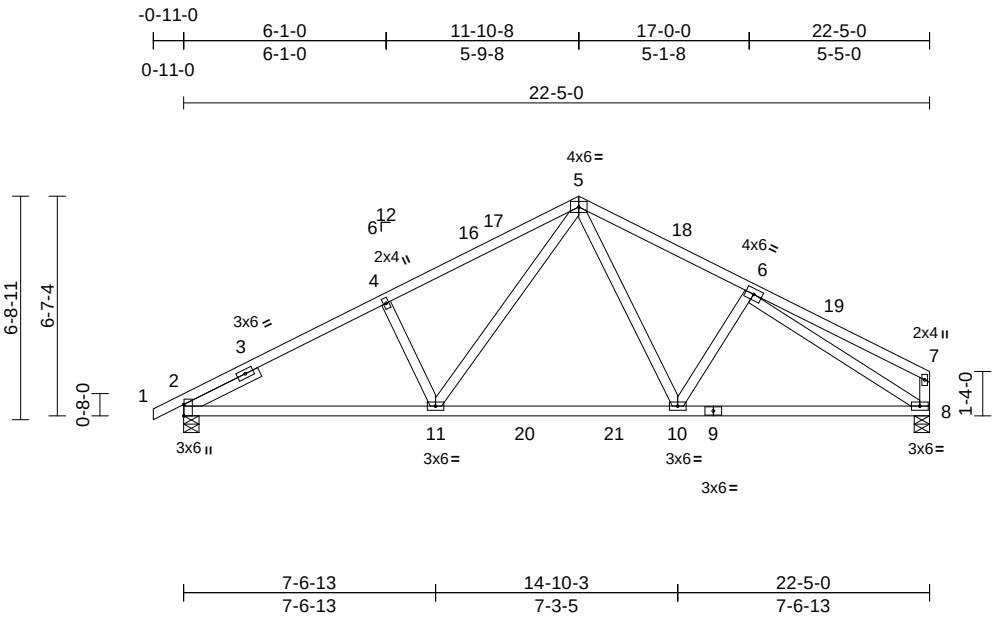
May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	B01	Common	3	1	Job Reference (optional)	I73424068

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:33 ID:XulmTdh1nU6AV9oob1vjtFzxXRX-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:69.3

Plate Offsets (X, Y): [2:0-4-1,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	0.43	Vert(LL)	-0.12	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.18	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 119 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 11-5,10-5,8-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 2-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-5-9 oc purlins, except end verticals.
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=89 (LC 20)
Max Uplift 2=-106 (LC 16), 8=-84 (LC 17)
Max Grav 2=947 (LC 2), 8=890 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/25, 2-4=-1288/165, 4-5=-1283/199, 5-6=-1103/183, 6-7=-193/65, 7-8=-198/70
BOT CHORD	2-11=-158/1199, 10-11=-47/790, 8-10=-104/991
WEBS	4-11=-318/146, 5-11=-113/521, 5-10=-66/349, 6-10=-180/126, 6-8=-1074/99

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) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-10-8, Exterior (2) 11-10-8 to 14-10-8, Interior (1) 14-10-8 to 22-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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 106 lb uplift at joint 2 and 84 lb uplift at joint 8.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	B02	Roof Special	5	1	Job Reference (optional)	I73424069

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:34 Page: 1
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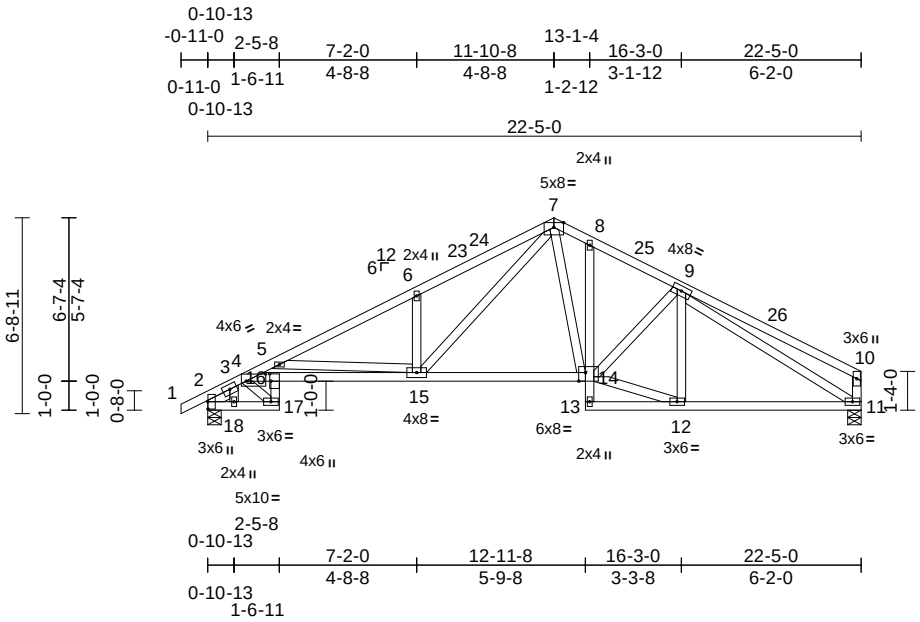

Scale = 1:79.1

Plate Offsets (X, Y): [2:0-3-0,0-0-1], [4:0-8-0,0-2-15], [14:0-2-12,Edge], [16:0-3-0,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.18	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.37	15-16	>716	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.18	11	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.1 *Except* 7-10:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-16,8-13:2x4 SP No.3, 4-14:2x4 SP DSS
WEBS 2x4 SP No.3 *Except* 9-11,7-15:2x4 SP No.2
SLIDER Left 2x4 SP No.1 -- 0-10-7

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) 2=0-5-8, 11=0-5-8
Max Horiz 2=89 (LC 20)
Max Uplift 2=-106 (LC 16), 11=-84 (LC 17)
Max Grav 2=947 (LC 2), 11=890 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-649/74, 3-4=-1086/128, 4-5=-2835/396, 5-6=-1795/198, 6-7=-1820/283, 7-8=-1127/186, 8-9=-1201/183, 9-10=-236/89, 10-11=-242/86
BOT CHORD 2-18=-141/774, 17-18=-141/774, 16-17=-114/665, 4-16=-403/2562, 15-16=-435/2745, 14-15=-54/934, 13-14=0/33, 8-14=-54/29, 12-13=-14/45, 11-12=-91/1000
WEBS 5-15=-1175/263, 6-15=-351/143, 3-18=-186/38, 4-17=-826/152, 9-11=-1038/66, 7-14=-79/402, 7-15=-199/957, 9-12=-206/61, 9-14=-66/97, 12-14=-81/1003

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) -0-11-0 to 2-1-13, Interior (1) 2-1-13 to 11-10-8, Exterior (2) 11-10-8 to 14-10-8, Interior (1) 14-10-8 to 22-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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 106 lb uplift at joint 2 and 84 lb uplift at joint 11.

LOAD CASE(S) Standard

May 14,2025

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	BE01	Common Structural Gable	1	1	Job Reference (optional)	I73424070

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:34 Page: 1
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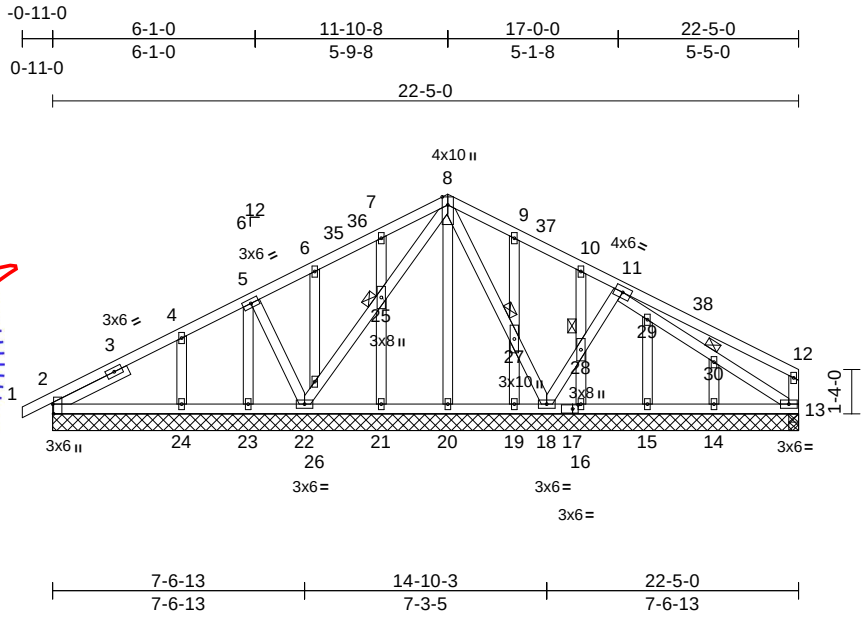

Scale = 1:69.3

Plate Offsets (X, Y): [2:0-3-8,Edge], [17:0-2-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	0.01	24-33	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	24-33	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.08	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 167 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 22-8,18-8,13-11:2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 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.
JOINTS 1 Brace at Jt(s): 25, 27, 28, 30

REACTIONS (size) 2=22-5-0, 13=22-5-0, 14=22-5-0, 15=22-5-0, 16=22-5-0, 18=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
Max Horiz 2=88 (LC 20)
Max Uplift 2=-11 (LC 16), 13=-56 (LC 17), 18=-102 (LC 17), 19=-48 (LC 17), 21=-53 (LC 16), 22=-66 (LC 16), 24=-86 (LC 16)
Max Grav 2=233 (LC 34), 13=255 (LC 2), 14=125 (LC 7), 15=113 (LC 7), 16=77 (LC 7), 18=299 (LC 2), 19=194 (LC 35), 20=104 (LC 7), 21=214 (LC 34), 22=241 (LC 2), 23=42 (LC 20), 24=298 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-4=-146/27, 4-5=-111/63, 5-6=-57/63, 6-7=-67/88, 7-8=-82/114, 8-9=-62/107, 9-10=-45/72, 10-11=-64/65, 11-12=-138/78, 12-13=-174/74
BOT CHORD 2-24=-24/81, 23-24=-24/81, 22-23=-24/80, 21-22=-21/60, 20-21=-21/60, 19-20=-21/60, 18-19=-21/60, 16-18=-23/123, 15-16=-23/123, 14-15=-23/123, 13-14=-23/123
WEBS 5-22=-96/63, 22-26=-82/13, 25-26=-31/19, 8-25=-24/9, 8-27=-66/1, 18-27=-73/1, 18-28=-258/135, 11-28=-245/126, 11-29=-93/1, 29-30=-64/0, 13-30=-68/0, 8-20=-40/10, 7-25=-132/61, 21-25=-153/66, 6-26=-106/45, 5-23=-27/23, 4-24=-200/88, 9-27=-146/56, 19-27=-139/56, 10-28=-21/24, 16-28=-29/40, 15-29=-44/3, 14-30=-2/8

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) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-9-0, Exterior (2) 11-9-0 to 14-9-0, Interior (1) 14-9-0 to 22-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=11.5 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 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain load requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
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 11 lb uplift at joint 2, 66 lb uplift at joint 22, 102 lb uplift at joint 18, 56 lb uplift at joint 13, 53 lb uplift at joint 21, 86 lb uplift at joint 24, 48 lb uplift at joint 19 and 11 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)

May 14,2025

Continued on page 2

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Vert: 1-8=-43, 8-12=-43

Trapezoidal Loads (lb/ft)

Vert: 31=-20-to-33=-20 (F=0), 33=-20 (F=0)-to-24=-23 (F=-3), 24=-23 (F=-3)-to-23=-24 (F=-4), 23=-24 (F=-4)-to-22=-25 (F=-5), 22=-25 (F=-5)-to-21=-27 (F=-7), 21=-27 (F=-7)-to-20=-28 (F=-8), 20=-28 (F=-8)-to-19=-29 (F=-9), 19=-29 (F=-9)-to-18=-30 (F=-10), 18=-30 (F=-10)-to-17=-31 (F=-11), 17=-31 (F=-11)-to-16=-31 (F=-11), 16=-31 (F=-11)-to-15=-32 (F=-12), 15=-32 (F=-12)-to-14=-33 (F=-13), 14=-33 (F=-13)-to-13=-35 (F=-15)

May 14,2025

ENGINEERING BY TRENCO
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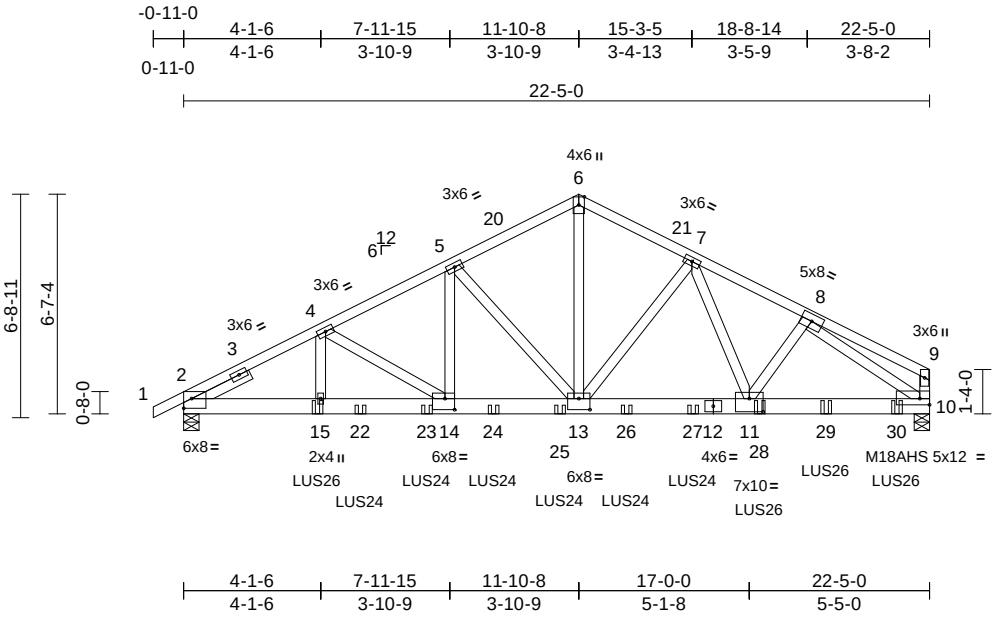
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	BG01	Common Girder	1	2	I73424071 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:35 Page: 1
ID:Ma9usJA6Mn8UIJsUxRd6UhzxXQv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.3

Plate Offsets (X, Y): [2:Edge,0-3-8], [10:Edge,0-2-4], [11:0-5-0,0-4-12], [13:0-4-0,0-4-0], [14:0-3-8,0-4-0]

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	0.76	Vert(LL)	-0.11	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.22	14-15	>999	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.05	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 304 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 6-9:2x4 SP No.2
BOT CHORD 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-11-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-10 oc purlins, except end verticals.
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=102 (LC 36)
Max Uplift 2=-614 (LC 12), 10=-556 (LC 13)
Max Grav 2=4943 (LC 2), 10=5798 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-4=-8484/1049, 4-5=-7527/803, 5-6=-5679/587, 6-7=-5664/592, 7-8=-7152/710, 8-9=-879/119, 9-10=-521/81
BOT CHORD 2-15=-969/7436, 14-15=-969/7436, 13-14=-713/6732, 11-13=-513/5804, 10-11=-525/5689
WEBS 4-15=-253/1027, 4-14=-851/298, 5-14=-304/2403, 5-13=-2545/395, 6-13=-475/4812, 8-10=-6350/579, 7-13=-1320/196, 7-11=-158/1623, 8-11=-98/1261

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 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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) All plates are MT20 plates 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 614 lb uplift at joint 2 and 556 lb uplift at joint 10.
13) Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent at 4-0-4 from the left end to connect truss(es) to front face of bottom chord.
14) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 8-0-0 oc max. starting at 5-3-12 from the left end to 15-3-12 to connect truss(es) to front face of bottom chord.
15) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 9-3-12 from the left end to 13-3-12 to connect truss(es) to front face of bottom chord.
16) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2-1-8 oc max. starting at 17-3-12 from the left end to 21-5-4 to connect truss(es) to front face of bottom chord.
17) 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=-43, 6-9=-43, 10-16=-20
Concentrated Loads (lb)

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Continued on page 2

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Vert: 15=-995 (F), 22=-719 (F), 23=-708 (F), 24=-695 (F), 25=-681 (F), 26=-668 (F), 27=-660 (F), 28=-984 (F), 29=-787 (F), 30=-789 (F)

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	C02	Common	5	1	Job Reference (optional)	I73424072

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:35 Page: 1
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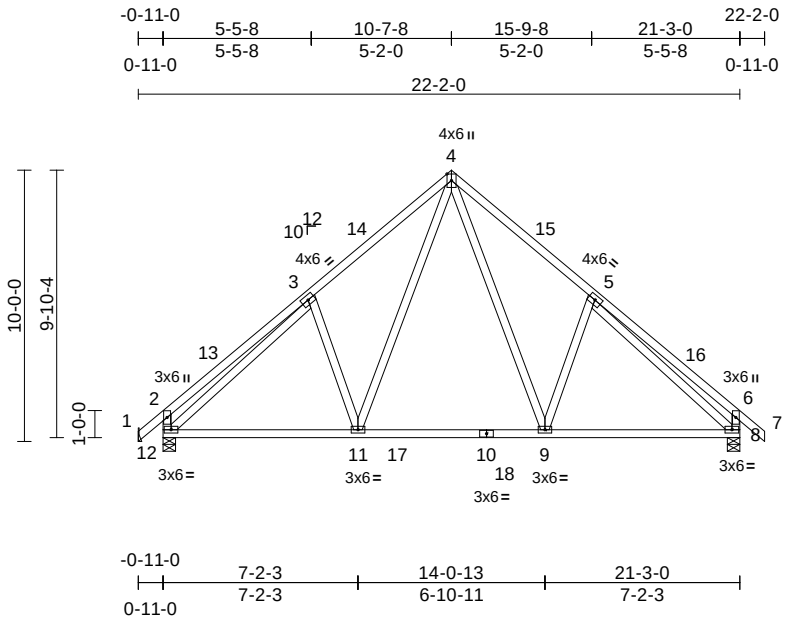

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.12	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.16	9-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	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 *Except* 9-5,11-3,12-2,8-6:2x4 SP No.3

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

REACTIONS (size) 1= Mechanical, 8=0-5-8, 12=0-5-8
Max Horiz 1=-212 (LC 12)
Max Uplift 1=-168 (LC 12), 8=-84 (LC 15), 12=-201 (LC 14)
Max Grav 1=159 (LC 11), 8=901 (LC 2), 12=1007 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-254/283, 2-3=-391/180, 3-4=-871/207, 4-5=-888/205, 5-6=-341/161, 6-7=0/41, 2-12=-391/173, 6-8=-366/147
BOT CHORD 11-12=-78/752, 9-11=0/526, 8-9=-8/674
WEBS 4-9=-146/460, 5-9=-237/193, 4-11=-130/442, 3-11=-232/178, 3-12=-796/66, 5-8=-735/5

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 22-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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 168 lb uplift at joint 1, 201 lb uplift at joint 12 and 84 lb uplift at joint 8.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	C03	Common	3	1	Job Reference (optional)	I73424073

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:35 Page: 1
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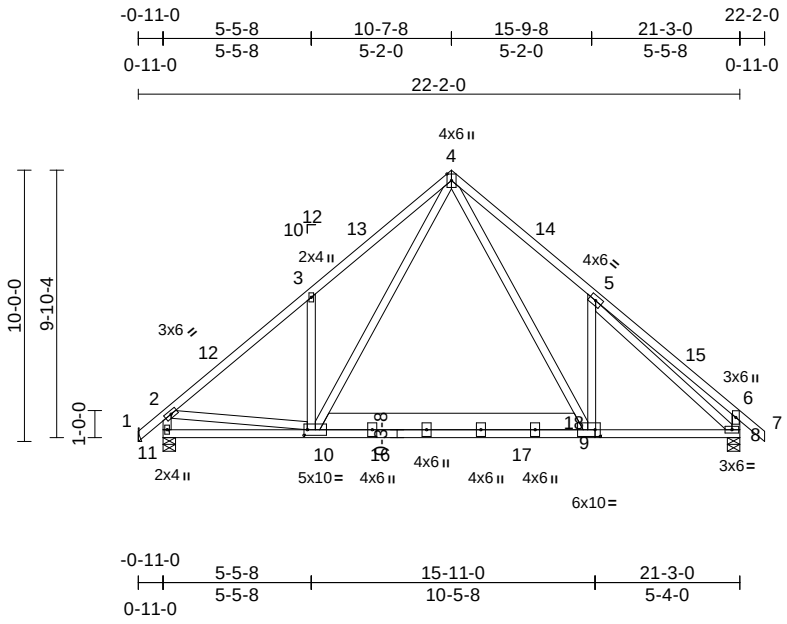

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Plate Offsets (X, Y): [9:0-2-4,0-3-0], [10:0-1-8,0-2-8]

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	0.41	Vert(LL)	-0.05	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.10	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 172 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 10-9:2x8 SP DSS
WEBS 2x4 SP No.3 *Except* 9-4,10-4,8-5:2x4 SP No.2

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

REACTIONS (size) 1= Mechanical, 8=0-5-8, 11=0-5-8
Max Horiz 1=-212 (LC 12)
Max Uplift 1=-195 (LC 12), 8=-105 (LC 15), 11=-224 (LC 14)
Max Grav 1=171 (LC 11), 8=1040 (LC 2), 11=1154 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-261/301, 2-3=-1158/133, 3-4=-1131/256, 4-5=-1232/289, 5-6=-358/171, 6-7=0/41, 2-11=-1110/239, 6-8=-382/153
BOT CHORD 10-11=-40/141, 8-10=-27/886
WEBS 4-9=-224/780, 5-9=-244/218, 4-10=-172/571, 3-10=-326/207, 2-10=-48/780, 5-8=-1000/18

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 22-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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 195 lb uplift at joint 1, 224 lb uplift at joint 11 and 105 lb uplift at joint 8.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-4=-43, 4-6=-43, 6-7=-43, 8-11=-20, 4-18=-40 (F)

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	C04	Common	1	1	Job Reference (optional)	I73424074

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:36 Page: 1
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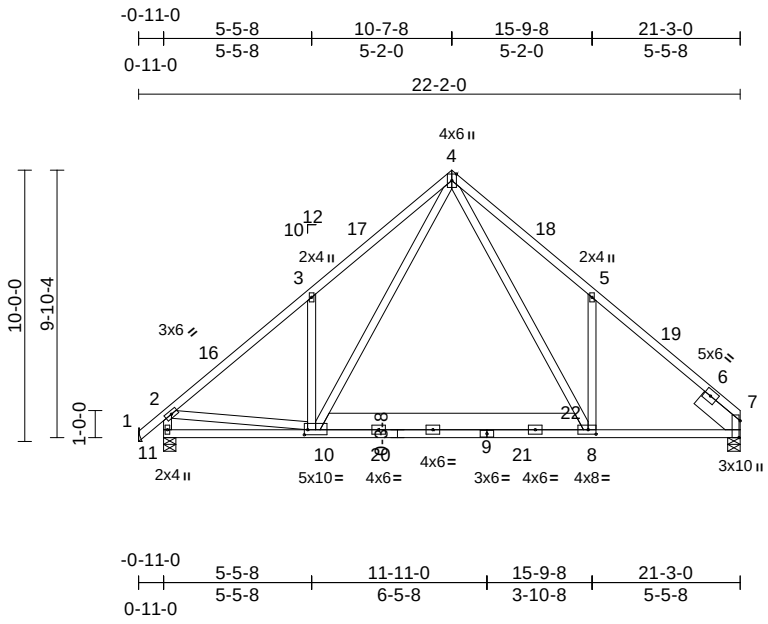

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Plate Offsets (X, Y): [7:0-7-7,Edge], [8:0-3-8,0-2-0], [10:0-1-8,0-2-4]

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	0.55	Vert(LL)	-0.06	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.12	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.03	7	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* 10-8:2x8 SP DSS
WEBS	2x4 SP No.3 *Except* 8-4,10-4:2x4 SP No.2
SLIDER	Right 2x8 SP DSS -- 1-11-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-7-10 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 7=0-5-8, 11=0-5-8
Max Horiz 1=196 (LC 11)
Max Uplift 1=-186 (LC 12), 7=-91 (LC 15), 11=-240 (LC 14)
Max Grav 1=169 (LC 11), 7=975 (LC 2), 11=1156 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-258/282, 2-3=-1166/131, 3-4=-1139/255, 4-5=-1190/321, 5-7=-1139/152, 2-11=-1113/255
BOT CHORD	10-11=-42/135, 8-10=-12/608, 7-8=-76/817
WEBS	4-8=-259/730, 5-8=-300/225, 4-10=-168/606, 3-10=-324/207, 2-10=-65/782

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 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=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 186 lb uplift at joint 1, 91 lb uplift at joint 7 and 240 lb uplift at joint 11.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-4=-43, 4-7=-43, 11-12=-20, 4-22=-40 (F)

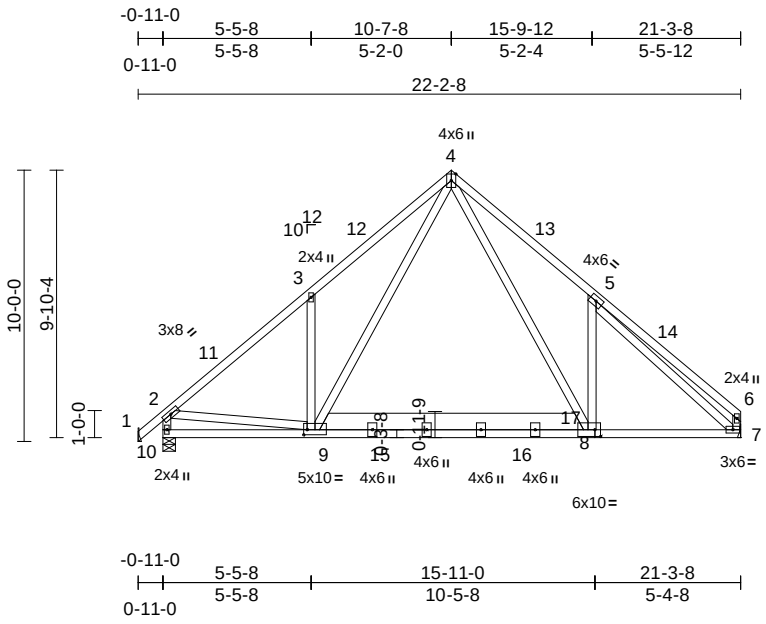
May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C05	Common	2	1	I73424075
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:36 Page: 1
ID:f_qzrT22hO4ujXn1MvwQDqzHIlq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:84.9

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

Loading	(psf)	Spacing	2-1-8	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.06	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.10	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 171 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 9-8:2x8 SP DSS
WEBS 2x4 SP No.3 *Except* 9-4,8-4,7-5:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 7= Mechanical, 10=0-5-8
Max Horiz 1=218 (LC 11)
Max Uplift 1=-198 (LC 12), 7=-94 (LC 15), 10=-247 (LC 14)
Max Grav 1=187 (LC 11), 7=1024 (LC 2), 10=1215 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-286/304, 2-3=-1225/139, 3-4=-1197/270, 4-5=-1312/308, 5-6=-338/143, 2-10=-1169/262, 6-7=-308/118
BOT CHORD 9-10=-43/149, 7-9=-54/933
WEBS 3-9=-347/220, 5-8=-273/235, 2-9=-60/818, 4-9=-182/608, 4-8=-239/832, 5-7=-1079/41

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 10-7-8, Exterior (2) 10-7-8 to 13-7-8, Interior (1) 13-7-8 to 21-1-12 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=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 1, 247 lb uplift at joint 10 and 94 lb uplift at joint 7.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-46, 2-4=-46, 4-6=-46, 7-10=-21, 4-17=-40 (F)

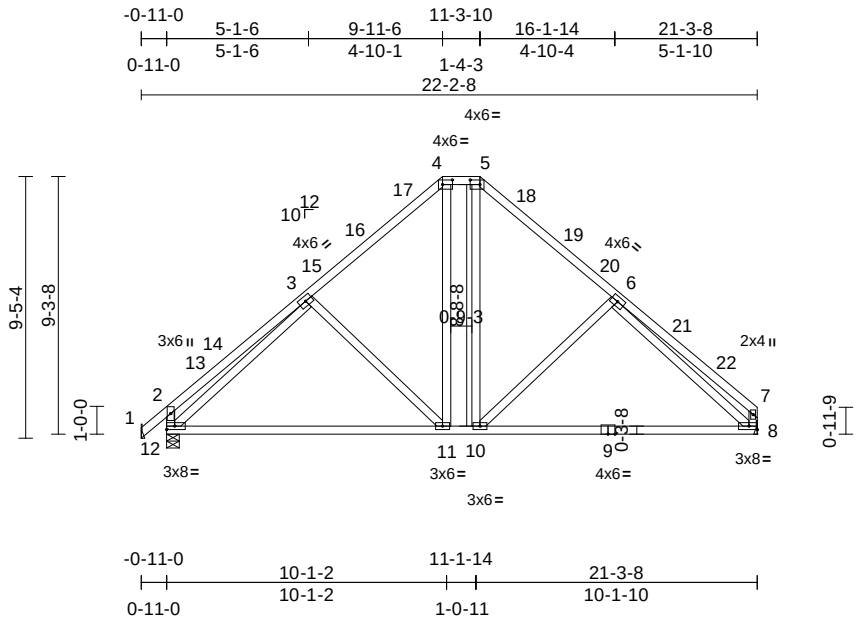
May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	C06	Hip	1	1	Job Reference (optional)	I73424076

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:36 Page: 1
ID:Ve7oZaJziYLOt8NaiiCuC3zHIdk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:83.1

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

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	0.57	Vert(LL)	-0.23	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.46	8-10	>551	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 142 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 12-2,8-7:2x4 SP No.3

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

REACTIONS (size) 1= Mechanical, 8= Mechanical, 12=0-5-8
Max Horiz 1=195 (LC 13)
Max Uplift 1=-157 (LC 14), 8=-67 (LC 17), 12=-198 (LC 16)
Max Grav 1=159 (LC 13), 8=1004 (LC 39), 12=1072 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-251/260, 2-3=-456/128, 3-4=-953/167, 4-5=-619/160, 5-6=-956/167, 6-7=-386/99, 2-12=-429/151, 7-8=-327/87
BOT CHORD 11-12=-89/813, 10-11=0/619, 8-10=-53/826
WEBS 3-11=-274/158, 4-11=-62/306, 5-10=-62/315, 6-10=-304/176, 3-12=-818/99, 6-8=-843/67

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 9-11-6, Exterior (2) 9-11-6 to 15-6-8, Interior (1) 15-6-8 to 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 1, 198 lb uplift at joint 12 and 67 lb uplift at joint 8.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

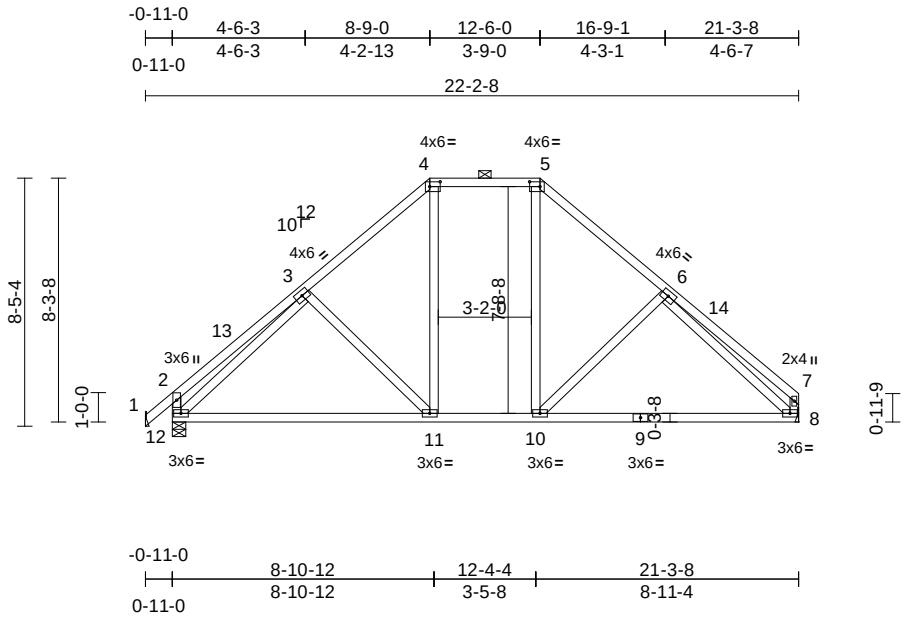
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C07	Hip	1	1	I73424077
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:37 Page: 1
ID:KQfdEWdjGkx4qkeL1O8DarzHIc2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.3

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

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)	-0.17	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.33	8-10	>752	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 11-4,10-5:2x4 SP No.2

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

REACTIONS (size) 1= Mechanical, 8= Mechanical, 12=0-5-8
Max Horiz 1=176 (LC 11)
Max Uplift 1=-166 (LC 12), 8=-65 (LC 15), 12=-196 (LC 14)
Max Grav 1=172 (LC 11), 8=839 (LC 2), 12=966 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-245/250, 2-3=-406/142, 3-4=-807/175, 4-5=-551/163, 5-6=-809/174, 6-7=-331/88, 2-12=-376/137, 7-8=-280/75
BOT CHORD 11-12=-75/673, 10-11=-17/560, 8-10=-64/663
WEBS 3-11=-178/140, 4-11=-41/278, 5-10=-43/281, 6-10=-196/161, 3-12=-698/120, 6-8=-682/82

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 8-9-0, Exterior (2) 8-9-0 to 16-10-11, Interior (1) 16-10-11 to 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, 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 166 lb uplift at joint 1, 196 lb uplift at joint 12 and 65 lb uplift at joint 8.
10) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C08	Hip	1	1	I73424078 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:37 Page: 1
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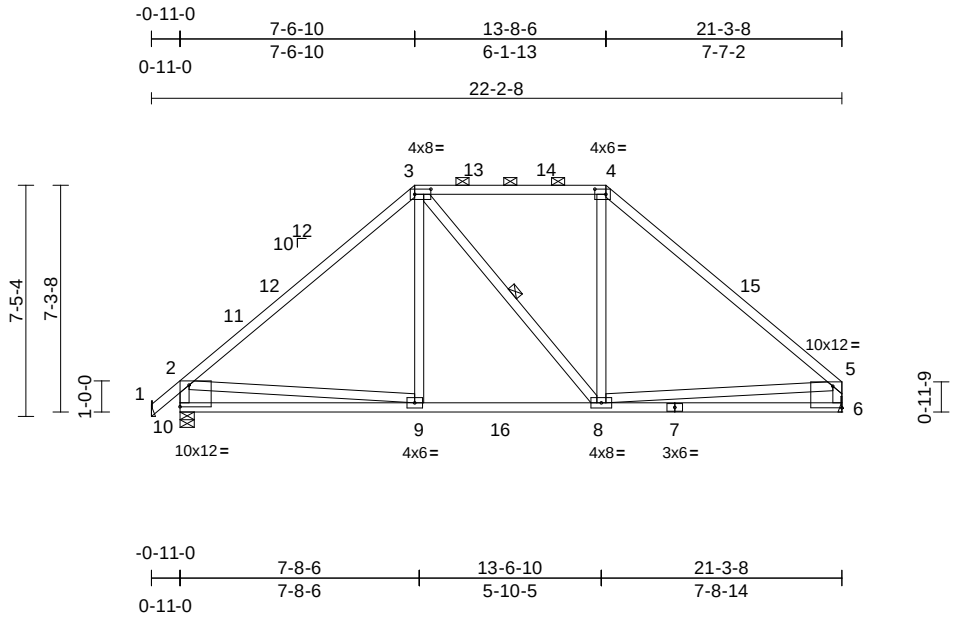

Scale = 1:74.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.09	6-8	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.19	6-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 129 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 10-2,6-5:2x4 SP No.3

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

REACTIONS (size) 1= Mechanical, 6= Mechanical, 10=0-5-8
Max Horiz 1=156 (LC 11)
Max Uplift 1=-254 (LC 26), 6=-56 (LC 15), 10=-272 (LC 14)
Max Grav 1=188 (LC 14), 6=832 (LC 2), 10=1081 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-228/282, 2-3=-927/140, 3-4=-604/164, 4-5=-930/137, 2-10=-1012/293, 5-6=-758/117
BOT CHORD 9-10=-96/271, 8-9=-57/590, 6-8=-139/324
WEBS 3-9=0/247, 3-8=-69/95, 4-8=0/247, 2-9=-30/362, 5-8=-98/378

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 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 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, 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 254 lb uplift at joint 1, 272 lb uplift at joint 10 and 56 lb uplift at joint 6.
10) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C09	Hip	1	1	I73424079
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:37 Page: 1
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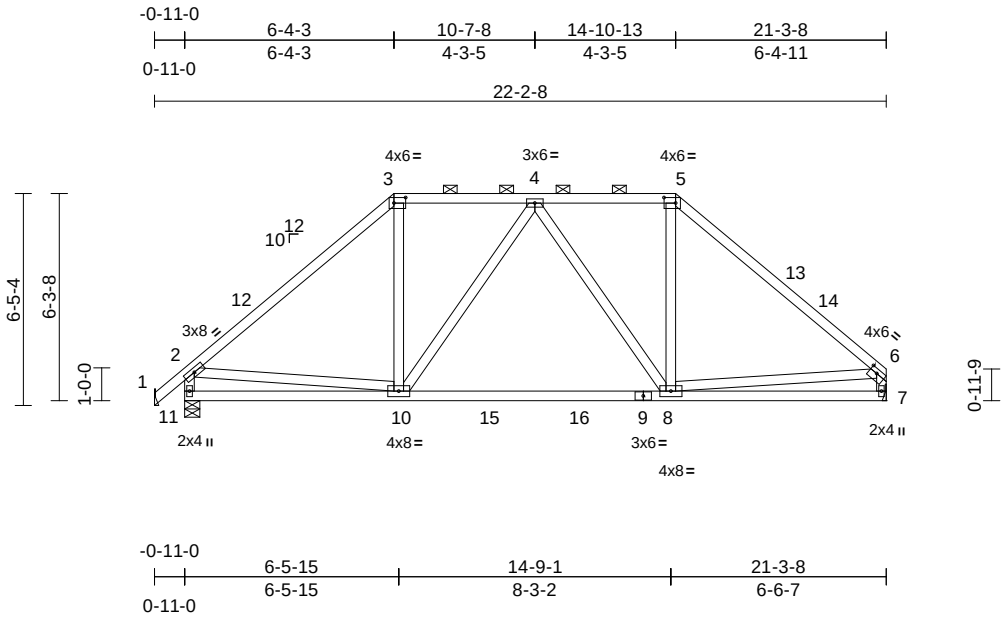


Scale = 1:69.9

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

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	0.61	Vert(LL)	-0.13	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.22	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 129 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 10-4,8-4,10-2,8-6:2x4 SP No.2

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

REACTIONS (size) 1= Mechanical, 7= Mechanical, 11=0-5-8
Max Horiz 1=137 (LC 11)
Max Uplift 1=-182 (LC 26), 7=-50 (LC 15), 11=-208 (LC 14)
Max Grav 1=140 (LC 11), 7=834 (LC 2), 11=998 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-194/225, 2-3=-954/138, 3-4=-636/144, 4-5=-650/155, 5-6=-960/136, 2-11=-943/234, 6-7=-779/114
BOT CHORD 10-11=-71/186, 8-10=-81/728, 7-8=-100/219
WEBS 3-10=-35/315, 4-10=-219/95, 4-8=-206/97, 5-8=-25/310, 2-10=-47/462, 6-8=-76/484

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 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 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, 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 182 lb uplift at joint 1, 208 lb uplift at joint 11 and 50 lb uplift at joint 7.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

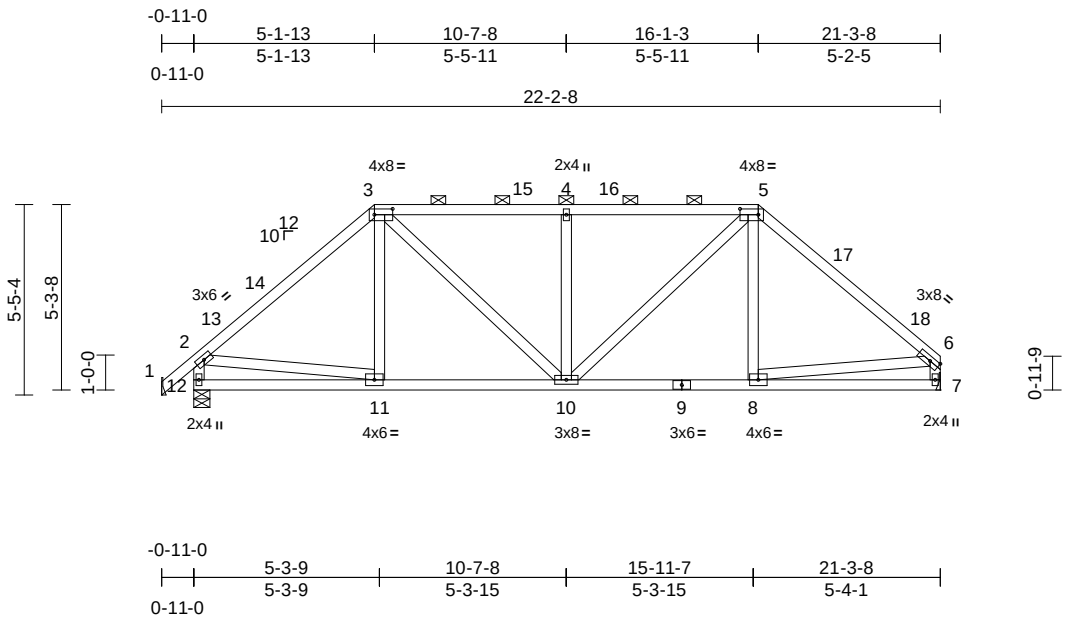
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C10	Hip	1	1	I73424080
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:37 Page: 1
ID:InZ4u8vGlolF?nagca2YlhzHIZ5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.7

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

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	0.42	Vert(LL)	-0.02	10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.05	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 128 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-3 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-9 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 7= Mechanical, 12=0-5-8
Max Horiz 1=118 (LC 11)
Max Uplift 1=-128 (LC 12), 7=-44 (LC 10), 12=-159 (LC 11)
Max Grav 1=110 (LC 11), 7=836 (LC 2), 12=950 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-160/181, 2-3=-960/141, 3-4=-918/174, 4-5=-918/174, 5-6=-969/138, 2-12=-902/209, 6-7=-787/115
BOT CHORD 11-12=-47/128, 10-11=-88/654, 8-10=-43/667, 7-8=-66/153
WEBS 3-11=0/161, 3-10=-93/397, 4-10=-375/119, 5-10=-95/386, 5-8=0/165, 2-11=-75/531, 6-8=-79/522

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 5-1-13, Exterior (2) 5-1-13 to 9-4-11, Interior (1) 9-4-11 to 16-1-3, Exterior (2) 16-1-3 to 20-4-2, Interior (1) 20-4-2 to 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 1, 159 lb uplift at joint 12 and 44 lb uplift at joint 7.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

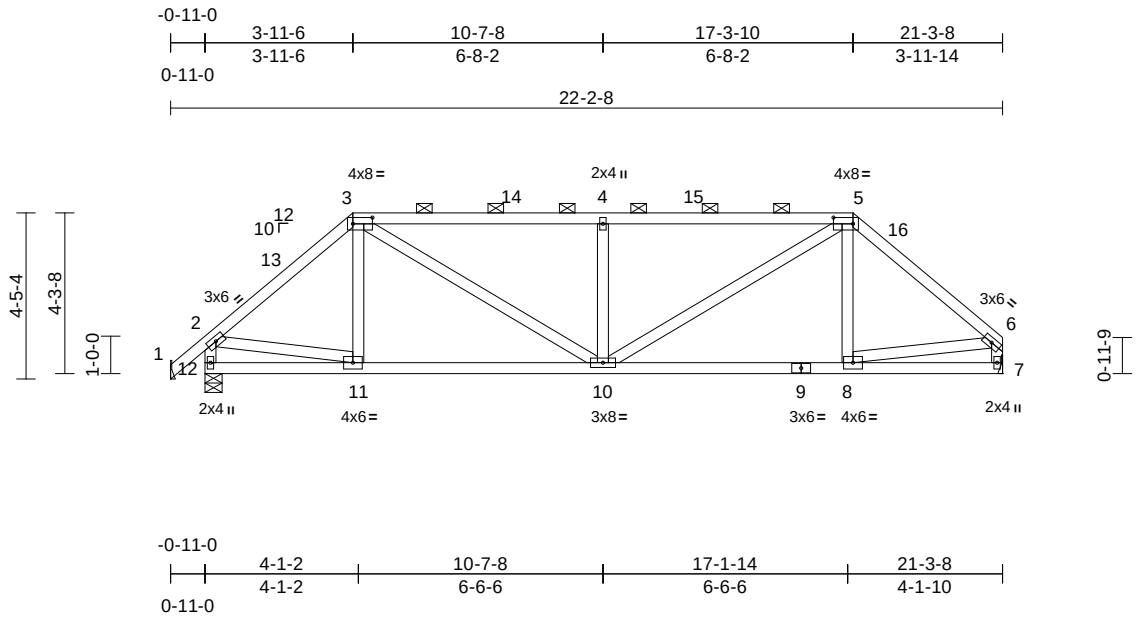
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C11	Hip	1	1	I73424081
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:38 Page: 1
ID:qg7Py2jlzOClY4CY18kFyqzHIY2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.5

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

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	0.64	Vert(LL)	-0.04	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.10	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 120 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-7-5 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1= Mechanical, 7= Mechanical, 12=0-5-8
Max Horiz 1=98 (LC 11)
Max Uplift 1=-93 (LC 12), 7=-68 (LC 10), 12=-156 (LC 11)
Max Grav 1=83 (LC 11), 7=838 (LC 2), 12=921 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-128/144, 2-3=-963/139, 3-4=-1184/193, 4-5=-1184/193, 5-6=-976/136, 2-12=-890/180, 6-7=-806/112
BOT CHORD 11-12=-30/57, 10-11=-99/680, 8-10=-61/694, 7-8=-41/84
WEBS 3-11=-14/129, 3-10=-119/616, 4-10=-464/143, 5-10=-121/604, 5-8=-5/136, 2-11=-96/639, 6-8=-83/629

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 3-11-6, Exterior (2) 3-11-6 to 8-2-5, Interior (1) 8-2-5 to 17-3-10, Exterior (2) 17-3-10 to 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 1, 156 lb uplift at joint 12 and 68 lb uplift at joint 7.
10) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	C12	Hip	1	1	I73424082
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:38 Page: 1
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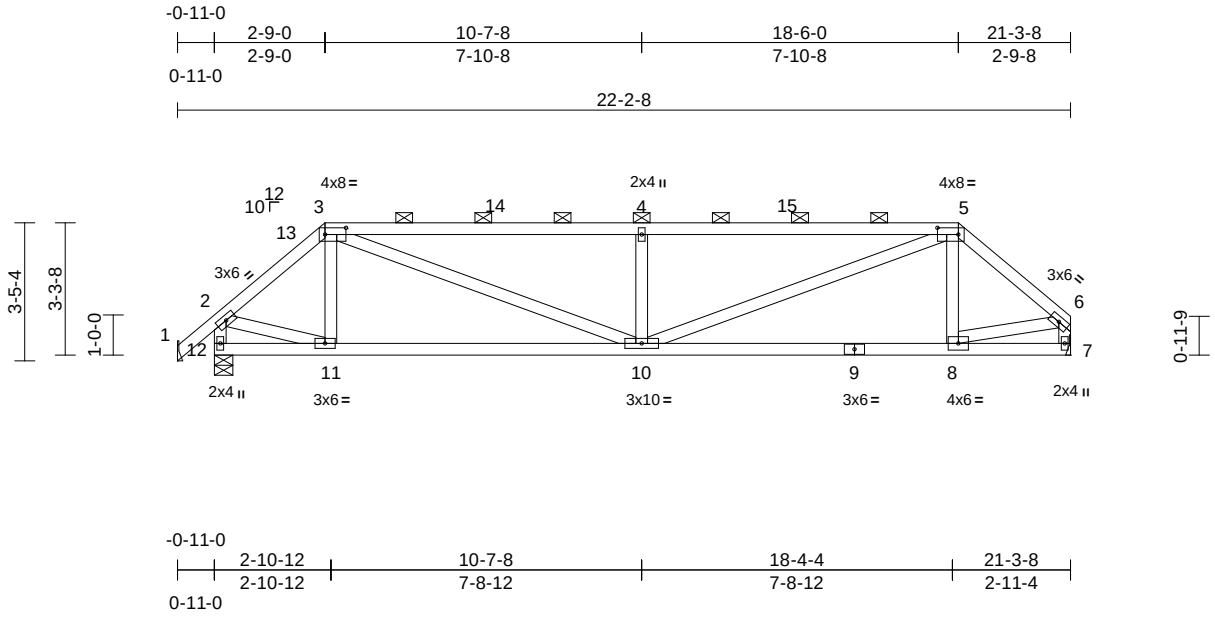

Scale = 1:57.3

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

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	0.93	Vert(LL)	-0.08	8-10	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.18	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 113 lb	FT = 20%

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

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

REACTIONS (size) 1= Mechanical, 7= Mechanical, 12=0-5-8
Max Horiz 1=79 (LC 11)
Max Uplift 1=-70 (LC 12), 7=-89 (LC 10), 12=-156 (LC 11)
Max Grav 1=61 (LC 11), 7=838 (LC 2), 12=917 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-99/114, 2-3=-943/132, 3-4=-1621/247, 4-5=-1621/247, 5-6=-966/128, 2-12=-919/155, 6-7=-837/106
BOT CHORD 11-12=-45/12, 10-11=-104/694, 8-10=-78/715, 7-8=-23/24
WEBS 3-11=-76/98, 3-10=-176/1009, 4-10=-542/166, 5-10=-176/991, 5-8=-59/111, 2-11=-115/757, 6-8=-92/733

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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 2-9-0, Exterior (2) 2-9-0 to 6-11-15, Interior (1) 6-11-15 to 18-6-0, Exterior (2) 18-6-0 to 21-1-12 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=15.0 psf (ground snow); Pf=16.5 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 1, 156 lb uplift at joint 12 and 89 lb uplift at joint 7.
10) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	CE01	Common Supported Gable	1	1	I73424083 Job Reference (optional)

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

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Tue May 13 16:26:31 Page: 1
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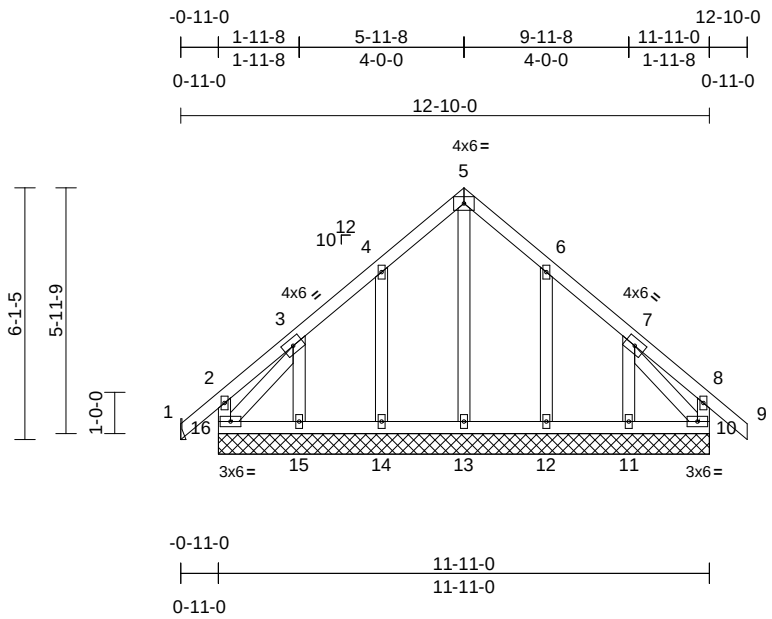

Scale = 1:55.9

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	0.08	Vert(LL)	0.00	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 79 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 (lb/size) 1=15/ Mechanical, 10=135/11-11-0, 11=132/11-11-0, 12=155/11-11-0, 13=111/11-11-0, 14=144/11-11-0, 15=122/11-11-0, 16=97/11-11-0
Max Horiz 1=-136 (LC 12)
Max Uplift 1=-95 (LC 10), 11=-96 (LC 15), 12=-74 (LC 15), 14=-74 (LC 14), 15=-81 (LC 14), 16=-45 (LC 11)
Max Grav 1=104 (LC 13), 10=181 (LC 2), 11=186 (LC 27), 12=205 (LC 27), 13=162 (LC 29), 14=196 (LC 26), 15=154 (LC 30), 16=172 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-16=-110/58, 1-2=-164/177, 2-3=-135/134, 3-4=-104/79, 4-5=-116/117, 5-6=-116/117, 6-7=-61/50, 7-8=-45/52, 8-9=0/41, 8-10=-113/70
BOT CHORD 15-16=-53/81, 14-15=-59/86, 13-14=-59/86, 12-13=-59/86, 11-12=-59/86, 10-11=-54/82
WEBS 5-13=-105/47, 4-14=-142/84, 3-15=-142/109, 6-12=-141/83, 7-11=-138/99, 3-16=-108/79, 7-10=-87/50

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) -0-10-4 to 1-10-6, Exterior (2) 1-10-6 to 5-11-8, Corner (3) 5-11-8 to 8-11-8, Exterior (2) 8-11-8 to 12-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
13) Refer to girder(s) for truss to truss connections.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 1, 74 lb uplift at joint 14, 81 lb uplift at joint 15, 74 lb uplift at joint 12, 96 lb uplift at joint 11 and 45 lb uplift at joint 16.
15) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-5=-43, 5-8=-43, 8-9=-43
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)

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	CE02	Common Structural Gable	1	1	I73424084 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:39 Page: 1
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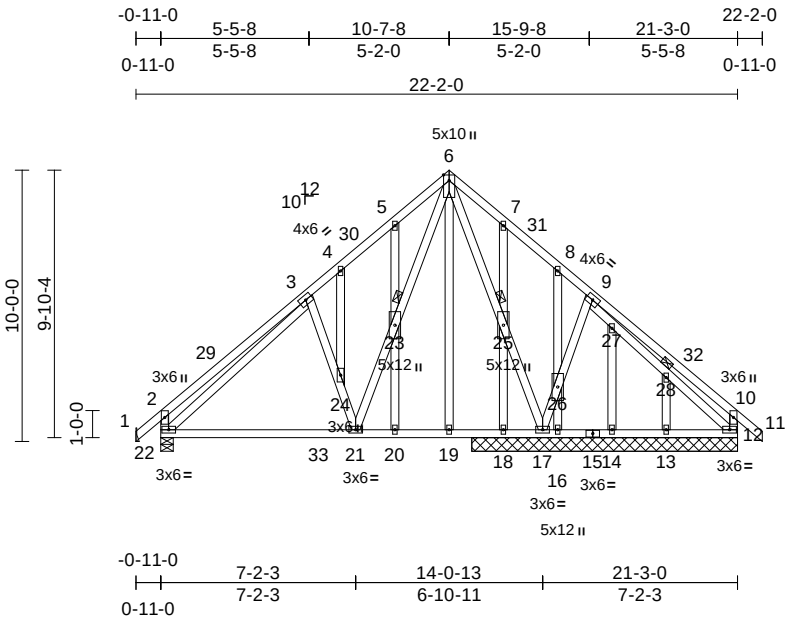

Scale = 1:84.9

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	0.34	Vert(LL)	-0.06	21-22	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.13	21-22	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.31	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.3 *Except* 17-6,21-6,22-3,12-9:2x4 SP No.2
OTHERS 2x4 SP No.3 *Except* 19-6:2x4 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) 1= Mechanical, 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 1=-209 (LC 12)
Max Uplift 1=-184 (LC 12), 12=-78 (LC 15), 17=-125 (LC 14), 18=-47 (LC 15), 22=-191 (LC 14)
Max Grav 1=162 (LC 11), 12=346 (LC 2), 13=129 (LC 5), 14=100 (LC 5), 16=80 (LC 5), 17=590 (LC 2), 18=204 (LC 31), 22=731 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-254/291, 2-3=-367/176, 3-4=-458/128, 4-5=-436/154, 5-6=-478/194, 6-7=-191/181, 7-8=-140/128, 8-9=-163/111, 9-10=-262/186, 10-11=0/41, 2-22=-421/196, 10-12=-323/166
BOT CHORD 21-22=-59/418, 20-21=-27/210, 19-20=-27/210, 18-19=-27/211, 17-18=-27/211, 16-17=0/104, 14-16=0/104, 13-14=0/104, 12-13=0/104
WEBS 17-26=-304/222, 9-26=-263/191, 3-24=-199/134, 21-24=-226/161, 6-25=-406/45, 17-25=-446/49, 21-23=-141/415, 6-23=-162/454, 3-22=-350/48, 6-19=-20/73, 9-27=-148/126, 27-28=-120/109, 12-28=-117/104, 5-23=-111/57, 20-23=-69/35, 4-24=-37/29, 7-25=-151/62, 18-25=-127/74, 8-26=-1/8, 16-26=-33/52, 14-27=-37/23, 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) -0-10-4 to 2-1-12, Interior (1) 2-1-12 to 10-5-2, Exterior (2) 10-5-2 to 13-5-2, Interior (1) 13-5-2 to 22-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 184 lb uplift at joint 1, 125 lb uplift at joint 17, 78 lb uplift at joint 12, 191 lb uplift at joint 22 and 47 lb uplift at joint 18.
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=-43, 2-6=-43, 6-10=-43, 10-11=-43, 22-33=-20
Trapezoidal Loads (lb/ft)

May 14,2025

Continued on page 2

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818 Soundside Road
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Vert: 33=-20-to-21=-21 (F=-1), 21=-21 (F=-1)-to-20=-23 (F=-3), 20=-23 (F=-3)-to-19=-25 (F=-5), 19=-25 (F=-5)-to-18=-27 (F=-7), 18=-27 (F=-7)-to-17=-28 (F=-8), 17=-28 (F=-8)-to-16=-29 (F=-9), 16=-29 (F=-9)-to-15=-30 (F=-10), 15=-30 (F=-10)-to-14=-31 (F=-11), 14=-31 (F=-11)-to-13=-33 (F=-13), 13=-33 (F=-13)-to-12=-35 (F=-15)

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	CG01	Half Hip Girder	1	1	Job Reference (optional)	I73424085

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:39
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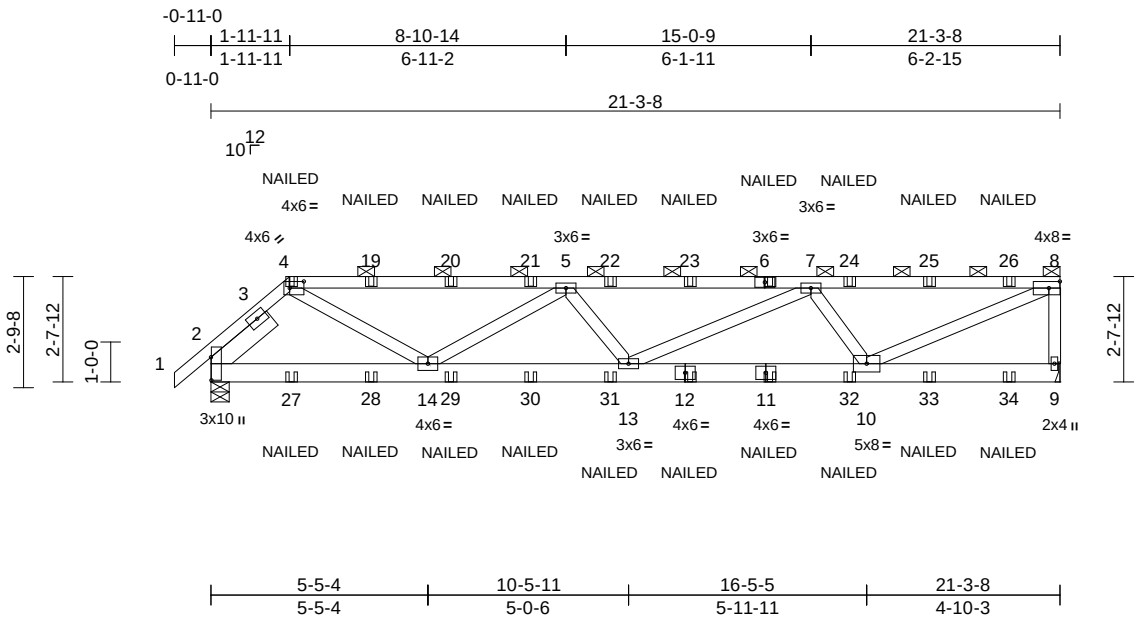

Scale = 1:57.8

Plate Offsets (X, Y): [2:0-6-15,0-0-2], [4:0-4-4,0-2-0]

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	0.93	Vert(LL)	-0.10	10-13	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.21	10-13	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 125 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.1 *Except* 1-4:2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-11-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-4-9 oc purlins, except 2-0-0 oc purlins (2-11-10 max.): 4-8.
BOT CHORD	Rigid ceiling directly applied or 8-8-14 oc bracing.

REACTIONS (size) 2=0-5-8, 9= Mechanical
Max Horiz 2=71 (LC 33)
Max Uplift 2=-263 (LC 7), 9=-291 (LC 7)
Max Grav 2=1240 (LC 2), 9=1206 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/35, 2-4=-1412/370, 4-5=-2023/476, 5-7=-2843/683, 7-8=-1943/455
BOT CHORD	2-14=-278/1022, 13-14=-718/2851, 10-13=-603/2404, 9-10=0/0
WEBS	8-9=-1132/292, 4-14=-239/1197, 5-13=-16/129, 5-14=-994/297, 7-13=-90/490, 7-10=-879/282, 8-10=-505/2157

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; cantilever left and right exposed ; end vertical left exposed; 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=15.0 psf (ground snow); Pf=16.5 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 11.5 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 263 lb uplift at joint 2 and 291 lb uplift at joint 9.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
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=-43, 4-8=-53, 9-15=-20
   Concentrated Loads (lb)
   Vert: 4=-34 (B), 6=-22 (B), 12=-24 (B), 11=-24 (B), 19=-22 (B), 20=-22 (B), 21=-22 (B), 22=-22 (B), 23=-22 (B), 24=-22 (B), 25=-22 (B), 26=-22 (B), 27=-31 (B), 28=-24 (B), 29=-24 (B), 30=-24 (B), 31=-24 (B), 32=-24 (B), 33=-24 (B), 34=-24 (B)

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	J2	Jack-Open Girder	1	1	I73424086 Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:40 Page: 1
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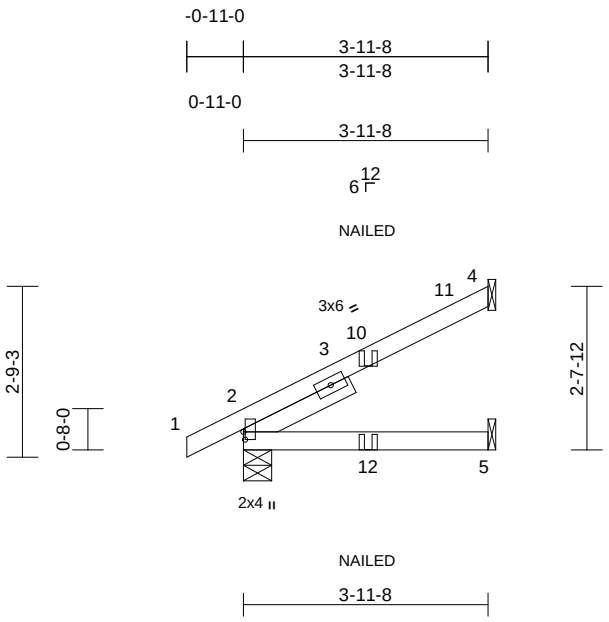

Scale = 1:37.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.02	5-8	>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: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 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, 5= Mechanical
Max Horiz 2=71 (LC 12)
Max Uplift 2=-25 (LC 12), 4=-44 (LC 12), 5=-6 (LC 12)
Max Grav 2=221 (LC 2), 4=101 (LC 2), 5=69 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-4=-146/36
BOT CHORD 2-5=-65/62

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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 44 lb uplift at joint 4, 25 lb uplift at joint 2 and 6 lb uplift at joint 5.
10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
11) 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=-43, 5-6=-20
Concentrated Loads (lb)
Vert: 10=-15 (F), 12=-12 (F)

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	J3	Jack-Open	9	1	I73424087 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:40 Page: 1
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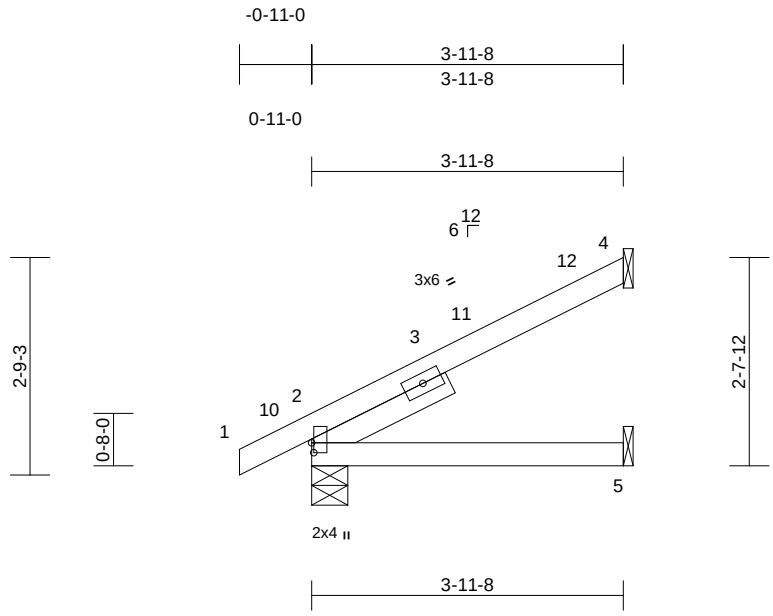


Scale = 1:29.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.01	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.02	5-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 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, 5= Mechanical
Max Horiz 2=71 (LC 16)
Max Uplift 2=-18 (LC 16), 4=-42 (LC 16), 5=-1 (LC 16)
Max Grav 2=217 (LC 2), 4=100 (LC 2), 5=69 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-4=-146/36
BOT CHORD 2-5=-109/67

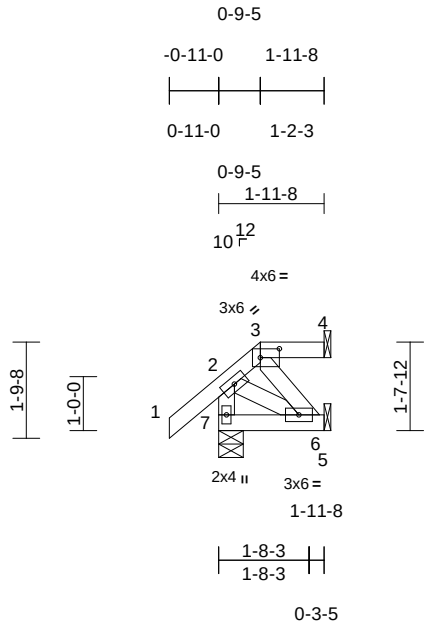
NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 3-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 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 11.5 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 42 lb uplift at joint 4, 18 lb uplift at joint 2 and 1 lb uplift at joint 5.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	J4	Jack-Open	1	1	Job Reference (optional)	I73424088



Scale = 1:42.8

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

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	0.11	Vert(LL)	0.00	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 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, 7=0-5-8
Max Horiz 7=34 (LC 13)
Max Uplift 4=-11 (LC 12), 5=-9 (LC 13), 7=-12 (LC 16)
Max Grav 4=50 (LC 35), 5=36 (LC 7), 7=190 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-173/58, 1-2=0/58, 2-3=-49/15, 3-4=0/0
BOT CHORD 6-7=-54/45, 5-6=0/0
WEBS 3-6=-41/28, 2-6=-56/73

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) -0-11-0 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=15.0 psf (ground snow); Pf=16.5 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 11.5 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 12 lb uplift at joint 7, 11 lb uplift at joint 4 and 9 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	M01	Monopitch	5	1	I73424089
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:40 Page: 1
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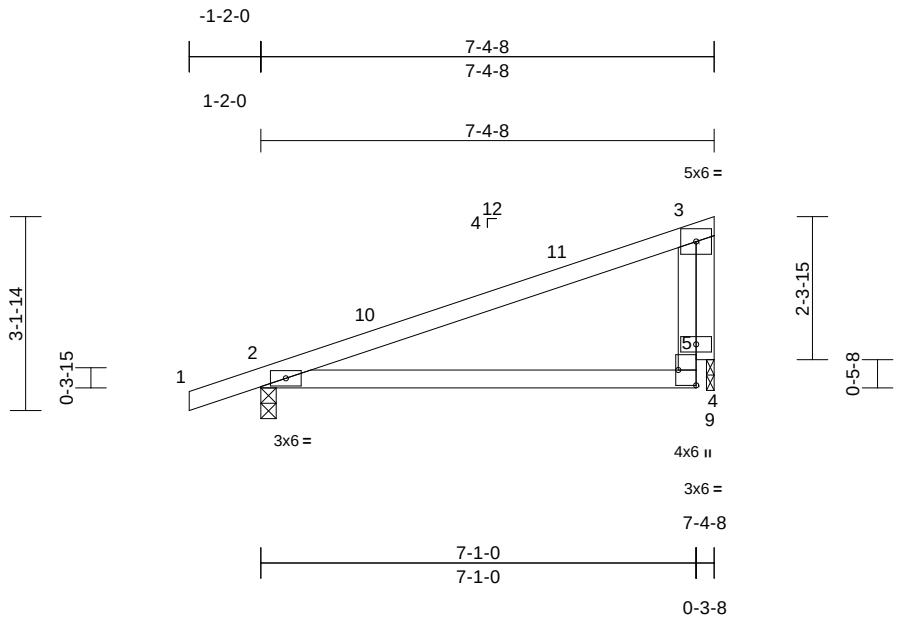

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Plate Offsets (X, Y): [4:Edge,0-3-8]

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	0.64	Vert(LL)	0.09	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.11	4-8	>799	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: 30 lb	FT = 20%

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

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

REACTIONS (size) 2=0-3-0, 9=0-1-8
Max Horiz 2=86 (LC 12)
Max Uplift 2=-122 (LC 12), 9=-96 (LC 12)
Max Grav 2=367 (LC 2), 9=258 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-260/123, 4-5=-133/153, 3-5=-152/173
BOT CHORD 2-4=-141/215
WEBS 3-9=-228/197

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) -1-2-0 to 1-10-0, Interior (1) 1-10-0 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 96 lb uplift at joint 9.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	M02	Monopitch	5	1	I73424090 Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:40 Page: 1
ID:X9GB1RuhnjFl1mb356ji3rzxXRG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

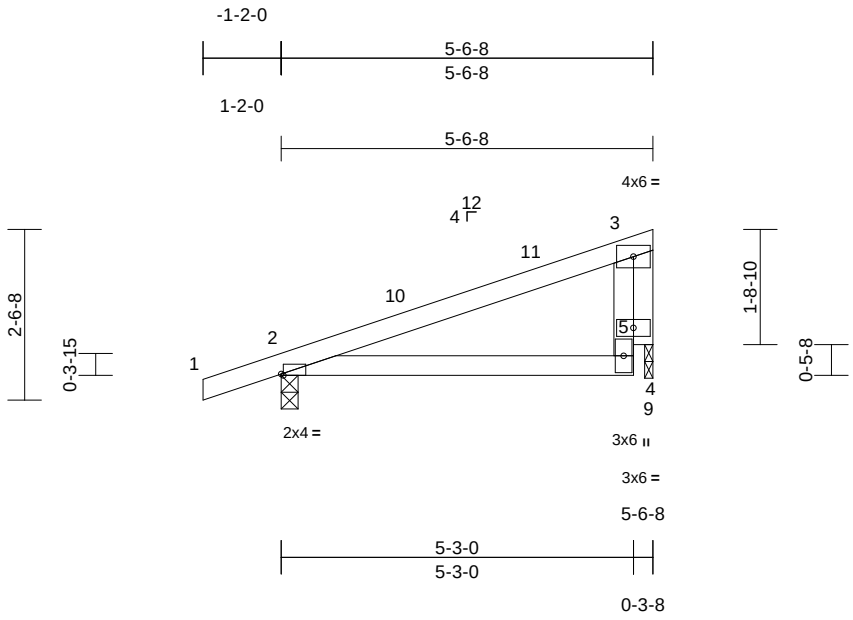

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Plate Offsets (X, Y): [2:0-0-6,Edge]

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	0.33	Vert(LL)	0.03	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.03	4-8	>999	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: 23 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 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=67 (LC 12)
Max Uplift 2=-101 (LC 12), 9=-68 (LC 12)
Max Grav 2=296 (LC 2), 9=183 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-191/97, 4-5=-98/110, 3-5=-73/82
BOT CHORD 2-4=-111/160
WEBS 3-9=-126/111

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) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 5-1-4 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 101 lb uplift at joint 2 and 68 lb uplift at joint 9.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	ME01	Monopitch	1	1	Job Reference (optional)	I73424091

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:40 Page: 1
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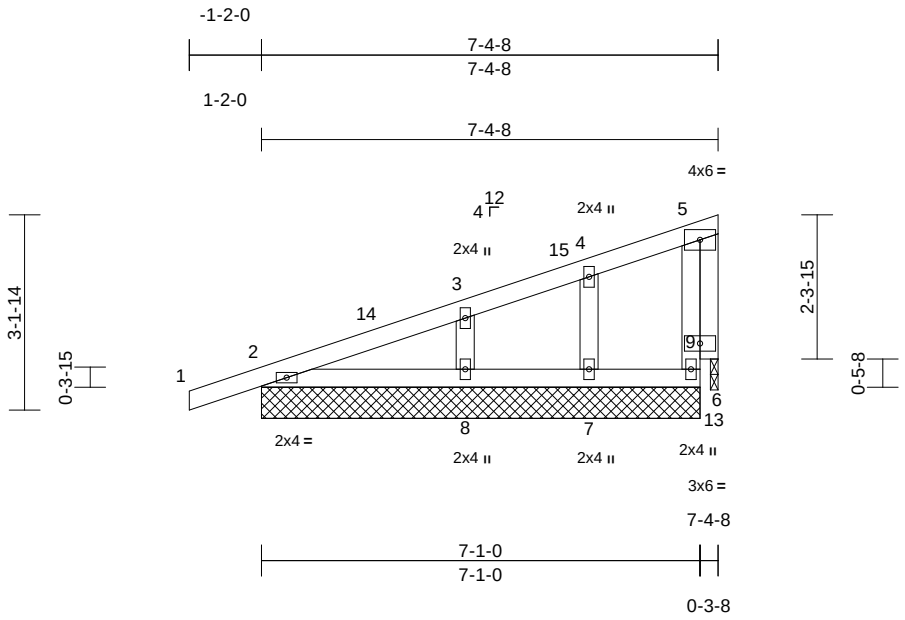

Scale = 1:37.2

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	0.09	Vert(LL)	0.00	8-12	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	8-12	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 34 lb	FT = 20%

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

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

REACTIONS (size) 2=7-1-0, 6=7-1-0, 7=7-1-0, 8=7-1-0, 13=0-1-8
Max Horiz 2=81 (LC 12)
Max Uplift 2=-41 (LC 12), 7=-24 (LC 12), 8=-48 (LC 16), 13=-26 (LC 12)
Max Grav 2=198 (LC 2), 6=43 (LC 7), 7=117 (LC 2), 8=247 (LC 2), 13=29 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-51/30, 3-4=-39/9, 4-5=-27/4, 6-9=-17/0, 5-9=-24/3
BOT CHORD 2-8=-10/35, 7-8=-10/15, 6-7=-10/15
WEBS 4-7=-95/37, 3-8=-168/55, 5-13=-21/14

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) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 6-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
12) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 2, 24 lb uplift at joint 7, 48 lb uplift at joint 8, 41 lb uplift at joint 2 and 26 lb uplift at joint 13.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	ME02	Monopitch	1	1	I73424092 Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:41 Page: 1
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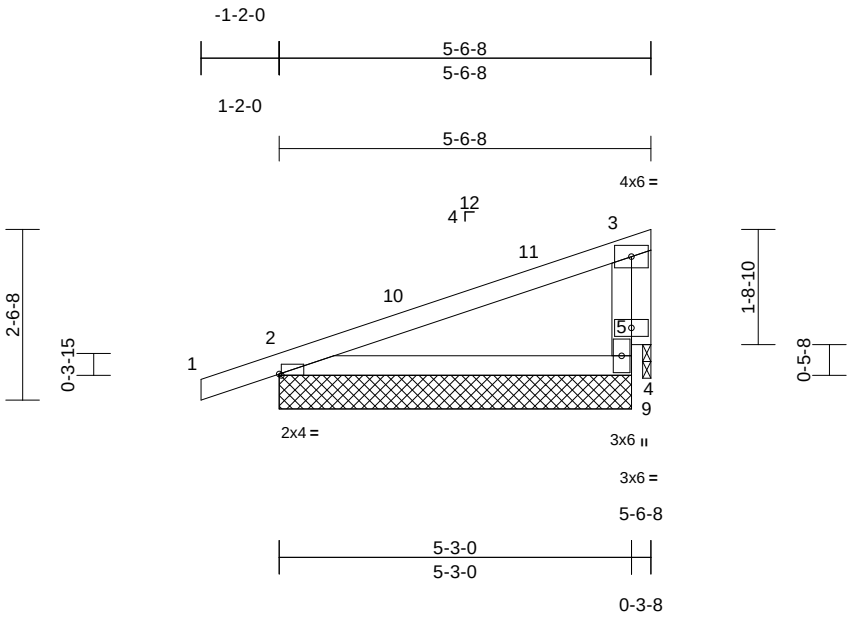

Scale = 1:34.3

Plate Offsets (X, Y): [2:0-0-6,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	0.30	Vert(LL)	-0.01	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	4-8	>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: 23 lb	FT = 20%

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

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

REACTIONS (size) 2=5-3-0, 4=5-3-0, 9=0-1-8
Max Horiz 2=67 (LC 12)
Max Uplift 2=-63 (LC 12), 9=-49 (LC 12)
Max Grav 2=287 (LC 2), 4=169 (LC 7), 9=64 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-165/41, 4-5=-58/0, 3-5=-102/71
BOT CHORD 2-4=-67/135
WEBS 3-9=-41/9

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) -1-2-0 to 1-10-0, Exterior (2) 1-10-0 to 5-1-4 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) 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) 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.
12) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 2, 63 lb uplift at joint 2 and 49 lb uplift at joint 9.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	P01	Monopitch	9	1	I73424093 Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:41 Page: 1
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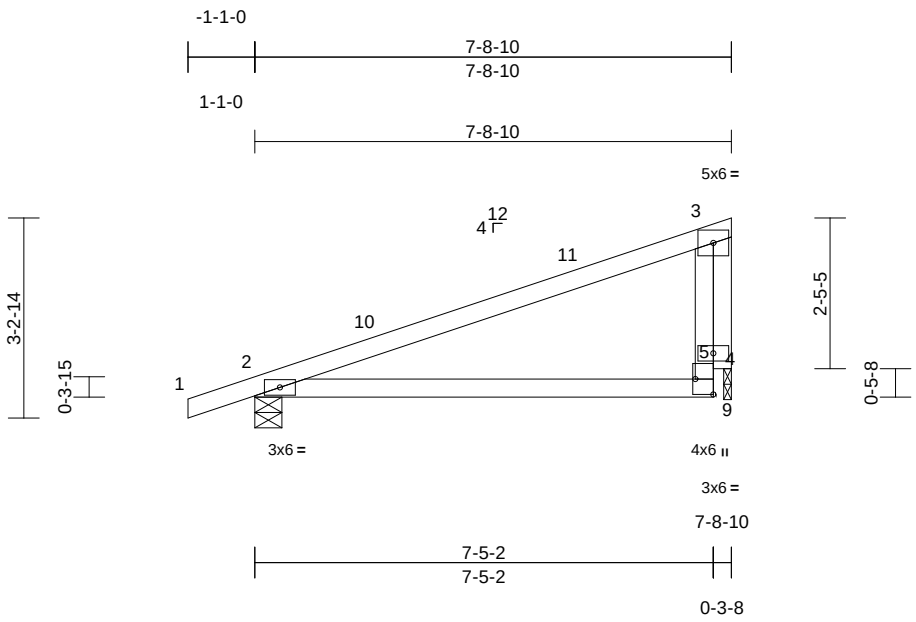

Scale = 1:37.3

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	0.70	Vert(LL)	-0.06	4-8	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.13	4-8	>686	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.3
OTHERS 2x4 SP No.3

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

REACTIONS (size) 2=0-5-4, 9=0-1-8
Max Horiz 2=83 (LC 12)
Max Uplift 2=-68 (LC 12), 9=-53 (LC 16)
Max Grav 2=375 (LC 2), 9=272 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-274/23, 4-5=0/161, 3-5=-37/194
BOT CHORD 2-4=-40/226
WEBS 3-9=-251/0

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) -1-1-0 to 1-11-0, Interior (1) 1-11-0 to 7-3-6 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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 68 lb uplift at joint 2 and 53 lb uplift at joint 9.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	PE01	Monopitch Supported Gable	2	1	I73424094 Job Reference (optional)

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

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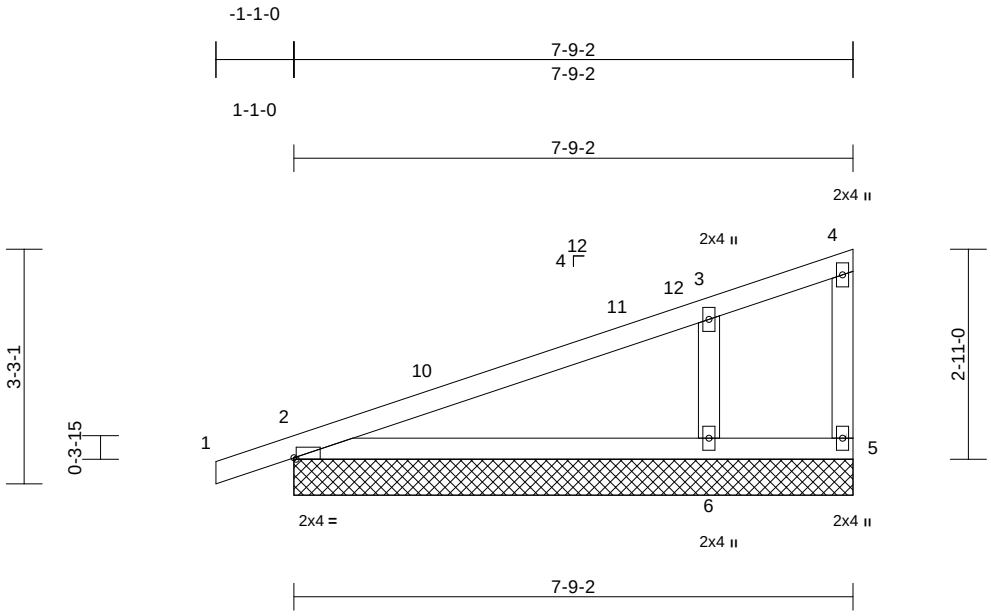

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Plate Offsets (X, Y): [2:0-0-6,Edge]

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	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 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 (lb/size) 2=199/7-9-2, 5=-46/7-9-2, 6=374/7-9-2
Max Horiz 2=90 (LC 15)
Max Uplift 2=-52 (LC 12), 5=-57 (LC 2), 6=-91 (LC 16)
Max Grav 2=259 (LC 2), 5=17 (LC 16), 6=472 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/21, 2-10=-123/58, 10-11=-114/63, 11-12=-106/80, 3-12=-104/82, 3-4=-57/50, 4-5=-24/32
BOT CHORD	2-6=-47/73, 5-6=-35/46
WEBS	3-6=-315/219

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) -1-1-0 to 1-11-0, Exterior (2) 1-11-0 to 7-7-6 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) 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=15.0 psf (ground snow); Pf=11.5 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 11.5 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 2, 57 lb uplift at joint 5, 91 lb uplift at joint 6 and 52 lb uplift at joint 2.
14) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

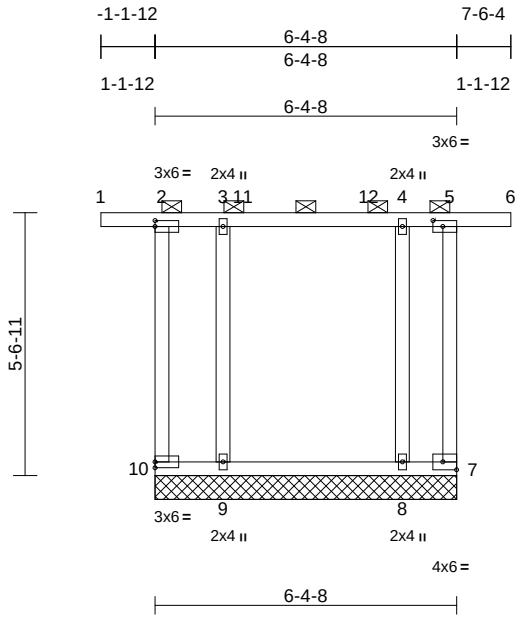
May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V01	Valley	1	1	I73424095
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:41 Page: 1
ID:ZomI8UU_iYwRrjKCgE?78kzxQQU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.7

Plate Offsets (X, Y): [2:Edge,0-1-8], [5:0-2-8,0-1-8], [7:Edge,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	0.80	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 52 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	2-0-0 oc purlins: 1-6, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 7=6-4-8, 8=6-4-8, 9=6-4-8, 10=6-4-8
Max Horiz 10=-149 (LC 10)
Max Uplift 7=-281 (LC 11), 8=-286 (LC 10), 9=-230 (LC 11), 10=-227 (LC 10)
Max Grav 7=233 (LC 10), 8=438 (LC 27), 9=382 (LC 26), 10=185 (LC 13)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-10=-145/190, 1-2=0/0, 2-3=-19/16, 3-4=-19/16, 4-5=-19/16, 5-6=0/0, 5-7=-170/221
BOT CHORD	9-10=-141/147, 8-9=-141/147, 7-8=-141/147
WEBS	3-9=-210/169, 4-8=-243/202

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 227 lb uplift at joint 10, 281 lb uplift at joint 7, 230 lb uplift at joint 9 and 286 lb uplift at joint 8.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

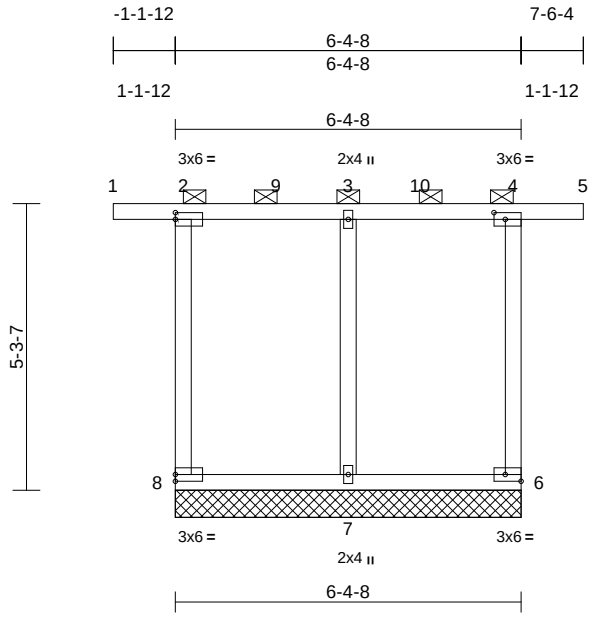
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V02	Valley	1	1	I73424096
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:42 Page: 1
ID:VBu2ZAWFE9A941Uanf2bD9zxQQS-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:42.5

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

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	0.63	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 43 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-4-8, 7=6-4-8, 8=6-4-8
Max Horiz 8=-141 (LC 10)
Max Uplift 6=-118 (LC 11), 7=-39 (LC 15), 8=-118 (LC 10)
Max Grav 6=211 (LC 26), 7=341 (LC 33), 8=211 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-171/135, 1-2=0/0, 2-3=-18/14, 3-4=-18/14, 4-5=0/0, 4-6=-171/135
BOT CHORD 7-8=-131/138, 6-7=-131/138
WEBS 3-7=-191/59

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 8, 118 lb uplift at joint 6 and 39 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V03	Valley	1	1	I73424097
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:42 Page: 1
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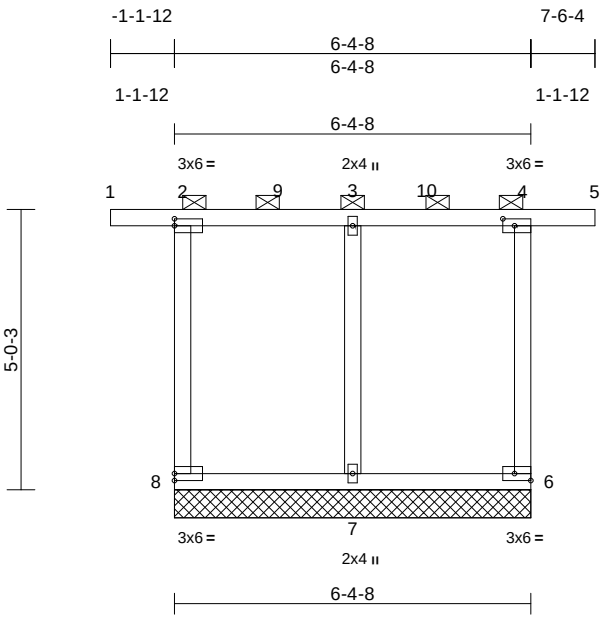


Scale = 1:41.2

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

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	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 42 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-4-8, 7=6-4-8, 8=6-4-8
Max Horiz 8=-134 (LC 10)
Max Uplift 6=-112 (LC 11), 7=-39 (LC 15), 8=-112 (LC 10)
Max Grav 6=207 (LC 26), 7=340 (LC 33), 8=207 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-171/130, 1-2=0/0, 2-3=-17/13, 3-4=-17/13, 4-5=0/0, 4-6=-171/130
BOT CHORD	7-8=-123/130, 6-7=-123/130
WEBS	3-7=-191/59

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 8, 112 lb uplift at joint 6 and 39 lb uplift at joint 7.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

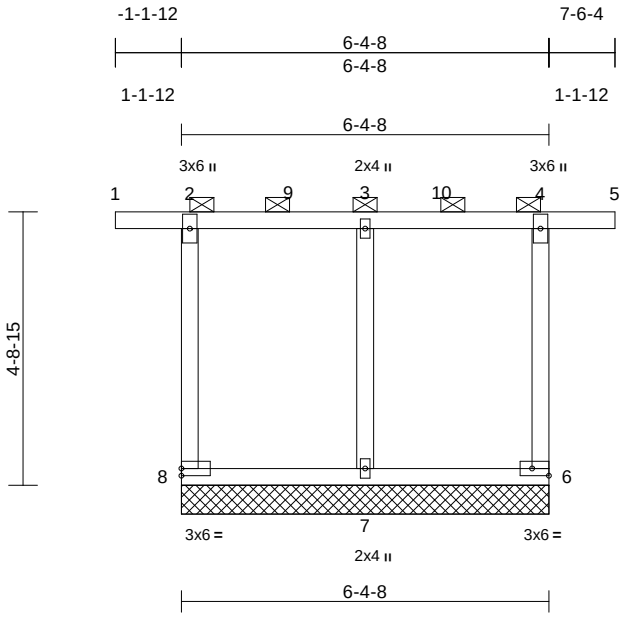
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V04	Valley	1	1	I73424098
					Job Reference (optional)

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:42 Page: 1
ID:_NSQnWWt?TI0iB3mLNZqmMzxQQR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40

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

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	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 41 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-4-8, 7=6-4-8, 8=6-4-8
Max Horiz 8=-126 (LC 12)
Max Uplift 6=-106 (LC 11), 7=-39 (LC 15), 8=-106 (LC 10)
Max Grav 6=203 (LC 3), 7=340 (LC 33), 8=203 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-171/126, 1-2=0/0, 2-3=-16/13, 3-4=-16/13, 4-5=0/0, 4-6=-171/126
BOT CHORD 7-8=-116/123, 6-7=-116/123
WEBS 3-7=-191/60

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 106 lb uplift at joint 8, 106 lb uplift at joint 6 and 39 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V05	Valley	1	1	Job Reference (optional)	I73424099

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:42 Page: 1
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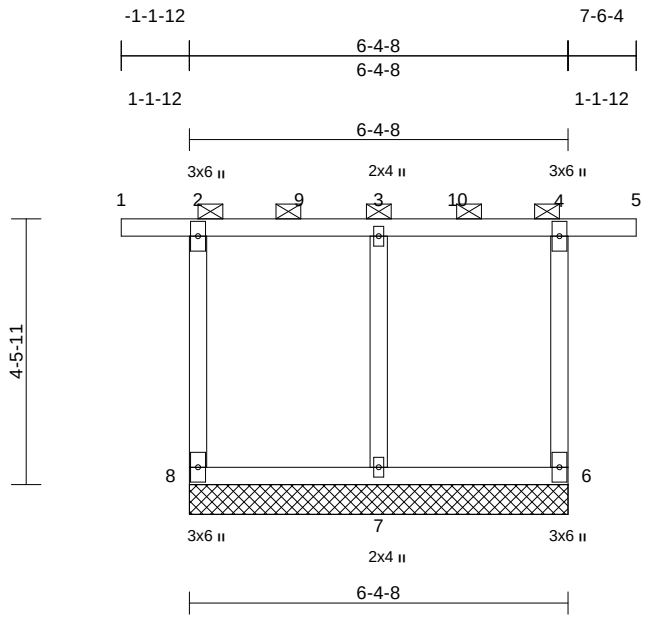

Scale = 1:38.8

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 40 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-4-8, 7=6-4-8, 8=6-4-8
Max Horiz 8=-118 (LC 10)
Max Uplift 6=-101 (LC 11), 7=-39 (LC 15), 8=-101 (LC 10)
Max Grav 6=203 (LC 3), 7=340 (LC 33), 8=203 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-171/121, 1-2=0/0, 2-3=-15/12, 3-4=-15/12, 4-5=0/0, 4-6=-171/121
BOT CHORD 7-8=-109/115, 6-7=-109/115
WEBS 3-7=-191/60

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 101 lb uplift at joint 8, 101 lb uplift at joint 6 and 39 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V06	Valley	1	1	Job Reference (optional)	I73424100

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:42 Page: 1
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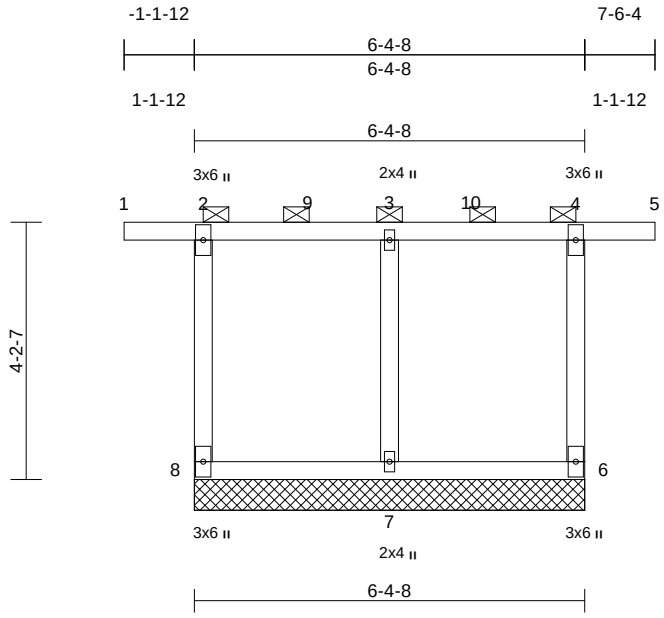

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 39 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-4-8, 7=6-4-8, 8=6-4-8
Max Horiz 8=-111 (LC 12)
Max Uplift 6=-96 (LC 11), 7=-39 (LC 15), 8=-96 (LC 10)
Max Grav 6=203 (LC 3), 7=339 (LC 33), 8=203 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-171/117, 1-2=0/0, 2-3=-15/11, 3-4=-15/11, 4-5=0/0, 4-6=-171/117
BOT CHORD 7-8=-101/108, 6-7=-101/108
WEBS 3-7=-191/60

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) -1-1-12 to 1-10-4, Interior (1) 1-10-4 to 7-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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, with BCDL = 10.0psf.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 8, 96 lb uplift at joint 6 and 39 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V07	Valley	1	1	I73424101
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:43 Page: 1
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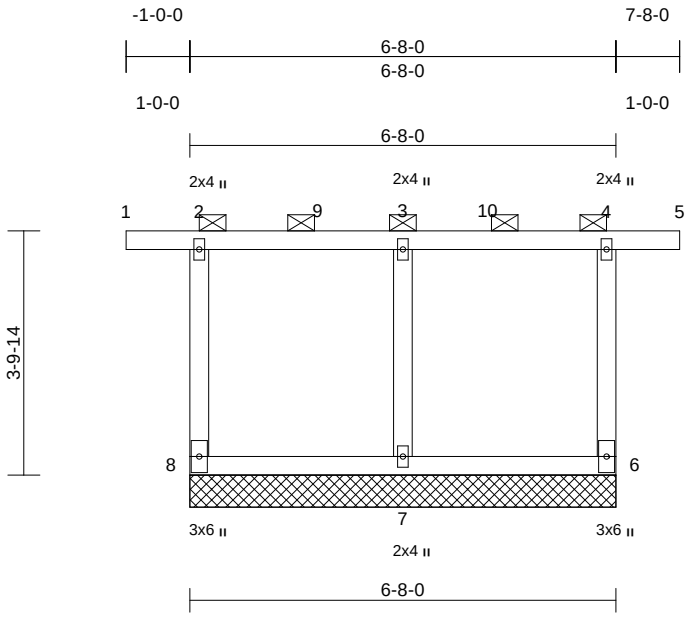

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-100 (LC 10)
Max Uplift 6=-82 (LC 11), 7=-42 (LC 15), 8=-83 (LC 10)
Max Grav 6=187 (LC 32), 7=282 (LC 31), 8=187 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-161/106, 1-2=0/0, 2-3=-14/10, 3-4=-14/10, 4-5=0/0, 4-6=-161/105
BOT CHORD	7-8=-90/97, 6-7=-90/97
WEBS	3-7=-207/64

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) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 83 lb uplift at joint 8, 82 lb uplift at joint 6 and 42 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V08	Valley	1	1	Job Reference (optional)	I73424102

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:43 Page: 1
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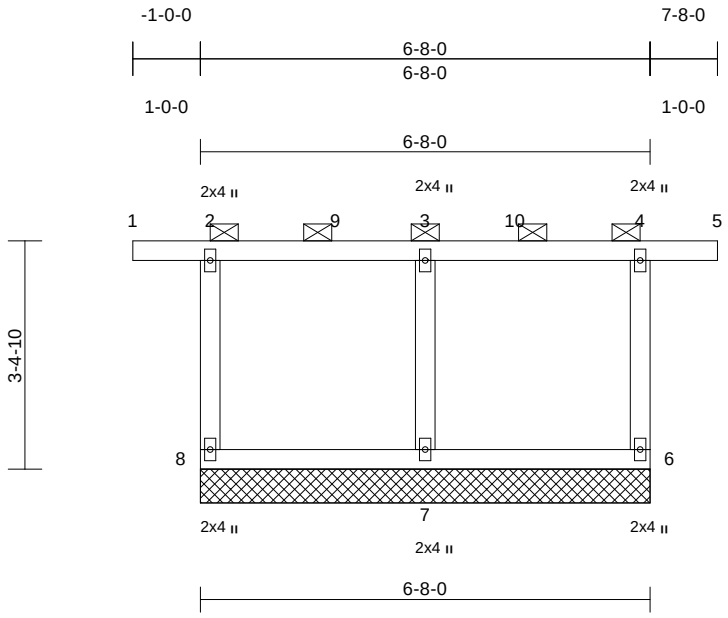

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 35 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-88 (LC 10)
Max Uplift 6=-76 (LC 11), 7=-42 (LC 15), 8=-76 (LC 10)
Max Grav 6=187 (LC 32), 7=281 (LC 31), 8=187 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-161/100, 1-2=0/0, 2-3=-12/9, 3-4=-12/9, 4-5=0/0, 4-6=-161/100
BOT CHORD 7-8=-78/84, 6-7=-78/84
WEBS 3-7=-206/64

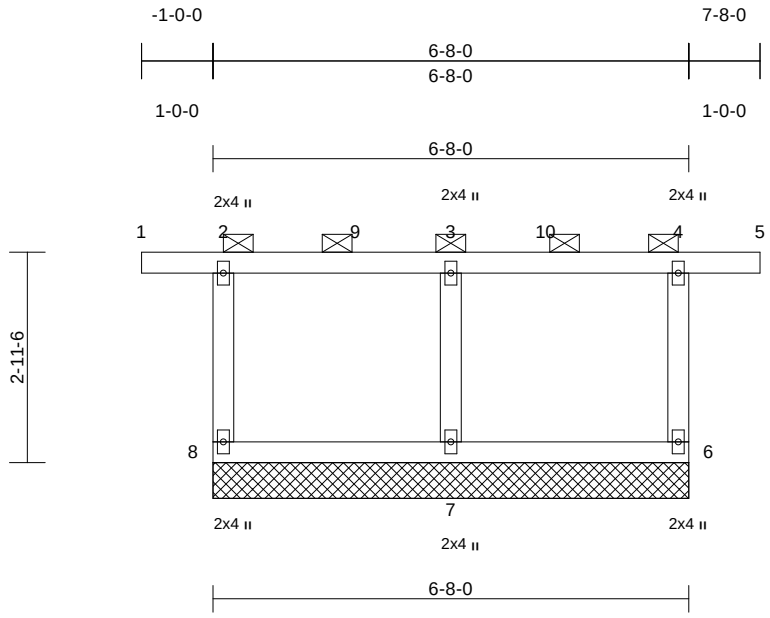
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 76 lb uplift at joint 8, 76 lb uplift at joint 6 and 42 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V09	Valley	1	1	I73424103 Job Reference (optional)



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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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
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.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=75 (LC 11)
Max Uplift 6=-70 (LC 11), 7=-42 (LC 15), 8=-71 (LC 10)
Max Grav 6=188 (LC 32), 7=280 (LC 31), 8=188 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-161/96, 1-2=0/0, 2-3=-11/8, 3-4=-11/8, 4-5=0/0, 4-6=-161/95
BOT CHORD 7-8=-66/72, 6-7=-66/72
WEBS 3-7=-205/64

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) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 71 lb uplift at joint 8, 70 lb uplift at joint 6 and 42 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V10	Valley	1	1	Job Reference (optional)	I73424104

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:43 Page: 1

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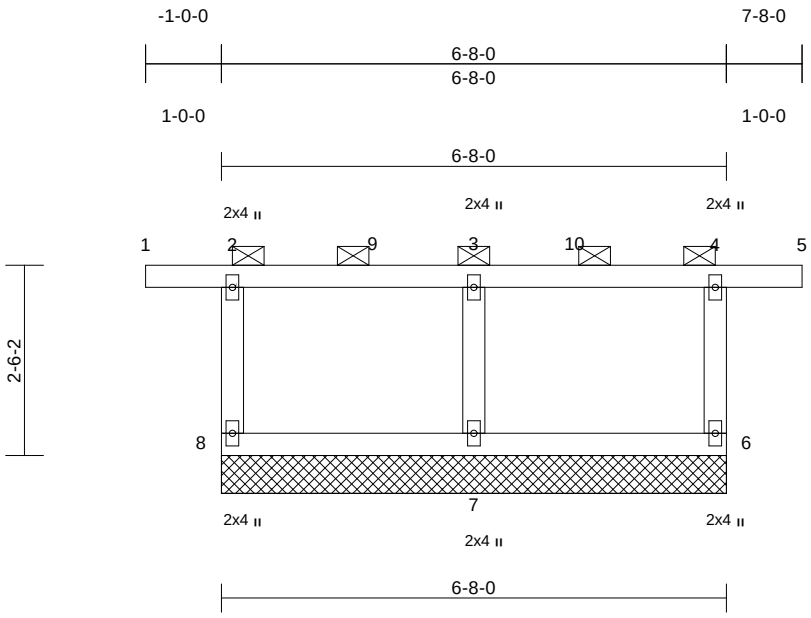


Scale = 1:30.4

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	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.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-63 (LC 10)
Max Uplift 6=-66 (LC 11), 7=-41 (LC 15), 8=-66 (LC 10)
Max Grav 6=188 (LC 32), 7=279 (LC 31), 8=188 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-8=-161/92, 1-2=0/0, 2-3=-10/7, 3-4=-10/7, 4-5=0/0, 4-6=-161/91
BOT CHORD	7-8=-53/60, 6-7=-53/60
WEBS	3-7=-205/64

NOTES

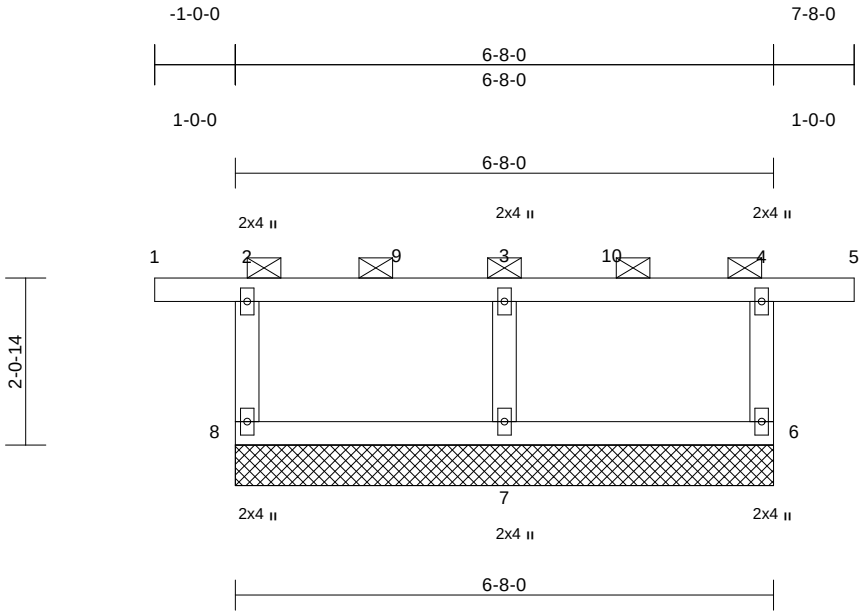
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 66 lb uplift at joint 8, 66 lb uplift at joint 6 and 41 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V11	Valley	1	1	Job Reference (optional)	I73424105



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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
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.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-50 (LC 10)
Max Uplift 6=-62 (LC 11), 7=-41 (LC 15), 8=-62 (LC 10)
Max Grav 6=189 (LC 32), 7=277 (LC 31), 8=189 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-162/88, 1-2=0/0, 2-3=-10/6, 3-4=-10/6, 4-5=0/0, 4-6=-162/88
BOT CHORD 7-8=-39/48, 6-7=-39/48
WEBS 3-7=-204/64

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) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 62 lb uplift at joint 8, 62 lb uplift at joint 6 and 41 lb uplift at joint 7.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

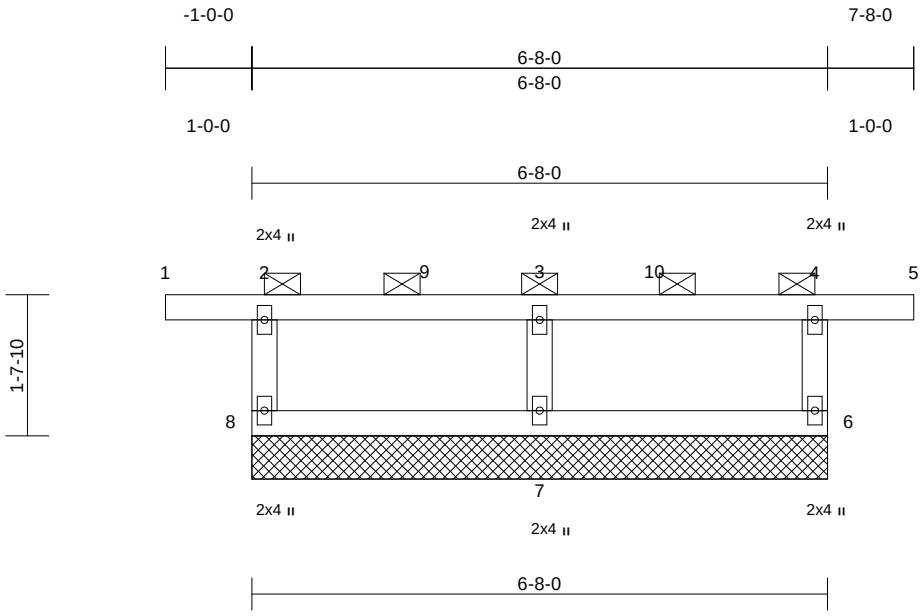
LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V12	Valley	1	1	Job Reference (optional)	I73424106

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:44 Page: 1
ID:1?KgMqVdTs2lStvODyWMhxzxQQT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 27 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-38 (LC 10)
Max Uplift 6=-59 (LC 11), 7=-41 (LC 15), 8=-59 (LC 10)
Max Grav 6=190 (LC 32), 7=276 (LC 31), 8=190 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-162/86, 1-2=0/0, 2-3=-14/5, 3-4=-14/5, 4-5=0/0, 4-6=-162/86
BOT CHORD 7-8=-30/41, 6-7=-30/41
WEBS 3-7=-202/63

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) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 59 lb uplift at joint 8, 59 lb uplift at joint 6 and 41 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V13	Valley	1	1	Job Reference (optional)	I73424107

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:44 Page: 1
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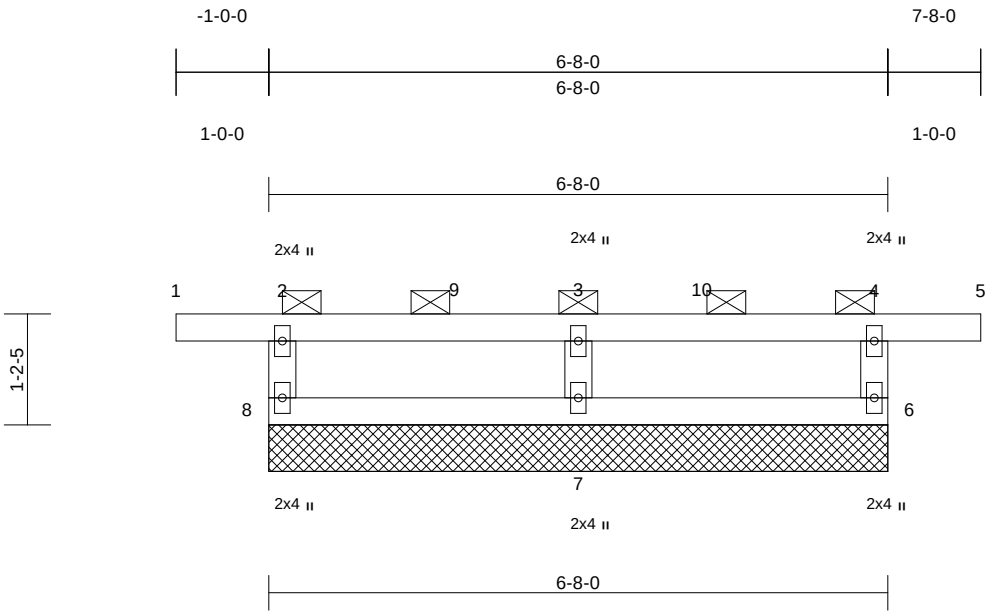

Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 26 lb	FT = 20%

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

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 6=6-8-0, 7=6-8-0, 8=6-8-0
Max Horiz 8=-26 (LC 10)
Max Uplift 6=-57 (LC 11), 7=-40 (LC 15), 8=-57 (LC 10)
Max Grav 6=191 (LC 32), 7=274 (LC 31), 8=191 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-163/84, 1-2=0/0, 2-3=-23/6, 3-4=-23/6, 4-5=0/0, 4-6=-163/84
BOT CHORD 7-8=-21/36, 6-7=-21/36
WEBS 3-7=-201/63

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) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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
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 11.5 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) 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 4-0-0 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 57 lb uplift at joint 8, 57 lb uplift at joint 6 and 40 lb uplift at joint 7.
14) 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

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity	
P02509-25343	V14	Valley	1	1	Job Reference (optional)	I73424108

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:44 Page: 1
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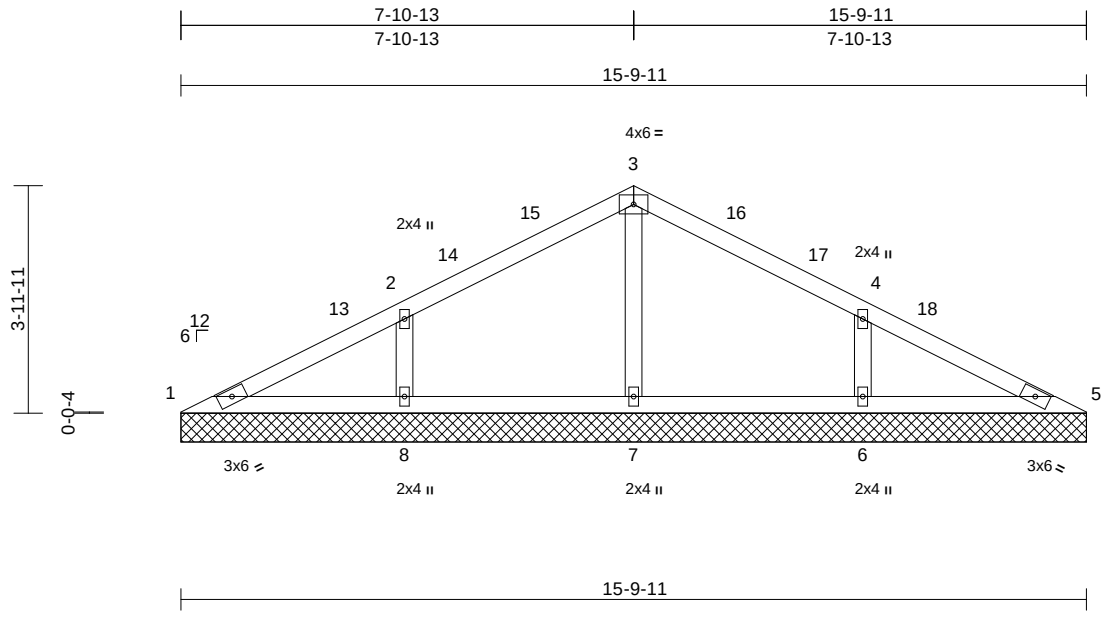

Scale = 1:40.2

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	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 57 lb	FT = 20%

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

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

REACTIONS (size) 1=15-9-11, 5=15-9-11, 6=15-9-11, 7=15-9-11, 8=15-9-11
Max Horiz 1=50 (LC 16)
Max Uplift 1=-7 (LC 17), 5=-7 (LC 17), 6=-91 (LC 17), 8=-91 (LC 16)
Max Grav 1=99 (LC 33), 5=99 (LC 34), 6=370 (LC 34), 7=347 (LC 2), 8=370 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-136/128, 2-3=-5/127, 3-4=-5/120, 4-5=-136/128
BOT CHORD 1-8=-64/115, 7-8=-64/49, 6-7=-64/49, 5-6=-64/115
WEBS 3-7=-278/27, 2-8=-267/107, 4-6=-267/106

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 7-11-5, Exterior (2) 7-11-5 to 10-11-5, Interior (1) 10-11-5 to 15-10-3 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=15.0 psf (ground snow); Pf=11.5 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 7 lb uplift at joint 1, 7 lb uplift at joint 5, 91 lb uplift at joint 8 and 91 lb uplift at joint 6.

LOAD CASE(S) Standard

May 14,2025

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

Job	Truss	Truss Type	Qty	Ply	903 Serenity
P02509-25343	V15	Valley	1	1	I73424109
					Job Reference (optional)

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Mon May 12 14:09:44 Page: 1
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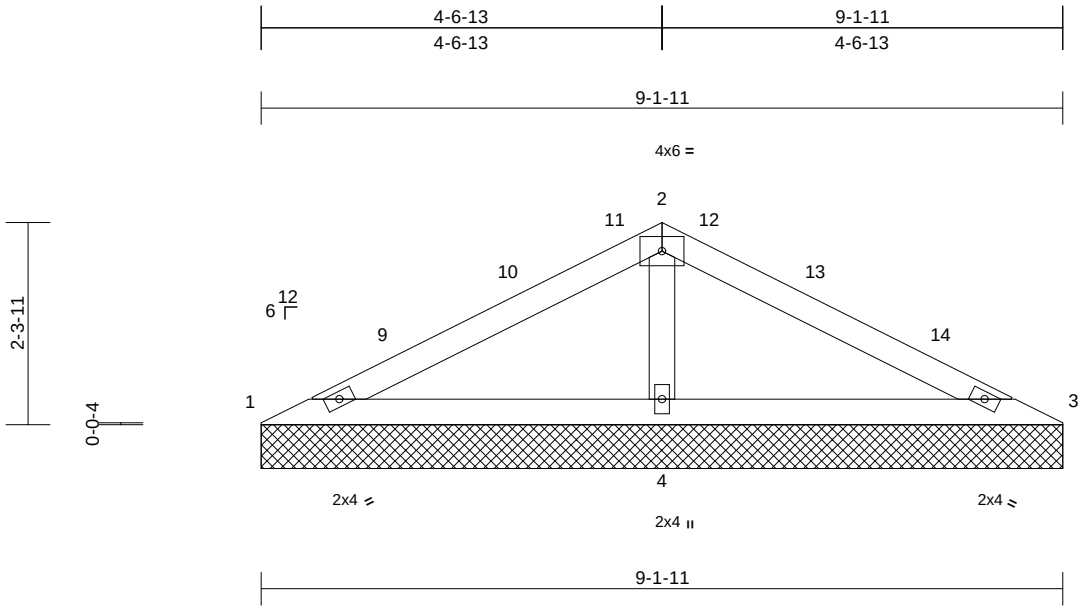


Scale = 1:26.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2015/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 29 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-1-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-1-11, 3=9-1-11, 4=9-1-11
Max Horiz 1=28 (LC 16)
Max Uplift 1=-10 (LC 16), 3=-16 (LC 17), 4=-56 (LC 16)
Max Grav 1=86 (LC 33), 3=86 (LC 34), 4=622 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-98/303, 2-3=-98/303
BOT CHORD 1-4=-223/98, 3-4=-223/98
WEBS 2-4=-461/135

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 4-7-5, Exterior (2) 4-7-5 to 7-7-5, Interior (1) 7-7-5 to 9-2-3 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=15.0 psf (ground snow); Pf=11.5 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 10 lb uplift at joint 1, 16 lb uplift at joint 3 and 56 lb uplift at joint 4.

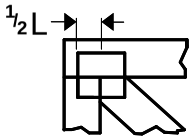
LOAD CASE(S) Standard

May 14,2025

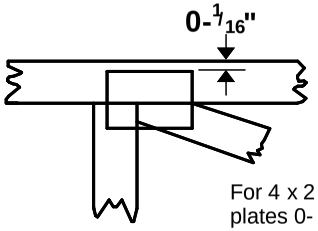
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

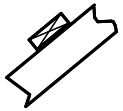
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

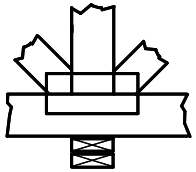
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

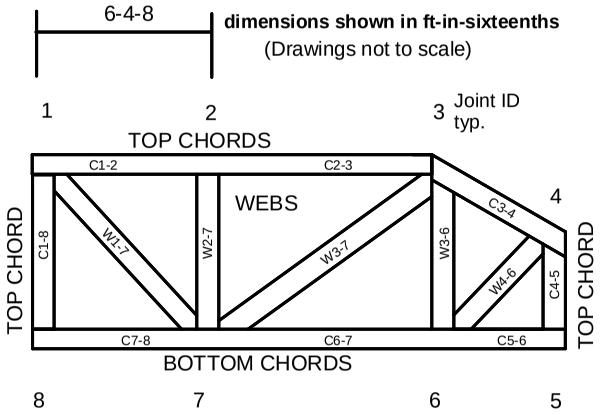


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.