ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 25040099-01
1001 Serenity-Roof-B329 B RH CP

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I73150287 thru I73150329

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

North Carolina COA: C-0844

May 2,2025

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	1001 Serenity-Roof-B329 B RH CP
25040099-01	A	Attic	2	1	I73150287 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:03 Page: 1

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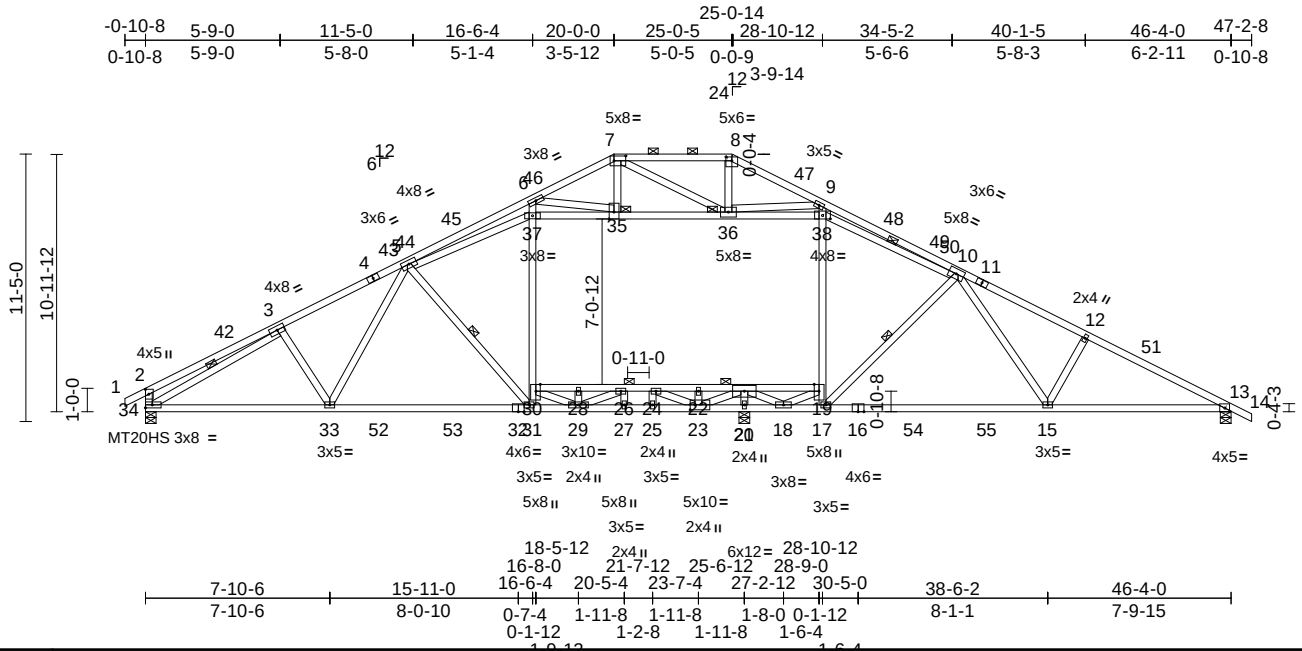

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Plate Offsets (X, Y): [2:0-2-8,0-1-12], [7:0-6-0,0-2-8], [8:0-3-0,0-2-0], [23:0-2-8,0-2-8], [30:Edge,0-2-4], [35:0-3-8,0-2-8], [38:0-4-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.60	31-33	>511	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.97	31-33	>315	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.14	13	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.34	19-30	>437	360		
BCDL	10.0										Weight: 336 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.1 *Except* 32-16:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 6-31:2x4 SP No.1, 9-17,37-38:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-8 max.): 7-8.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

WEBS 1 Row at midpt 5-31, 10-17, 3-34, 10-38

JOINTS 1 Brace at Jt(s): 35, 36

REACTIONS (size) 13=0-5-8, 21=0-5-8, 34=0-5-8

Max Horiz 34=-176 (LC 19)

Max Uplift 34=-101 (LC 14)

Max Grav 13=1725 (LC 48), 21=2290 (LC 40), 34=2048 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

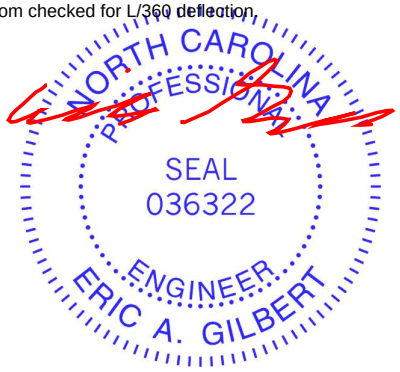
TOP CHORD 1-2=0/27, 2-3=-581/120, 3-5=-3376/149, 5-6=-3870/195, 6-7=-1251/101, 7-8=-756/149, 8-9=-913/144, 9-10=-525/297, 10-12=-3414/96, 12-13=-3537/70, 13-14=0/23, 2-34=-465/143

BOT CHORD 33-34=-195/2902, 31-33=-86/2762, 29-31=0/2644, 27-29=-249/2365, 25-27=-249/2365, 23-25=-249/2365, 21-23=-2503/691, 18-21=-2503/691, 17-18=0/1892, 15-17=0/2543, 13-15=0/3114, 28-30=-763/336, 26-28=-763/336, 24-26=-436/1318, 22-24=-385/2570, 20-22=-385/2570, 19-20=0/2534

WEBS 3-33=-47/198, 5-33=-42/379, 5-31=-730/214, 30-31=-51/765, 30-37=-10/1013, 6-37=0/1299, 17-19=-1/909, 19-38=-379/170, 9-38=-921/105, 10-17=-622/265, 10-15=-76/769, 12-15=-345/171, 35-37=-135/1692, 35-36=-1331/69, 36-38=-2841/181, 3-34=-2929/17, 20-21=-2034/0, 20-23=0/1928, 29-30=-496/428, 22-23=-120/31, 28-29=-333/0, 23-24=-1953/0, 26-29=-139/1119, 26-27=-283/29, 24-25=0/362, 18-20=-288/1915, 18-19=-2511/74, 7-35=-4/468, 8-36=0/175, 7-36=-509/55, 9-36=-69/1256, 6-35=-2908/204, 5-37=-221/1220, 10-38=-2450/143

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-9-2, Interior (1) 3-9-2 to 13-5-6, Exterior(2R) 13-5-6 to 31-6-15, Interior (1) 31-6-15 to 42-6-14, Exterior(2E) 42-6-14 to 47-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Ceiling dead load (5.0 psf) on member(s). 35-37, 35-36, 36-38; Wall dead load (5.0psf) on member(s).30-37, 19-38
11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 28-30, 26-28, 24-26, 22-24, 20-22, 19-20
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 34. This connection is for uplift only and does not consider lateral forces.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Attic room checked for L/360 deflection.



May 2,2025

Continued on page 2

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

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A1	Piggyback Base	1	1	I73150288 Job Reference (optional)

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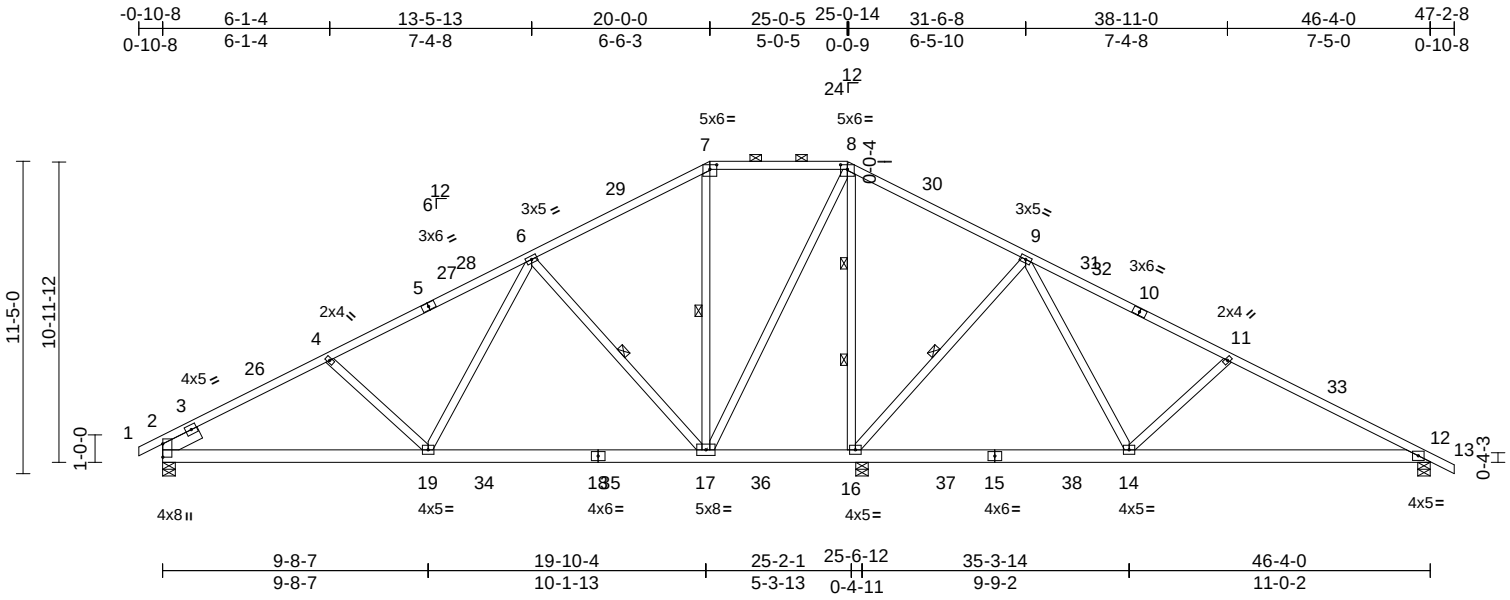

Scale = 1:84.2

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

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	0.92	Vert(LL)	-0.15	17-19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.26	14-25	>992	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.02	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 304 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 17-7,17-8,16-8:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-17, 7-17, 9-16
WEBS 2 Rows at 1/3 pts 8-16

REACTIONS (size) 2=0-5-8, 12=0-5-8, 16=0-5-8
Max Horiz 2=-189 (LC 15)
Max Uplift 2=-120 (LC 14), 12=-109 (LC 15), 16=-139 (LC 15)
Max Grav 2=949 (LC 37), 12=686 (LC 39), 16=2950 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1318/195, 4-6=-1087/166, 6-7=-203/218, 7-8=-91/167, 8-9=0/938, 9-11=-551/140, 11-12=-848/176, 12-13=0/23
BOT CHORD 2-19=-242/1112, 17-19=-85/634, 16-17=-827/297, 14-16=-209/132, 12-14=-57/713
WEBS 4-19=-375/208, 6-19=-18/731, 6-17=-1010/255, 7-17=-414/60, 8-17=-159/1569, 8-16=-2117/197, 9-16=-1110/262, 9-14=-39/920, 11-14=-468/230

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-9-2, Interior (1) 3-9-2 to 13-5-6, Exterior(2R) 13-5-6 to 31-6-8, Interior (1) 31-6-8 to 42-6-14, Exterior(2E) 42-6-14 to 47-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 16, and 12. This connection is for uplift only and does not consider lateral forces.
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 2,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A2	Piggyback Base	2	1	I73150289 Job Reference (optional)

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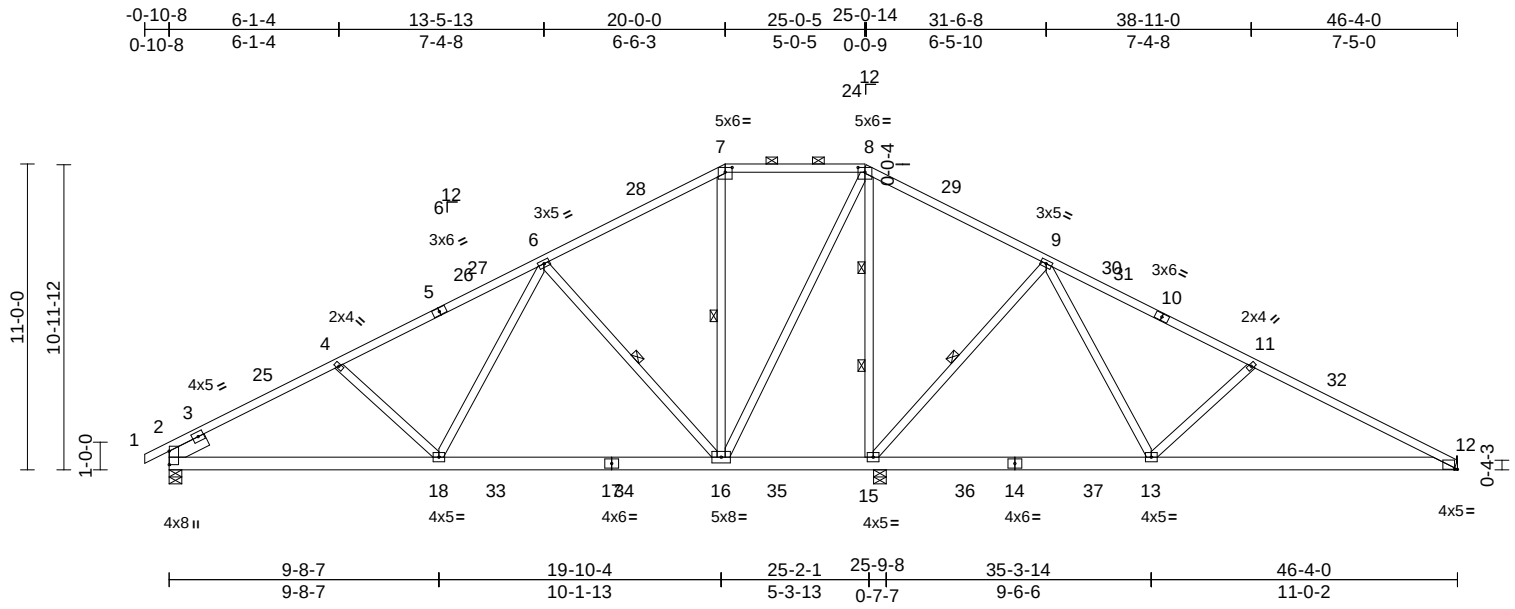

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Plate Offsets (X, Y): [2:0-5-13,0-0-1], [7:0-3-0,0-2-0], [8:0-3-0,0-2-0], [12:0-1-4,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.15	16-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.25	13-24	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.02	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 303 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 16-7,16-8,15-8:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-16, 7-16, 9-15
WEBS 2 Rows at 1/3 pts 8-15

REACTIONS (size) 2=0-5-8, 12= Mechanical, 15=0-5-8
Max Horiz 2=-174 (LC 15)
Max Uplift 2=-118 (LC 14), 12=-90 (LC 15), 15=-142 (LC 15)
Max Grav 2=952 (LC 37), 12=648 (LC 39), 15=2931 (LC 47)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1336/191, 4-6=-1105/163, 6-7=-207/201, 7-8=-96/160, 8-9=0/912, 9-11=-572/138, 11-12=-867/173
BOT CHORD 2-18=-247/1125, 16-18=-89/638, 15-16=-806/285, 13-15=-195/127, 12-13=-69/729
WEBS 4-18=-374/208, 6-18=-18/729, 6-16=-1009/255, 7-16=-404/63, 8-16=-162/1558, 8-15=-2096/206, 9-15=-1108/263, 9-13=-40/916, 11-13=-466/229

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-9-2, Interior (1) 3-9-2 to 13-5-6, Exterior(2R) 13-5-6 to 31-6-8, Interior (1) 31-6-8 to 41-7-10, Exterior(2E) 41-7-10 to 46-3-4 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 12.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 15. This connection is for uplift only and does not consider lateral forces.
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 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A4	Piggyback Base	3	1	I73150290 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:05 Page: 1
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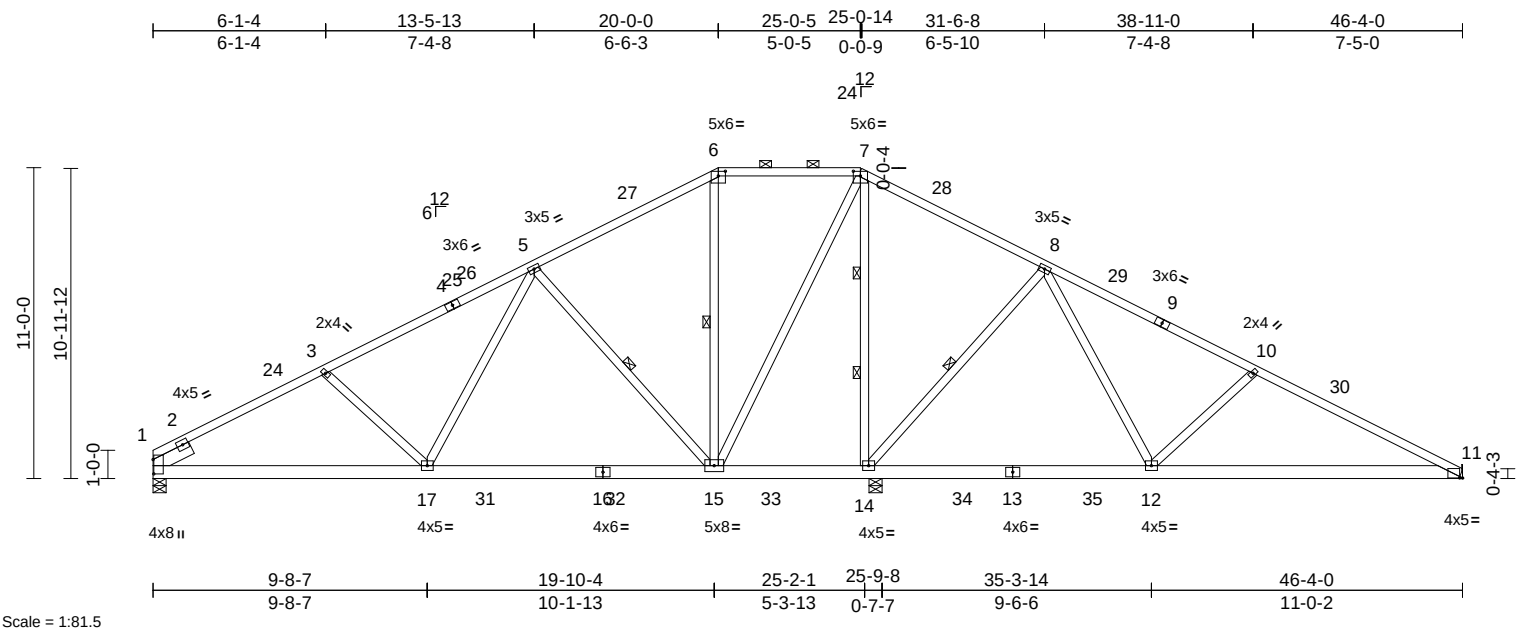

Scale = 1:81.5

Plate Offsets (X, Y): [1:0-6-1,0-0-5], [6:0-3-0,0-2-0], [7:0-3-0,0-2-0], [11:0-1-4,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.15	15-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.25	12-23	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 302 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 15-6,15-7,14-7:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-15, 6-15, 8-14
WEBS 2 Rows at 1/3 pts 7-14

REACTIONS (size) 1=0-5-8, 11= Mechanical, 14=0-5-8
Max Horiz 1=-181 (LC 15)
Max Uplift 1=-101 (LC 14), 11=-90 (LC 15), 14=-142 (LC 15)
Max Grav 1=909 (LC 36), 11=647 (LC 38), 14=2932 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-1341/192, 3-5=-1110/163, 5-6=-211/196, 6-7=-100/162, 7-8=0/909, 8-10=-571/138, 10-11=-864/173
BOT CHORD 1-17=-247/1130, 15-17=-89/640, 14-15=-804/285, 12-14=-190/126, 11-12=-69/726
WEBS 3-17=-375/208, 5-17=-19/732, 5-15=-1011/255, 6-15=-402/62, 7-15=-161/1557, 7-14=-2094/205, 8-14=-1112/263, 8-12=-40/916, 10-12=-466/229

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-7-10, Interior (1) 4-7-10 to 13-5-6, Exterior(2R) 13-5-6 to 31-6-8, Interior (1) 31-6-8 to 41-7-10, Exterior(2E) 41-7-10 to 46-3-4 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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 90 lb uplift at joint 11.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 14. This connection is for uplift only and does not consider lateral forces.
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 2,2025

ENGINEERING BY TRENCO
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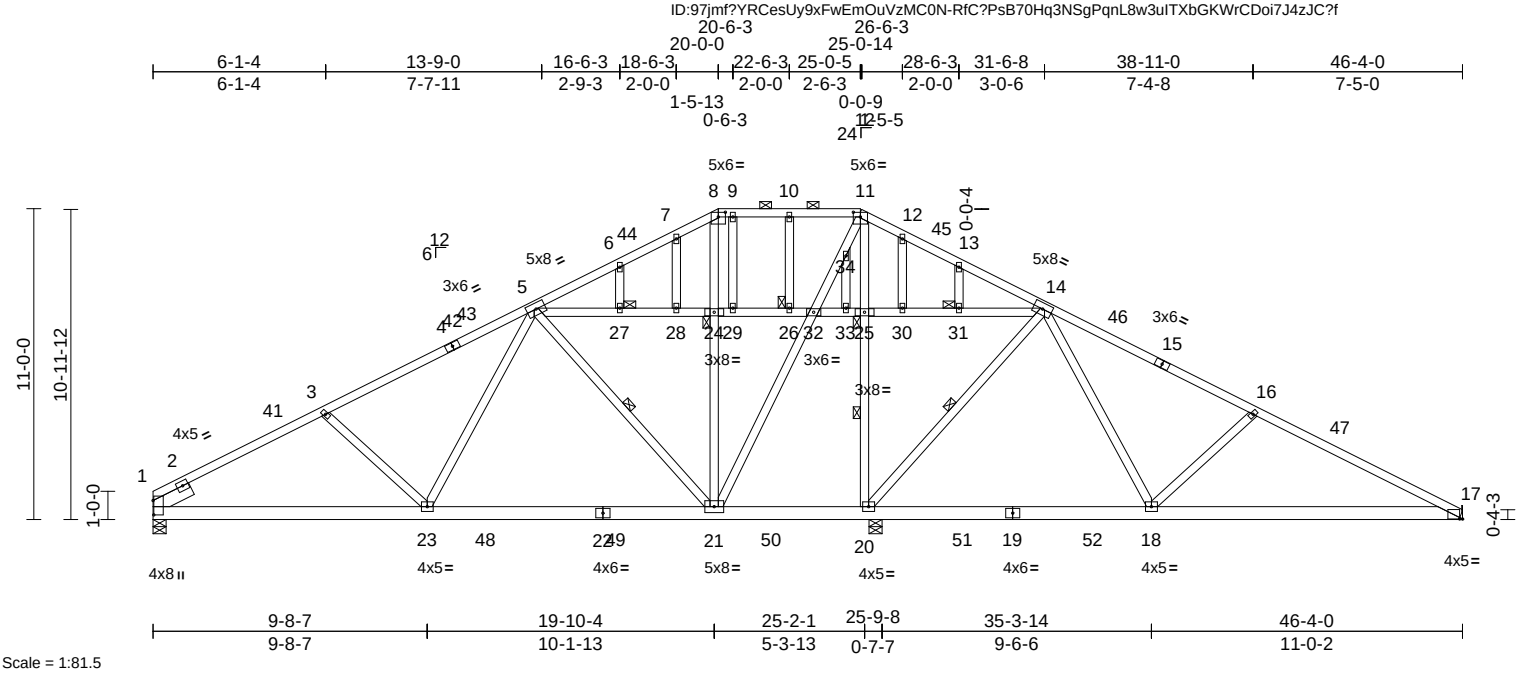
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A4SE	Piggyback Base Structural Gable	1	1	I73150291 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:05 Page: 1

ID:97jmf?YRCesUy9xFwEmOuVzMC0N-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.5

Plate Offsets (X, Y): [1:0-6-1,0-0-5], [8:0-3-0,0-2-0], [11:0-3-0,0-2-0], [17:0-1-4,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.15	21-23	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.25	18-40	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.02	17	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 352 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3 *Except* 21-8,21-11,20-11:2x4 SP No.2
SLIDER	Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 8-11.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-21, 20-25, 14-20
JOINTS	1 Brace at Jt(s): 24, 25, 26, 27, 31

REACTIONS (size) 1=0-5-8, 17= Mechanical, 20=0-5-8
Max Horiz 1=-181 (LC 15)
Max Uplift 1=-101 (LC 14), 17=-92 (LC 15), 20=-137 (LC 15)
Max Grav 1=894 (LC 36), 17=632 (LC 38), 20=2975 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1306/193, 3-5=-1071/163, 5-6=-333/131, 6-7=-256/148, 7-8=-221/166, 8-9=-227/179, 9-10=-227/179, 10-11=-230/179, 11-12=0/715, 12-13=0/706, 13-14=0/667, 14-16=-536/143, 16-17=-828/179
BOT CHORD	1-23=-248/1100, 21-23=-88/603, 20-21=-969/277, 18-20=-232/119, 17-18=-75/695
WEBS	3-23=-382/211, 5-23=-20/737, 5-21=-1152/248, 21-24=-311/59, 8-24=-280/49, 21-32=-166/1588, 32-34=-159/1580, 11-34=-157/1535, 20-25=-2048/204, 11-25=-1934/175, 14-20=-1236/254, 14-18=-42/917, 16-18=-470/232, 5-27=-24/339, 27-28=-23/336, 24-28=-23/336, 24-29=-25/347, 26-29=-25/347, 26-32=-25/347, 25-30=-17/318, 30-31=-17/318, 14-31=-18/321, 10-26=-176/60, 6-27=-50/16, 7-28=-75/31, 9-29=-27/75, 12-30=-94/31, 13-31=-46/15, 32-33=-24/385, 25-33=-24/385, 33-34=-49/5

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-7-10, Interior (1) 4-7-10 to 13-5-4, Exterior(2R) 13-5-4 to 31-7-1, Interior (1) 31-7-1 to 41-7-10, Exterior(2E) 41-7-10 to 46-3-4 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 17.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 20. This connection is for uplift only and does not consider lateral forces.
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

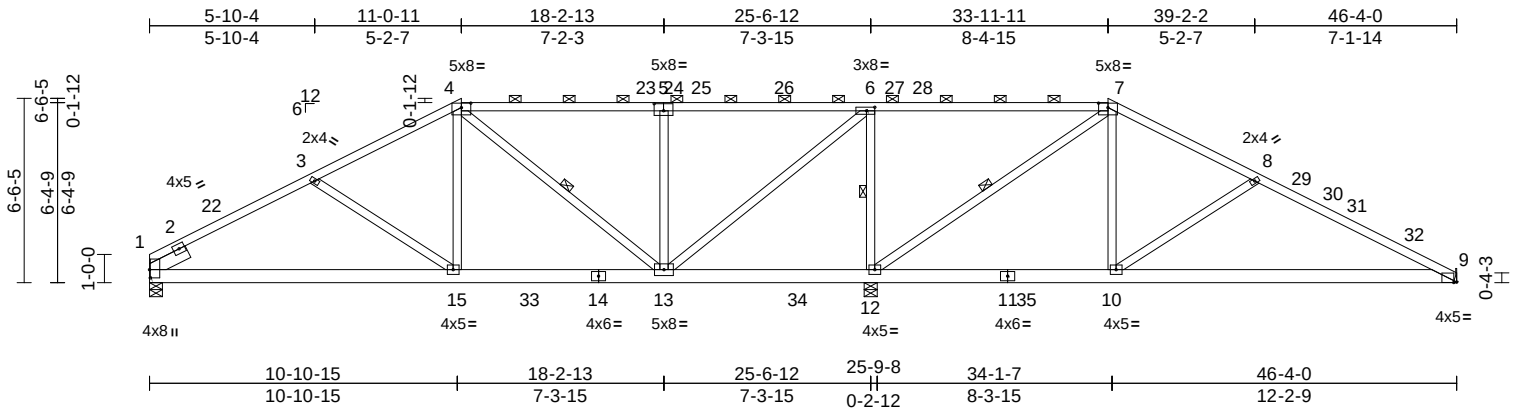
May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A5	Hip	1	1	I73150292 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:05 ID:E9GQhRE8mtRqfkVPk9TW5qzMCB5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.7

Plate Offsets (X, Y): [1:0-3-8,0-0-5], [4:0-4-0,0-1-15], [5:0-4-0,0-3-0], [6:0-3-8,0-1-8], [7:0-4-0,0-1-15], [9:0-1-4,0-0-3]

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	0.94	Vert(LL)	-0.22	10-21	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.42	10-21	>596	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.03	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 278 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP 2400F 2.0E
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-13.
WEBS 1 Row at midpt 6-12, 4-13, 7-12

REACTIONS (size) 1=0-5-8, 9= Mechanical, 12=0-5-8
Max Horiz 1=-108 (LC 15)
Max Uplift 1=-123 (LC 14), 9=-106 (LC 15), 12=-212 (LC 10)
Max Grav 1=1087 (LC 36), 9=837 (LC 38), 12=2583 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-1498/241, 3-4=-1166/182, 4-6=-635/144, 6-7=-43/827, 7-8=-668/144, 8-9=-1198/218
BOT CHORD 1-15=-214/1266, 13-15=-71/961, 12-13=-890/239, 10-12=0/484, 9-10=-109/1002
WEBS 3-15=-516/173, 4-15=0/592, 6-12=-1747/312, 7-10=0/805, 8-10=-657/204, 5-13=-585/186, 4-13=-721/75, 6-13=-239/1775, 7-12=-1566/158

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 4-7-10, Exterior(2R) 4-7-10 to 17-7-5, Interior (1) 17-7-5 to 27-5-0, Exterior (2R) 27-5-0 to 40-6-5, Interior (1) 40-6-5 to 41-7-10, Exterior(2E) 41-7-10 to 46-3-4 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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 106 lb uplift at joint 9.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 12. This connection is for uplift only and does not consider lateral forces.
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

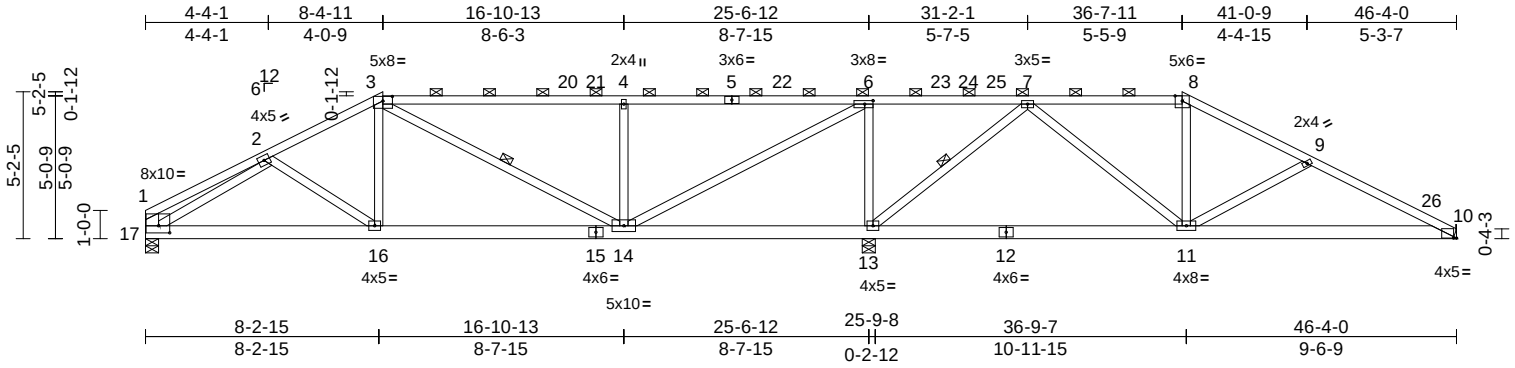
May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A6	Hip	1	1	I73150293 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:06 ID:aIU11ihHbkeL8g_Z2VekD8zMCBp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:81.4

Plate Offsets (X, Y): [1:0-4-12,0-3-0], [3:0-4-0,0-1-15], [6:0-3-8,0-1-8], [10:0-1-4,0-0-1]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.07	11-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.14	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 277 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP 2400F 2.0E
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 17-1:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-3 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 13-14.
WEBS 1 Row at midpt 7-13, 3-14

REACTIONS (size) 10= Mechanical, 13=0-5-8, 17=0-5-8
Max Horiz 17=-77 (LC 15)
Max Uplift 10=-118 (LC 15), 13=-251 (LC 10), 17=-141 (LC 14)
Max Grav 10=854 (LC 44), 13=2384 (LC 39), 17=990 (LC 42)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-350/53, 2-3=-1174/226, 3-4=-944/232, 4-6=-941/231, 6-7=-31/779, 7-8=-668/186, 8-9=-854/175, 9-10=-1329/247, 1-17=-301/65
BOT CHORD 16-17=-221/1139, 14-16=-133/1043, 13-14=-804/193, 11-13=-15/222, 10-11=-159/1140
WEBS 2-16=-253/124, 3-16=0/337, 8-11=-4/153, 9-11=-541/170, 2-17=-1086/207, 6-13=-1347/290, 7-11=-14/718, 7-13=-1275/217, 4-14=-724/240, 3-14=-372/31, 6-14=-281/1955

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 4-10-6, Exterior(2R) 4-10-6 to 14-11-5, Interior (1) 14-11-5 to 30-1-0, Exterior (2R) 30-1-0 to 41-7-10, Exterior(2E) 41-7-10 to 46-3-4 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
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 118 lb uplift at joint 10.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 17 and 13. This connection is for uplift only and does not consider lateral forces.
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

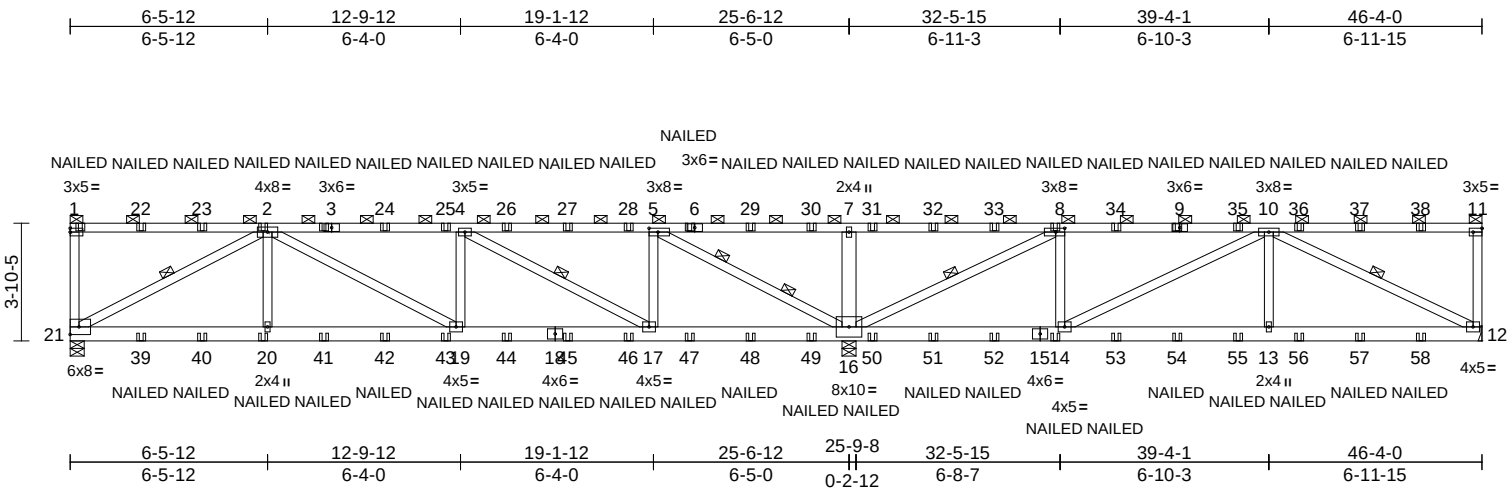
May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	A7GR	Flat Girder	1	1	I73150294 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:07 Page: 1

ID:MzC3fFp7GD?OvuFJV4QSxMzMCl5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:75.6

Plate Offsets (X, Y): [5:0-3-8,0-1-8], [8:0-3-8,0-1-8], [11: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	0.97	Vert(LL)	-0.13	19	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.21	17-19	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.08	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 290 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1 *Except* 6-9,3-6:2x4 SP 2400F 2.0E

BOT CHORD 2x6 SP No.2

WEBS 2x4 SP No.3 *Except* 16-7:2x6 SP No.2

BRACING

TOP CHORD 2-0-0 oc purlins (3-4-7 max.): 1-11, except end verticals.

BOT CHORD Rigid ceiling directly applied or 9-3-11 oc bracing.

WEBS 1 Row at midpt 8-16, 10-12, 2-21, 4-17

WEBS 2 Rows at 1/3 pts 5-16

REACTIONS (size) 12= Mechanical, 16=0-5-8, 21=0-5-8

Max Horiz 21=-120 (LC 10)

Max Uplift 12=-250 (LC 9), 16=-953 (LC 9), 21=-410 (LC 8)

Max Grav 12=1112 (LC 1), 16=4089 (LC 1), 21=1645 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-388/174, 1-2=-79/49, 2-4=-2492/575, 4-5=-1090/262, 5-7=-480/1934, 7-8=-480/1934, 8-10=-720/193, 10-11=-87/52, 11-12=-296/131

BOT CHORD 20-21=-566/2170, 19-20=-566/2170, 17-19=-626/2492, 16-17=-285/1090, 14-16=-186/720, 13-14=-360/1471, 12-13=-360/1471

WEBS 7-16=-799/355, 8-14=0/577, 8-16=-2970/689, 10-14=-842/197, 10-13=0/424, 10-12=-1579/355, 2-20=0/383, 2-21=-2415/562, 2-19=-102/367, 4-19=0/257, 4-17=-1600/389, 5-17=-66/939, 5-16=-3441/812

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; 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 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 250 lb uplift at joint 12.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21. This connection is for uplift only and does not consider lateral forces.
10) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16. This connection is for uplift only and does not consider lateral forces.
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: 1-11=-60, 12-21=-20
   Concentrated Loads (lb)
   Vert: 1=-133 (F), 3=-109 (F), 8=-109 (F), 14=-29 (F), 20=-29 (F), 2=-109 (F), 6=-109 (F), 9=-109 (F), 22=-109 (F), 23=-109 (F), 24=-109 (F), 25=-109 (F), 26=-109 (F), 27=-109 (F), 28=-109 (F), 29=-109 (F), 30=-109 (F), 31=-109 (F), 32=-109 (F), 33=-109 (F), 34=-109 (F), 35=-109 (F), 36=-109 (F), 37=-109 (F), 38=-109 (F), 39=-29 (F), 40=-29 (F), 41=-29 (F), 42=-29 (F), 43=-29 (F), 44=-29 (F), 45=-29 (F), 46=-29 (F), 47=-29 (F), 48=-29 (F), 49=-29 (F), 50=-29 (F), 51=-29 (F), 52=-29 (F), 53=-29 (F), 54=-29 (F), 55=-29 (F), 56=-29 (F), 57=-29 (F), 58=-29 (F)

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B	Common	7	1	I73150295 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:08 Page: 1
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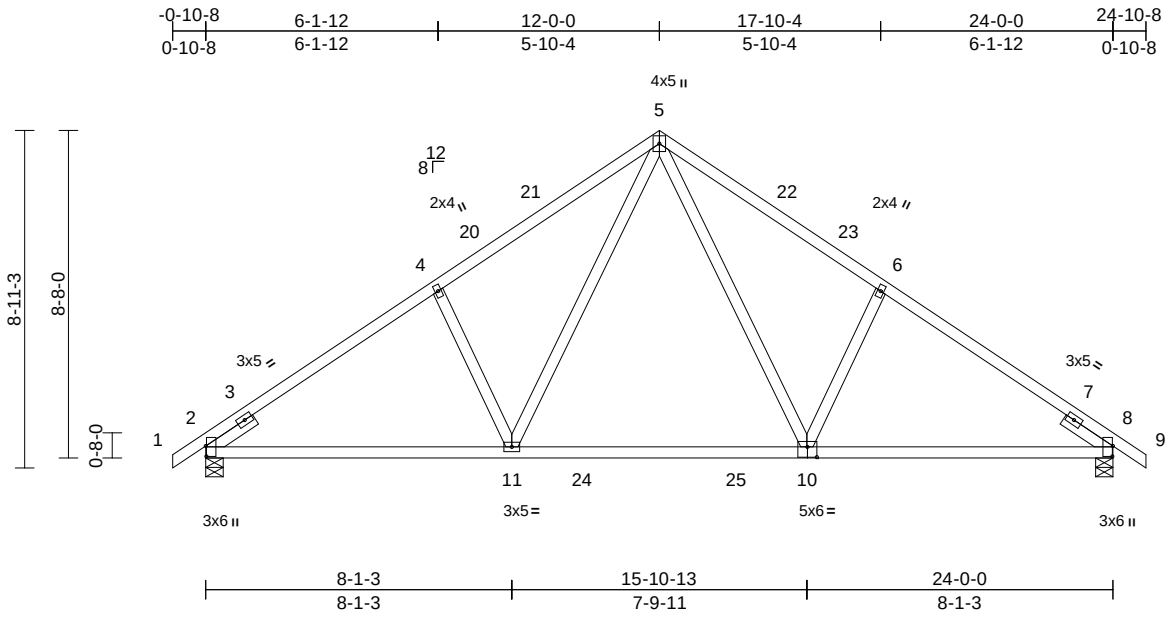

Scale = 1:61

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.16	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.24	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 127 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=202 (LC 13)
Max Uplift 2=-99 (LC 14), 8=-99 (LC 15)
Max Grav 2=1140 (LC 25), 8=1140 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1654/153, 4-5=-1572/217, 5-6=-1573/218, 6-8=-1654/153, 8-9=0/29
BOT CHORD 2-11=-210/1301, 8-11=-102/1301
WEBS 5-10=-129/713, 6-10=-385/224, 5-11=-128/712, 4-11=-385/224

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 9-0-0, Exterior(2R) 9-0-0 to 15-0-0, Interior (1) 15-0-0 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B1	Hip	1	1	I73150296 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:08 Page: 1
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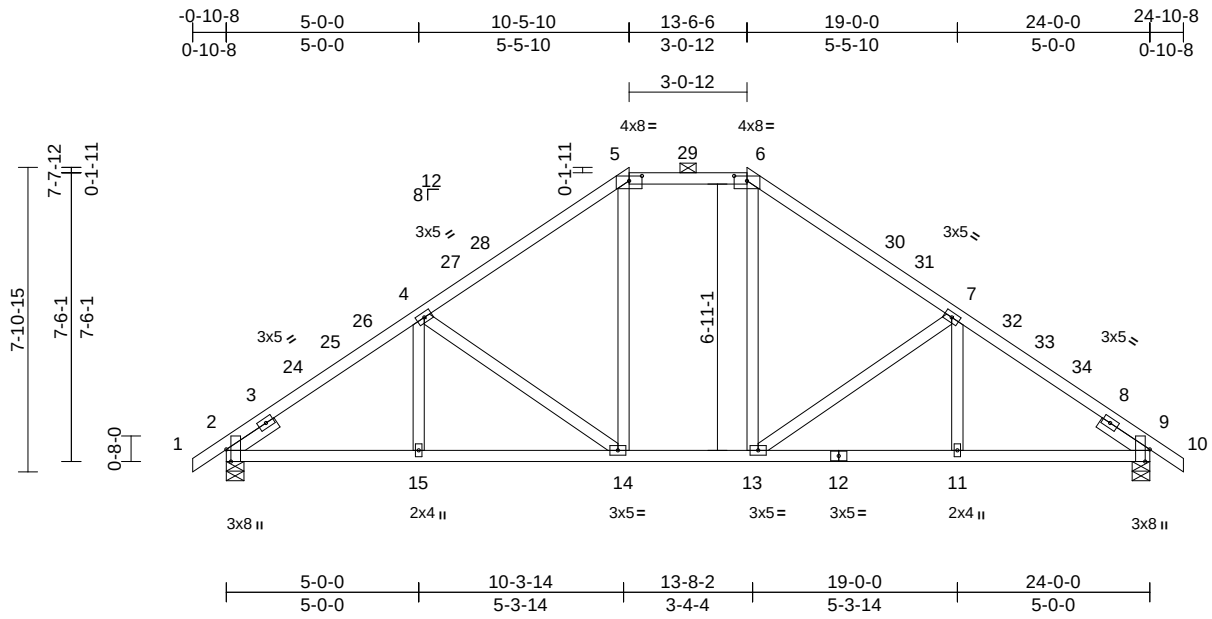

Scale = 1:59.9

Plate Offsets (X, Y): [2:0-3-13,Edge], [5:0-4-0,0-1-9], [6:0-4-0,0-1-9], [9:0-3-13,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	0.72	Vert(LL)	-0.18	11-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.24	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 135 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-9 oc purlins, except 2-0-0 oc purlins (5-4-3 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=-176 (LC 12)
Max Uplift 2=-105 (LC 14), 9=-105 (LC 15)
Max Grav 2=1257 (LC 51), 9=1257 (LC 53)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1874/146, 4-5=-1482/166, 5-6=-1150/182, 6-7=-1482/166, 7-9=-1874/146, 9-10=0/29
BOT CHORD 2-15=-156/1495, 14-15=-150/1495, 13-14=0/1081, 11-13=-32/1495, 9-11=-61/1495
WEBS 4-15=0/186, 4-14=-530/185, 5-14=-14/467, 6-13=-14/467, 7-13=-530/185, 7-11=0/186

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-2-11, Exterior(2R) 6-2-11 to 17-9-5, Interior (1) 17-9-5 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
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 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B2	Roof Special	1	1	I73150297 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:08 Page: 1

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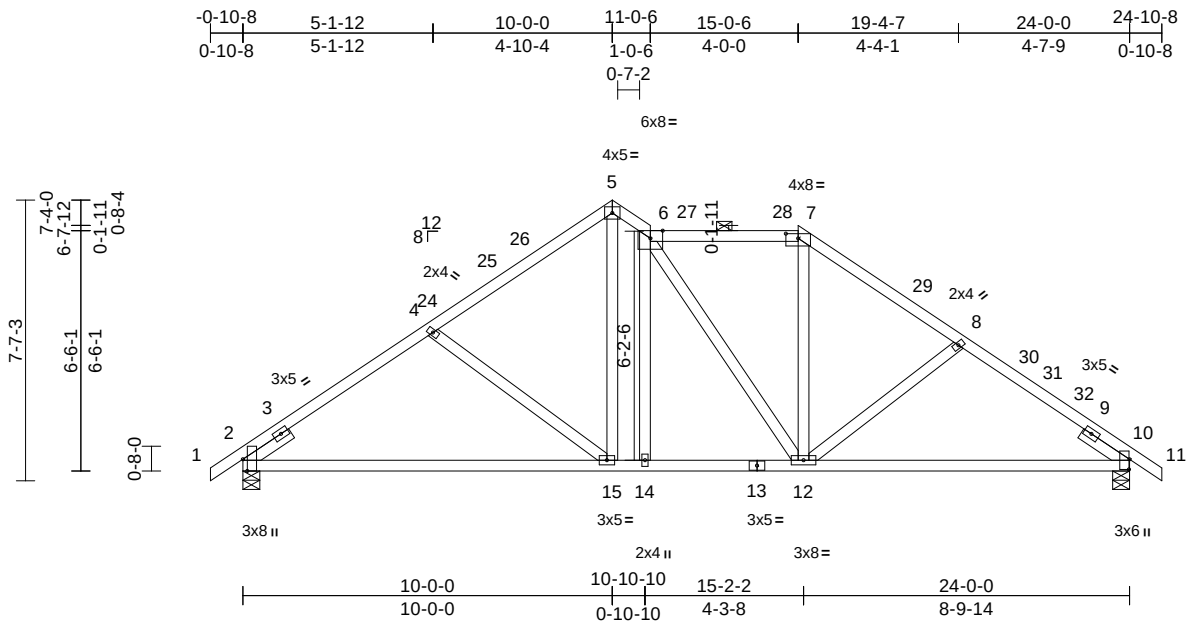

Scale = 1:62.4

Plate Offsets (X, Y): [2:0-3-13,Edge], [7:0-4-0,0-1-9], [10:0-3-5,0-0-3]

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	0.60	Vert(LL)	-0.17	12-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.29	15-18	>997	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 141 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-7-11 oc purlins, except 2-0-0 oc purlins (4-8-2 max.): 6-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 12-14.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-170 (LC 12)
Max Uplift 2=-89 (LC 14), 10=-120 (LC 15)
Max Grav 2=1028 (LC 44), 10=1097 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-1390/180, 4-5=-1185/175, 5-6=-1044/165, 6-7=-992/185, 7-8=-1246/176, 8-10=-1492/188, 10-11=0/29
BOT CHORD	2-15=-213/1090, 14-15=0/873, 12-14=0/889, 10-12=-119/1173
WEBS	4-15=-331/174, 5-15=-48/855, 6-14=-699/120, 6-12=-113/193, 7-12=0/351, 8-12=-342/148

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 10-0-0, Exterior(2E) 10-0-0 to 11-0-6, Interior (1) 11-0-6 to 12-0-6, Exterior (2R) 12-0-6 to 18-0-6, Interior (1) 18-0-6 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
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 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B3	Roof Special	1	1	I73150298 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:08 Page: 1
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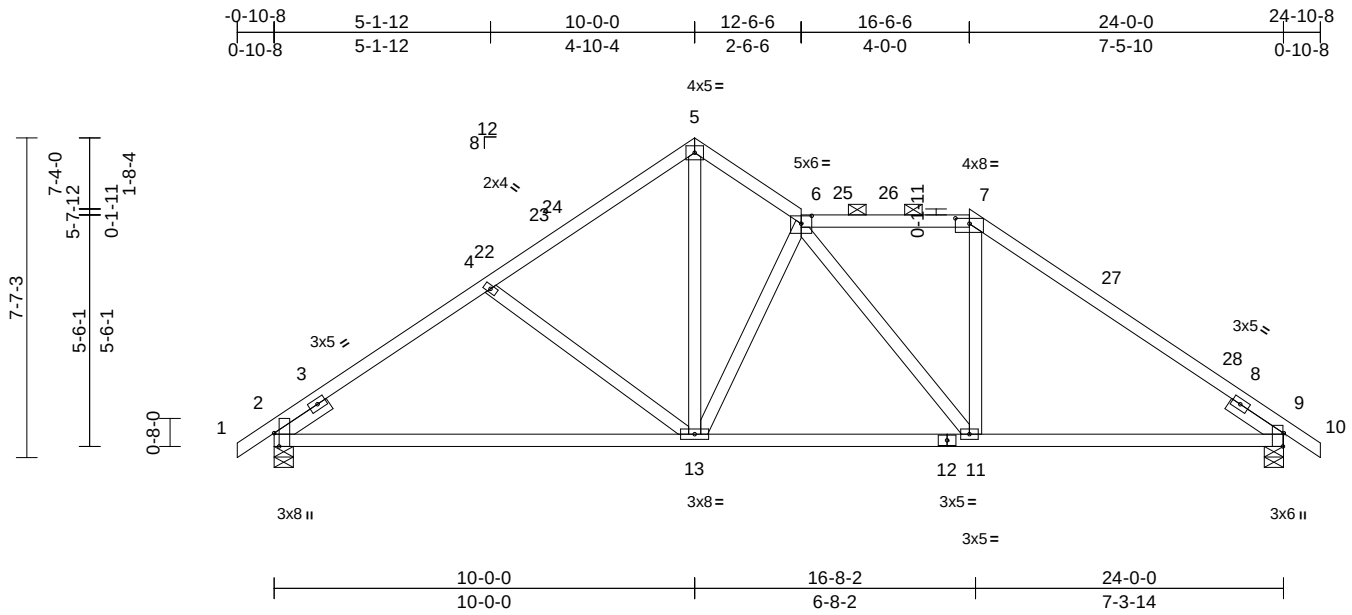


Scale = 1:54.8

Plate Offsets (X, Y): [2:0-3-13,Edge], [6:0-3-0,0-2-4], [7:0-4-0,0-1-9], [9:0-3-13,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	0.87	Vert(LL)	-0.18	13-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.36	13-16	>805	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 130 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 7-10:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

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

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=-170 (LC 12)
Max Uplift 2=-89 (LC 14), 9=-120 (LC 15)
Max Grav 2=1052 (LC 44), 9=1132 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1280/173, 4-5=-1158/163, 5-6=-1131/185, 6-7=-1087/191, 7-9=-1399/160, 9-10=0/29
BOT CHORD 2-13=-206/1095, 11-13=-11/1164, 9-11=-192/1033
WEBS 5-13=-101/979, 6-13=-763/188, 7-11=0/367, 6-11=-281/59, 4-13=-357/181

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 10-0-0, Exterior(2E) 10-0-0 to 12-6-6, Interior (1) 12-6-6 to 13-6-6, Exterior (2R) 13-6-6 to 19-6-6, Interior (1) 19-6-6 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

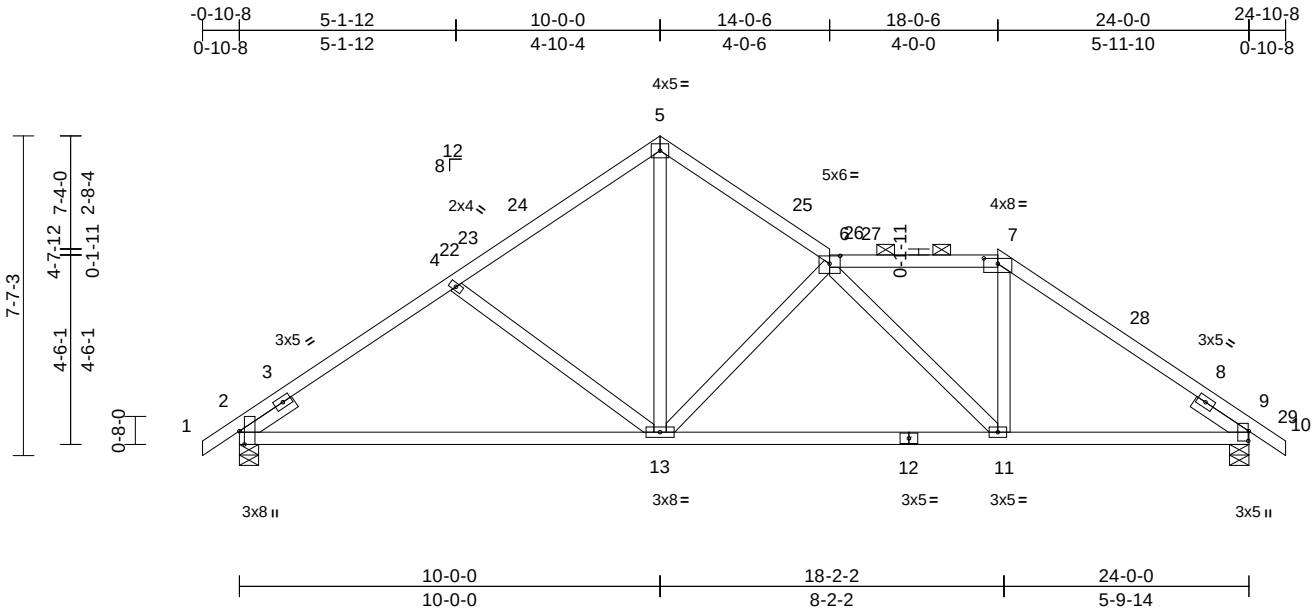
LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B4	Roof Special	1	1	I73150299 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:08 Page: 1
ID:MMyUAt3cpTU9GVinz1tIVUzMCOE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.8

Plate Offsets (X, Y): [2:0-3-13,Edge], [6:0-3-0,0-2-4], [7:0-4-0,0-1-9], [9:0-2-13,0-0-3]

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	0.59	Vert(LL)	-0.16	13-16	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.33	13-16	>884	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.05	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 127 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-11 oc purlins, except 2-0-0 oc purlins (5-0-15 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 9=0-5-8
Max Horiz 2=-170 (LC 12)
Max Uplift 2=-89 (LC 14), 9=-120 (LC 15)
Max Grav 2=1078 (LC 44), 9=1146 (LC 43)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1303/187, 4-5=-1177/178, 5-6=-1153/183, 6-7=-1139/178, 7-9=-1454/161, 9-10=0/45
BOT CHORD 2-13=-201/1137, 11-13=-67/1400, 9-11=-123/1102
WEBS 5-13=-84/935, 6-13=-814/202, 4-13=-356/182, 7-11=0/463, 6-11=-464/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 15-0-6, Exterior(2R) 15-0-6 to 21-0-6, Interior (1) 21-0-6 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
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 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	B5GR	Roof Special Girder	1	**2**	I73150300 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1

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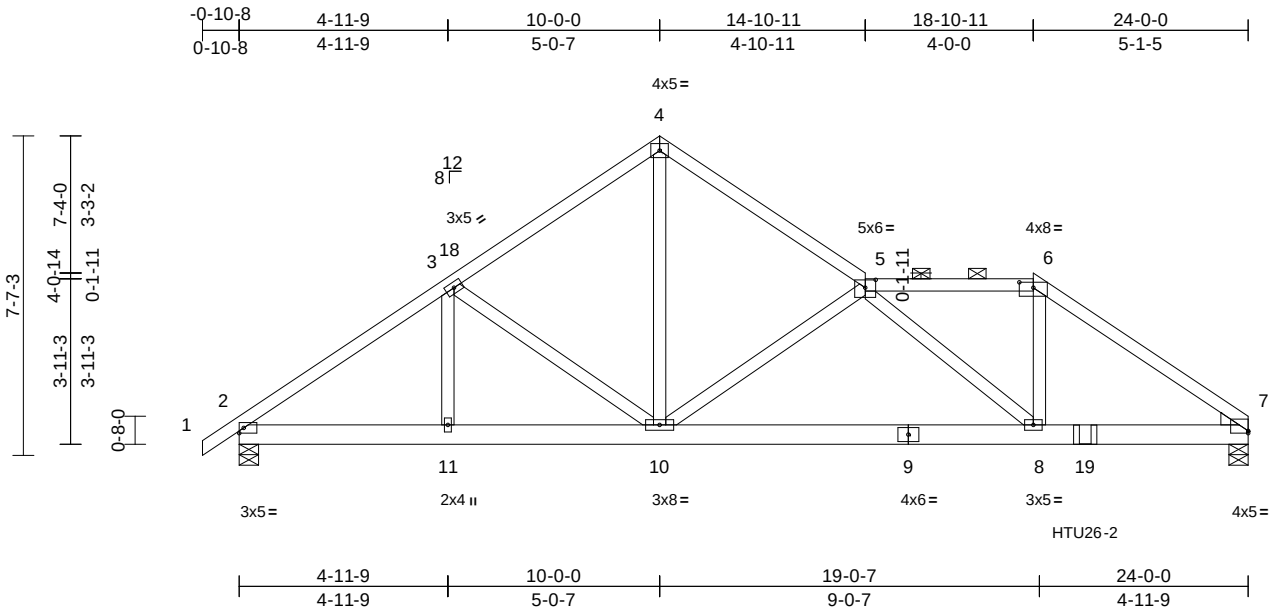

Scale = 1:54.8

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

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	0.36	Vert(LL)	-0.04	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.07	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.27	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 290 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=166 (LC 9)
Max Uplift 2=-113 (LC 12), 7=-229 (LC 13)
Max Grav 2=1260 (LC 40), 7=1911 (LC 39)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-1783/155, 3-4=-1487/196, 4-5=-1454/173, 5-6=-2076/298, 6-7=-2629/310
BOT CHORD 2-11=-172/1424, 10-11=-162/1424, 8-10=-190/2319, 7-8=-178/2122
WEBS 3-11=0/122, 3-10=-382/166, 4-10=-100/1184, 5-10=-1529/310, 5-8=-322/249, 6-8=-66/1147

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 2. This connection is for uplift only and does not consider lateral forces.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Use Simpson Strong-Tie HTU26-2 (20-10d Girder, 14-10d Truss) or equivalent at 20-1-8 from the left end to connect truss(es) to front face of bottom chord.
14) 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: 1-4=-60, 4-5=-60, 5-6=-60, 6-7=-60, 12-15=-20
Concentrated Loads (lb)
Vert: 19=-1021 (F)

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	BSE	Common Structural Gable	1	1	I73150301 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1
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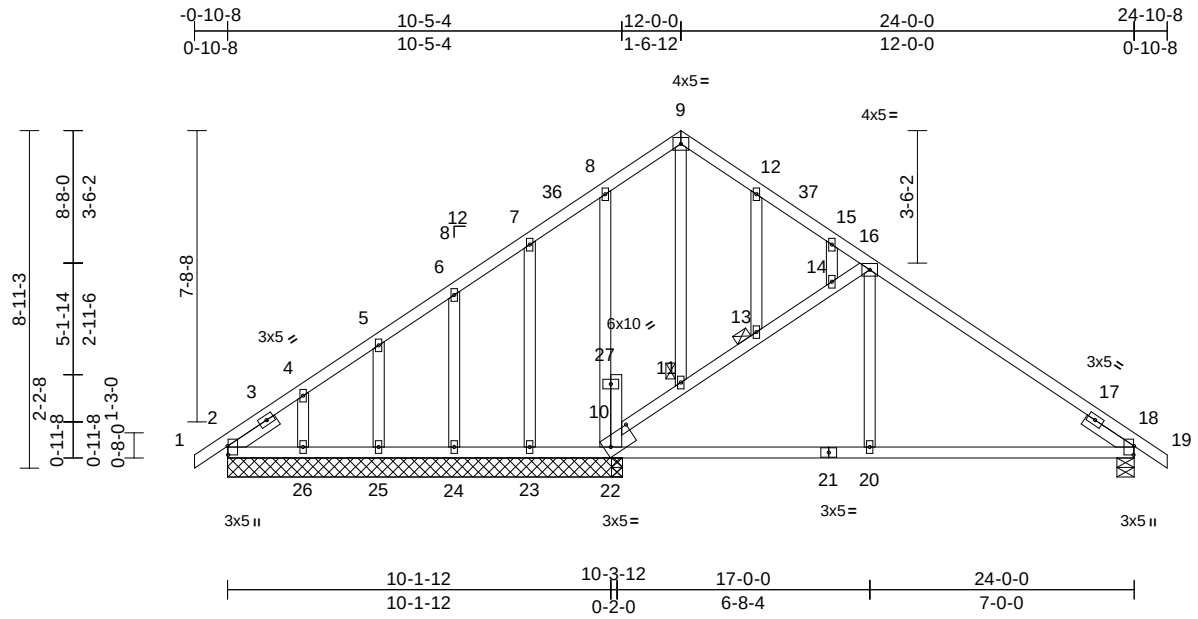


Scale = 1:61

Plate Offsets (X, Y): [2:0-2-13,0-0-3], [10:0-8-0,0-3-4], [18:0-2-13,0-0-3]

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	0.49	Vert(LL)	0.07	20-30	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.10	20-30	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	18	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 156 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
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 11, 13

REACTIONS (size) 2=10-5-8, 18=0-5-8, 22=10-5-8, 23=10-5-8, 24=10-5-8, 25=10-5-8, 26=10-5-8
Max Horiz 2=-202 (LC 12)
Max Uplift 2=-29 (LC 10), 18=-81 (LC 15), 23=-91 (LC 14), 24=-52 (LC 14), 25=-49 (LC 14), 26=-112 (LC 14)
Max Grav 2=274 (LC 26), 18=685 (LC 1), 22=432 (LC 1), 23=210 (LC 1), 24=160 (LC 25), 25=171 (LC 1), 26=167 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/29, 2-4=-278/99, 4-5=-260/73, 5-6=-252/71, 6-7=-238/70, 7-8=-224/108, 8-9=-224/111, 9-12=-208/111, 12-15=-226/72, 15-16=-245/56, 16-18=-757/93, 18-19=0/29, 10-11=-566/172, 11-13=-596/199, 13-14=-553/172, 14-16=-544/168, 10-22=-425/86, 8-10=-138/61
BOT CHORD	2-26=-23/215, 25-26=-23/215, 24-25=-23/215, 23-24=-23/215, 22-23=-23/215, 20-22=0/552, 18-20=-127/552
WEBS	9-11=-50/54, 7-23=-141/89, 6-24=-142/82, 5-25=-146/77, 4-26=-132/113, 12-13=-77/49, 14-15=-16/6, 16-20=0/287

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-0-0, Interior (1) 2-0-0 to 9-0-0, Exterior(2R) 9-0-0 to 15-0-0, Interior (1) 15-0-0 to 21-10-8, Exterior(2E) 21-10-8 to 24-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
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) N/A
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

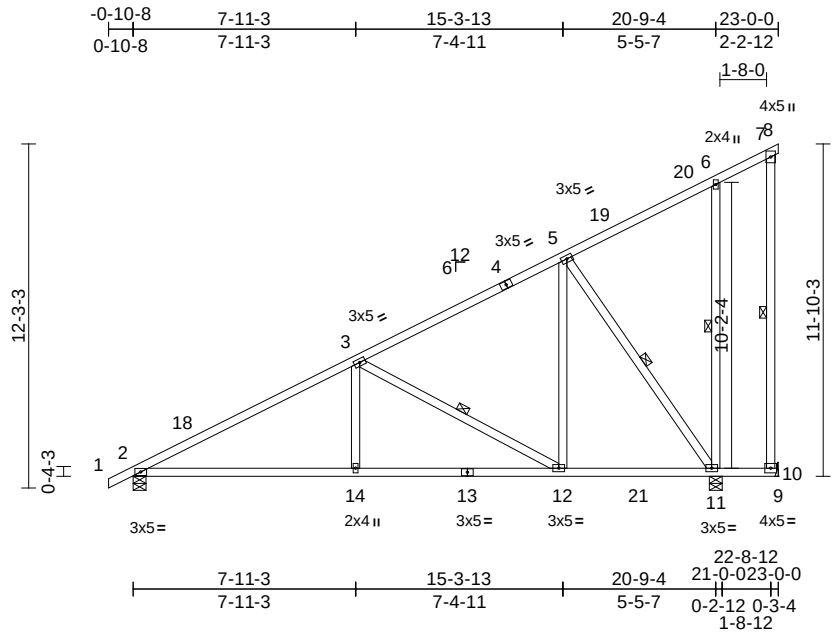
LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	C	Monopitch	1	1	I73150302 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1
ID:BtC6klK9j1Q8nN87NoP6J5z2Qj3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:82.1

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.14	14-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.27	14-17	>909	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 148 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-10,6-11:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 7-10, 3-12, 5-11, 6-11

REACTIONS (size) 2=0-5-8, 10= Mechanical, 11=0-5-8
Max Horiz 2=422 (LC 13)
Max Uplift 2=-80 (LC 14), 10=-72 (LC 13), 11=-264 (LC 14)
Max Grav 2=904 (LC 5), 10=58 (LC 10), 11=1231 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-1393/152, 3-5=-727/135, 5-6=-215/203, 6-7=-134/150, 7-8=-12/0, 7-10=-30/39
BOT CHORD 2-14=-200/1447, 12-14=-200/1447, 11-12=-106/651, 10-11=-142/190, 9-10=0/0
WEBS 3-14=0/329, 3-12=-906/204, 5-12=-9/670, 5-11=-959/208, 6-11=-429/120

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 20-0-0, Exterior(2E) 20-0-0 to 23-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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 72 lb uplift at joint 10.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 11. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	C1	Attic	3	1	I73150303 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1

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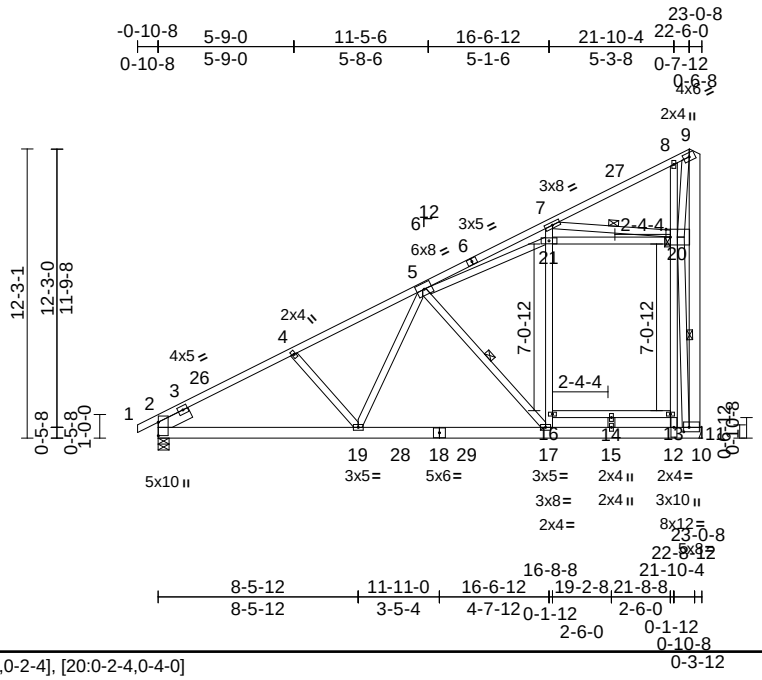

Scale = 1:97.6

Plate Offsets (X, Y): [2:0-6-13,0-0-1], [11:0-2-12,0-2-4], [20:0-2-4,0-4-0]

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	0.75	Vert(LL)	-0.37	17-19	>739	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.67	17-19	>409	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.15	12-17	>435	360		
BCDL	10.0										Weight: 229 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 16-13:2x4 SP No.2, 18-10:2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 7-17,8-12,21-20:2x4 SP No.2, 11-9:2x6 SP No.2, 20-11:2x4 SP 2400F 2.0E

SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-8 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-17, 7-20, 11-20

JOINTS 1 Brace at Jt(s): 20

REACTIONS (size) 2=0-5-8, 11= Mechanical

Max Horiz 2=431 (LC 14)

Max Uplift 2=-8 (LC 14), 11=-53 (LC 14)

Max Grav 2=1144 (LC 5), 11=1658 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-4=-1746/0, 4-5=-1592/0, 5-7=-2641/105, 7-8=-120/590, 8-9=-15/417, 9-11=-218/2072

BOT CHORD 2-19=-386/1603, 17-19=-198/1204, 15-17=-34/467, 12-15=-34/467, 11-12=-33/452, 10-11=0/0

WEBS 4-19=-230/170, 5-19=-68/638, 5-17=-1047/246, 16-17=-20/744, 16-21=-4/833, 7-21=0/1460, 12-13=-76/1834, 13-20=-60/1925, 8-20=-586/178, 14-16=-2/39, 13-14=-2/39, 20-21=-217/1957, 14-15=-36/2, 7-20=-2915/283, 9-20=-2229/178, 11-20=-4908/367, 5-21=-219/1939

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 19-8-12, Exterior(2E) 19-8-12 to 22-8-12 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) Ceiling dead load (5.0 psf) on member(s). 14-16, 13-14, 20-21; Wall dead load (5.0psf) on member(s).16-21, 13-20
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 15-17, 12-15
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 11.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
12) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	D	Common	9	1	I73150304 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1
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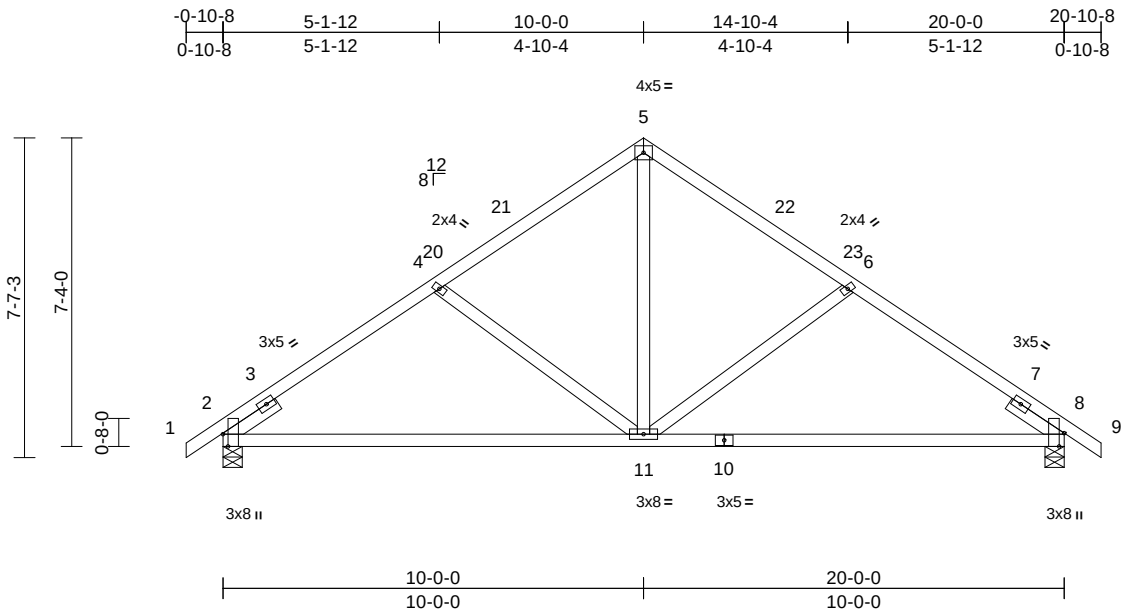


Scale = 1:54.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.14	11-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	11-14	>863	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 101 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=-170 (LC 12)
Max Uplift 2=-85 (LC 14), 8=-85 (LC 15)
Max Grav 2=900 (LC 21), 8=900 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1010/148, 4-5=-879/138, 5-6=-879/138, 6-8=-1010/148, 8-9=0/29
BOT CHORD 2-11=-194/901, 8-11=-102/901
WEBS 5-11=-29/596, 6-11=-367/184, 4-11=-367/183

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 17-10-8, Exterior(2E) 17-10-8 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.

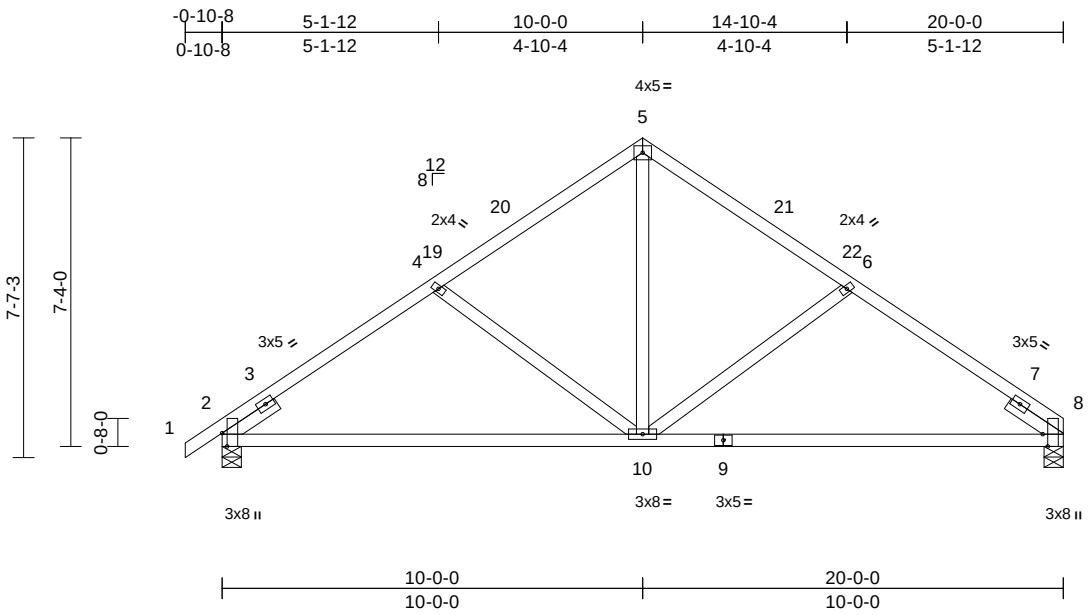
LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	D1	Common	2	1	I73150305 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:09 Page: 1
ID:Z_zCtCt8BmiE58RMZm1ivPzMCKc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.14	10-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	10-13	>857	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 100 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=166 (LC 11)
Max Uplift 2=-85 (LC 14), 8=-68 (LC 15)
Max Grav 2=900 (LC 21), 8=846 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1011/149, 4-5=-880/139, 5-6=-880/139, 6-8=-1014/150
BOT CHORD 2-10=-201/902, 8-10=-122/906
WEBS 5-10=-31/598, 6-10=-372/185, 4-10=-367/183

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 17-0-0, Exterior(2E) 17-0-0 to 20-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.

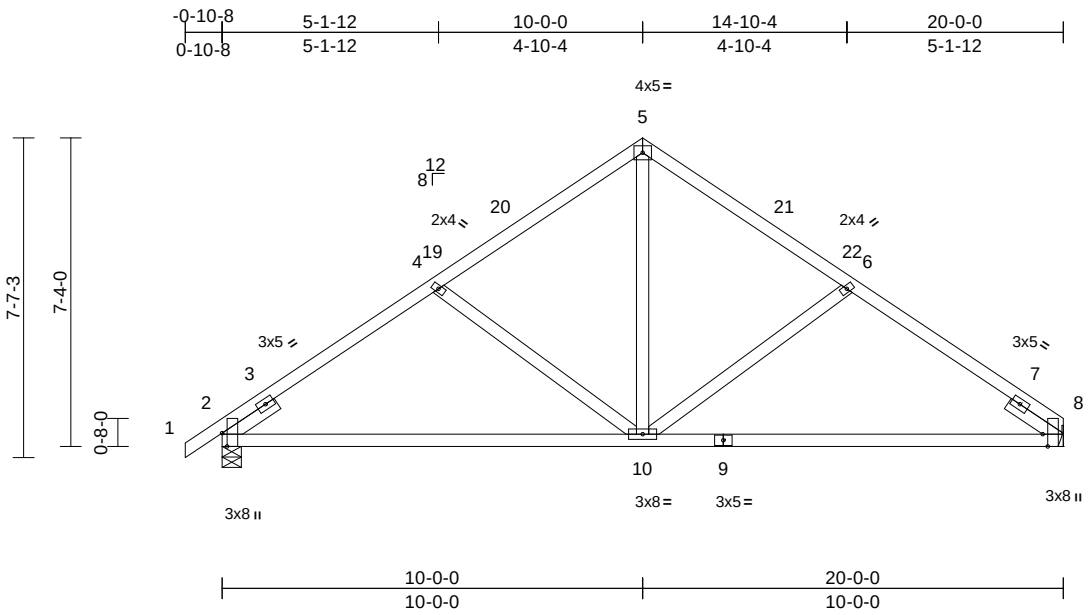
LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	D1A	Common	2	1	I73150306 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1
ID:CsyuH_9hORxEgU9Gof?ehgzMCMp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.14	10-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	10-13	>857	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 100 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 8= Mechanical
Max Horiz 2=166 (LC 11)
Max Uplift 2=-85 (LC 14), 8=-68 (LC 15)
Max Grav 2=900 (LC 21), 8=846 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-1011/149, 4-5=-880/139, 5-6=-880/139, 6-8=-1014/150
BOT CHORD 2-10=-201/902, 8-10=-122/906
WEBS 5-10=-31/598, 6-10=-372/185, 4-10=-367/183

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 17-0-0, Exterior(2E) 17-0-0 to 20-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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 68 lb uplift at joint 8.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.

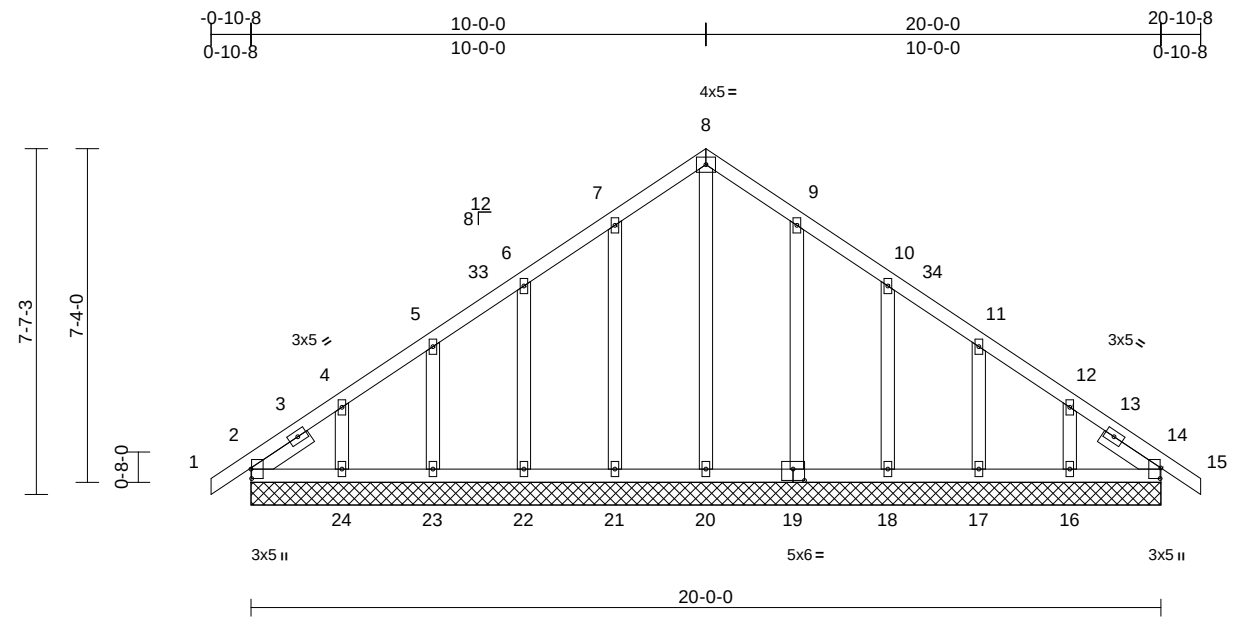
LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	DSE	Common Supported Gable	1	1	I73150307 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 ID:scQGvP9BX7kqzqHzzoTKtTzMCKE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:50.6

Plate Offsets (X, Y): [2:0-2-8,0-0-3], [14:0-2-13,0-0-3], [19:0-3-0,0-3-0]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 125 lb	FT = 20%

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

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

REACTIONS (size) 2=20-0-0, 14=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0
Max Horiz 2=170 (LC 13)
Max Uplift 2=-42 (LC 10), 14=-2 (LC 11), 16=-87 (LC 15), 17=-51 (LC 15), 18=-61 (LC 15), 19=-56 (LC 15), 21=-58 (LC 14), 22=-61 (LC 14), 23=-50 (LC 14), 24=-95 (LC 14)
Max Grav 2=168 (LC 26), 14=150 (LC 22), 16=181 (LC 26), 17=165 (LC 26), 18=223 (LC 22), 19=257 (LC 22), 20=166 (LC 28), 21=259 (LC 21), 22=222 (LC 21), 23=164 (LC 25), 24=190 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-4=-145/128, 4-5=-116/97, 5-6=-105/90, 6-7=-92/125, 7-8=-114/185, 8-9=-114/185, 9-10=-90/127, 10-11=-66/63, 11-12=-74/38, 12-14=-102/65, 14-15=0/29
BOT CHORD 2-24=-56/128, 23-24=-56/128, 22-23=-56/128, 21-22=-56/128, 20-21=-56/128, 18-20=-56/128, 17-18=-54/127, 16-17=-54/127, 14-16=-54/127
WEBS 8-20=-142/29, 7-21=-219/83, 6-22=-182/91, 5-23=-142/85, 4-24=-147/103, 9-19=-217/83, 10-18=-181/91, 11-17=-143/85, 12-16=-147/103

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 7-0-0, Corner(3R) 7-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 17-10-8, Corner(3E) 17-10-8 to 20-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 2, 2 lb uplift at joint 14, 58 lb uplift at joint 21, 61 lb uplift at joint 22, 50 lb uplift at joint 23, 95 lb uplift at joint 24, 56 lb uplift at joint 19, 61 lb uplift at joint 18, 51 lb uplift at joint 17, 87 lb uplift at joint 16, 42 lb uplift at joint 2 and 2 lb uplift at joint 14.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	EGE	Common Supported Gable	1	1	I73150308 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1
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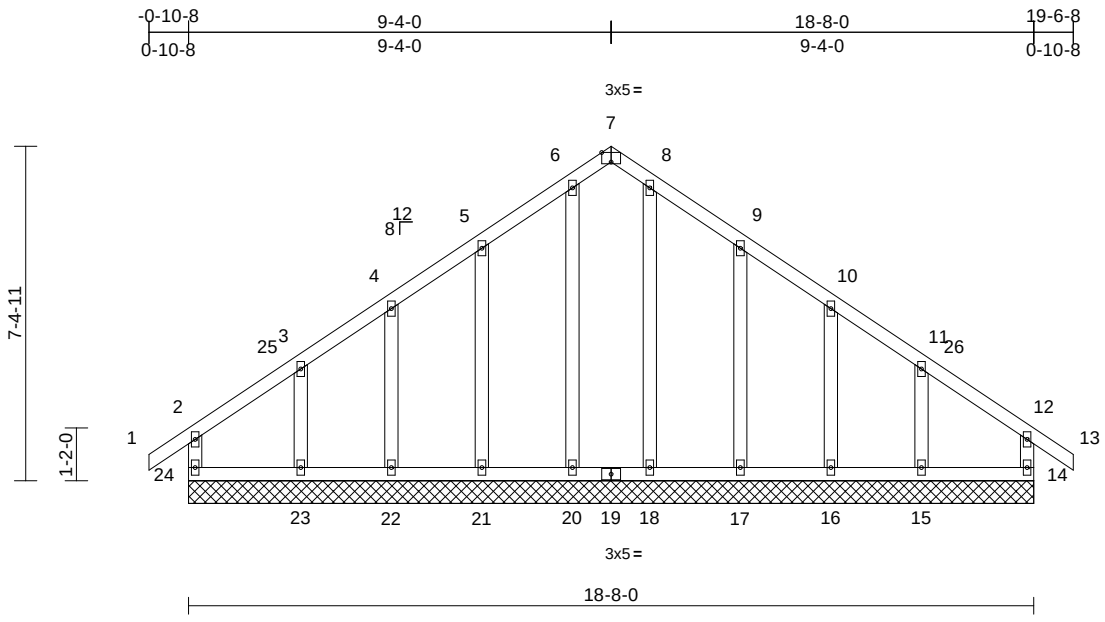


Scale = 1:50.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 118 lb	FT = 20%

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

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

REACTIONS (size) 14=18-8-0, 15=18-8-0, 16=18-8-0, 17=18-8-0, 18=18-8-0, 20=18-8-0, 21=18-8-0, 22=18-8-0, 23=18-8-0, 24=18-8-0
Max Horiz 24=192 (LC 13)
Max Uplift 14=-42 (LC 11), 15=-116 (LC 15), 16=-37 (LC 15), 17=-86 (LC 15), 21=-86 (LC 14), 22=-36 (LC 14), 23=-119 (LC 14), 24=-57 (LC 10)
Max Grav 14=176 (LC 25), 15=228 (LC 26), 16=196 (LC 22), 17=255 (LC 22), 18=204 (LC 22), 20=204 (LC 21), 21=255 (LC 21), 22=196 (LC 21), 23=234 (LC 25), 24=187 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-24=-150/105, 1-2=0/34, 2-3=-119/105, 3-4=-83/109, 4-5=-79/166, 5-6=-118/249, 6-7=-98/198, 7-8=-98/198, 8-9=-117/249, 9-10=-79/166, 10-11=-72/111, 11-12=-103/88, 12-13=0/34, 12-14=-141/96
BOT CHORD 23-24=-89/103, 22-23=-89/103, 21-22=-89/103, 20-21=-89/103, 18-20=-89/103, 17-18=-89/103, 16-17=-89/103, 15-16=-89/103, 14-15=-89/103
WEBS 6-20=-168/3, 8-18=-168/3, 5-21=-214/128, 4-22=-158/79, 3-23=-170/122, 9-17=-214/129, 10-16=-158/76, 11-15=-162/129

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-4-0, Corner(3R) 6-4-0 to 12-2-4, Exterior(2N) 12-2-4 to 16-6-8, Corner(3E) 16-6-8 to 19-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 24, 42 lb uplift at joint 14, 86 lb uplift at joint 21, 36 lb uplift at joint 22, 119 lb uplift at joint 23, 86 lb uplift at joint 17, 37 lb uplift at joint 16 and 116 lb uplift at joint 15.

LOAD CASE(S) Standard

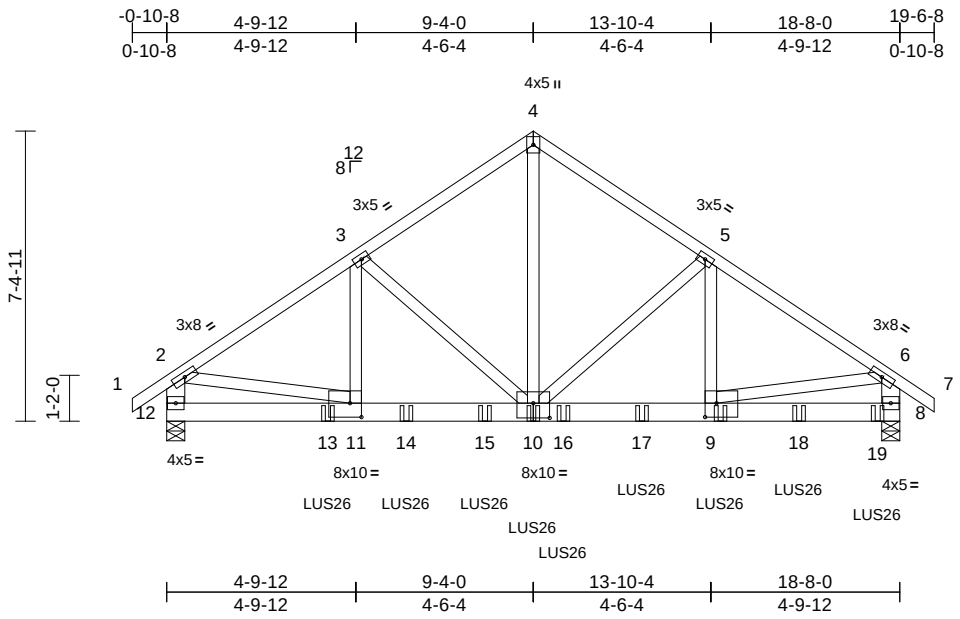
May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	EGR	Common Girder	1	**2**	I73150309 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1

ID:Ws_ekb?PSj8j0DmtCOLcX6zMBu1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.7

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

Loading	(psf)	**Spacing**	2-0-0	**CSI**		**DEFL**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	-0.07	10-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.12	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.02	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 267 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 12-2,8-6:2x6 SP No.2

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

REACTIONS (size) 8=0-5-8, 12=0-5-8
Max Horiz 12=191 (LC 11)
Max Uplift 8=-664 (LC 13), 12=-617 (LC 12)
Max Grav 8=4336 (LC 20), 12=3771 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-4896/800, 3-4=-3810/656, 4-5=-3810/656, 5-6=-4640/715, 6-7=0/37, 2-12=-3601/610, 6-8=-3377/544
BOT CHORD 11-12=-227/576, 9-11=-665/4004, 8-9=-123/635
WEBS 4-10=-628/3784, 5-10=-1025/243, 5-9=-115/936, 3-10=-1250/337, 3-11=-224/1134, 2-11=-518/3646, 6-9=-432/3239

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, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12 and 8. This connection is for uplift only and does not consider lateral forces.
11) Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent at 4-1-4 from the left end to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-1-4 from the left end to 18-1-4 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.
14) LGT2 Hurricane ties must have two studs in line below the truss.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-4=-60, 4-6=-60, 6-7=-60, 8-12=-20
Concentrated Loads (lb)
Vert: 10=-596 (B), 9=-613 (B), 13=-1092 (B), 14=-834 (B), 15=-815 (B), 16=-613 (B), 17=-613 (B), 18=-614 (B), 19=-621 (B)

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP	
25040099-01	F	Common	2	1	Job Reference (optional)	I73150310

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1
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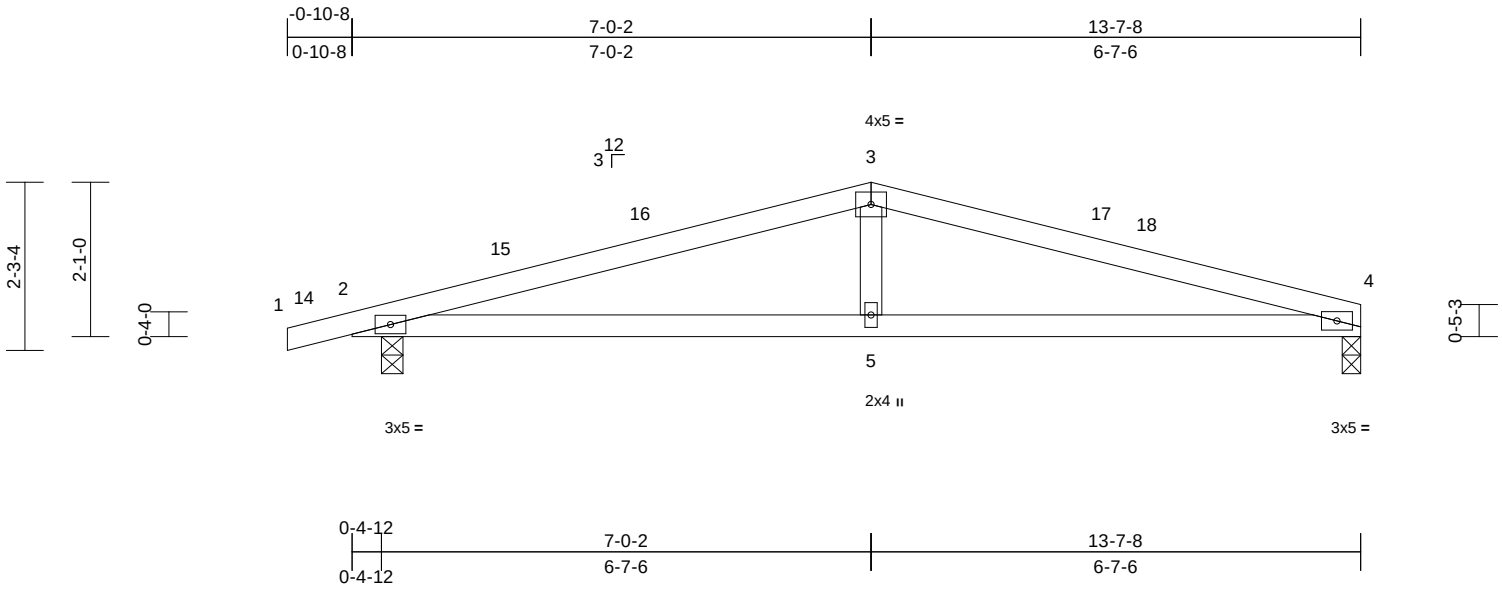

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.11	5-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.17	5-8	>980	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 45 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-5-14 oc bracing.

REACTIONS (size) 2=0-3-8, 4=0-3-0
Max Horiz 2=37 (LC 14)
Max Uplift 2=-223 (LC 10), 4=-176 (LC 11)
Max Grav 2=719 (LC 21), 4=605 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-1172/839, 3-4=-1179/836
BOT CHORD 2-5=-751/1095, 4-5=-751/1095
WEBS 3-5=-127/283

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-0-2, Exterior(2R) 4-0-2 to 10-0-2, Interior (1) 10-0-2 to 10-7-8, Exterior(2E) 10-7-8 to 13-7-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	FGE	Common Supported Gable	1	1	I73150311 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1
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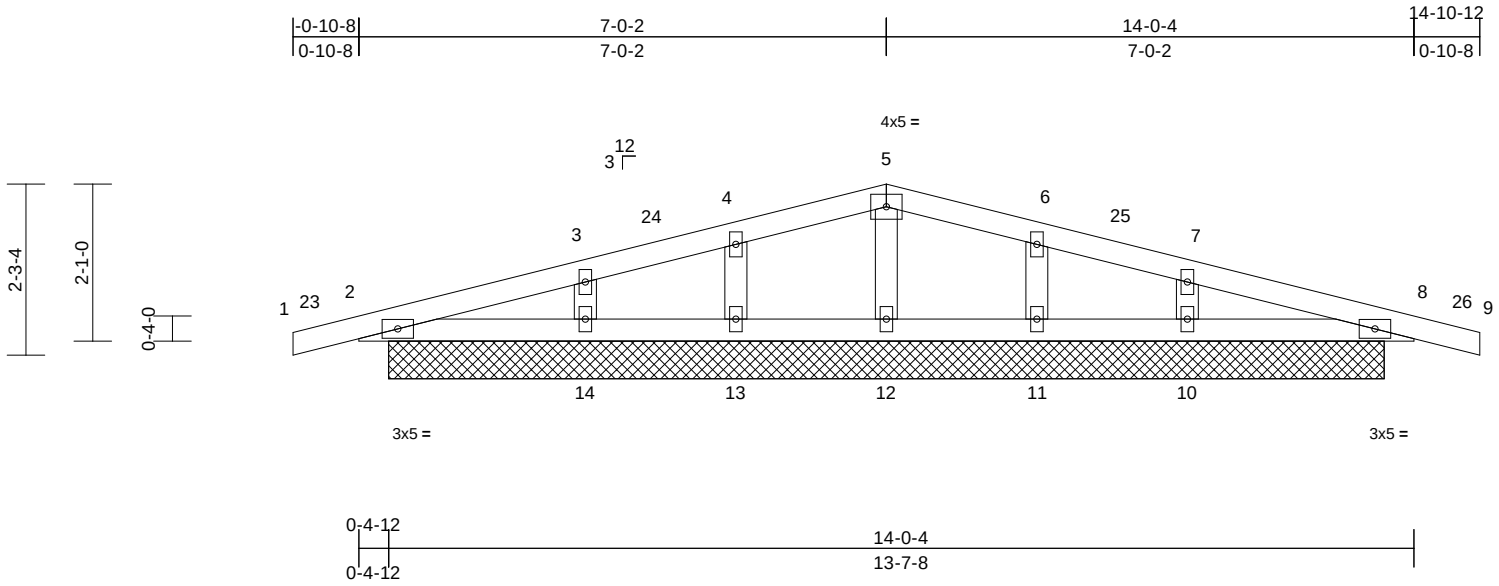

Scale = 1:30.6

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	0.16	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 52 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) 2=13-2-12, 8=13-2-12, 10=13-2-12, 11=13-2-12, 12=13-2-12, 13=13-2-12, 14=13-2-12
Max Horiz 2=31 (LC 14)
Max Uplift 2=-74 (LC 10), 8=-62 (LC 11), 10=-32 (LC 15), 11=-36 (LC 11), 12=-2 (LC 10), 13=-42 (LC 10), 14=-16 (LC 14)
Max Grav 2=334 (LC 21), 8=245 (LC 22), 10=246 (LC 22), 11=212 (LC 22), 12=164 (LC 21), 13=246 (LC 21), 14=122 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-99/144, 3-4=-16/69, 4-5=-24/63, 5-6=-24/53, 6-7=-16/52, 7-8=-90/114, 8-9=0/16
BOT CHORD 2-14=-125/104, 13-14=-44/74, 12-13=-44/74, 11-12=-44/74, 10-11=-44/74, 8-10=-109/111
WEBS 5-12=-126/82, 4-13=-194/133, 3-14=-126/72, 6-11=-179/126, 7-10=-186/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-0-2, Corner(3R) 4-0-2 to 10-0-2, Exterior(2N) 10-0-2 to 11-10-12, Corner(3E) 11-10-12 to 14-10-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
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) N/A
12) Non Standard bearing condition. Review required.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	GGE	Common Supported Gable	1	1	I73150312 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:10 Page: 1
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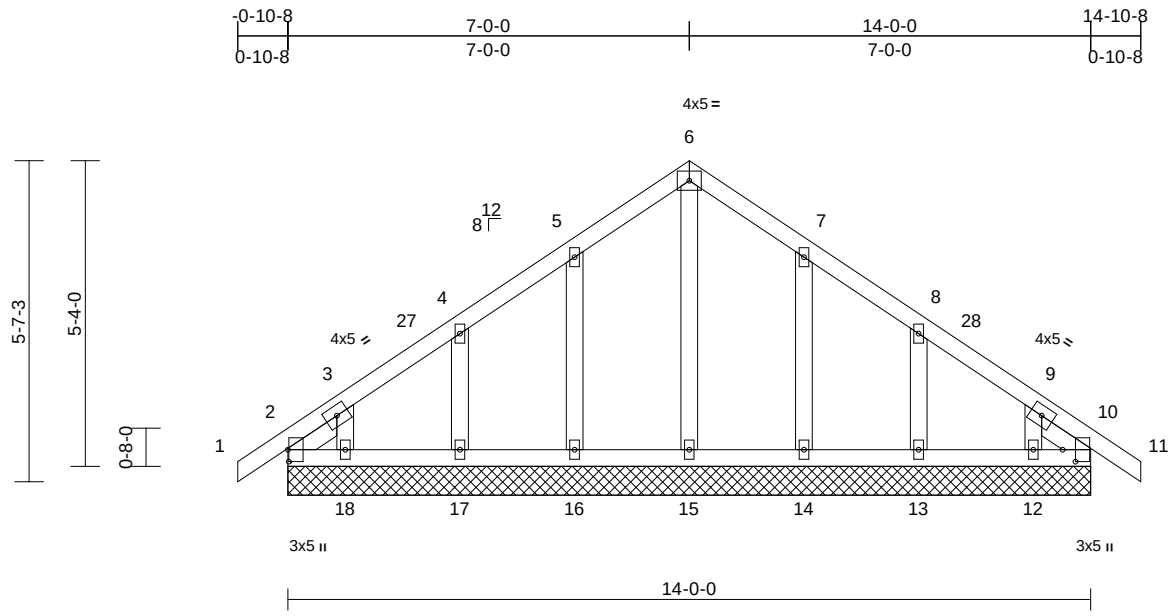

Scale = 1:40.2

Plate Offsets (X, Y): [2:0-2-8,0-0-3], [10:0-2-8,0-2-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 79 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-0-8, Right 2x4 SP No.3 -- 1-0-8

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

REACTIONS (size) 2=14-0-0, 10=14-0-0, 12=14-0-0, 13=14-0-0, 14=14-0-0, 15=14-0-0, 16=14-0-0, 17=14-0-0, 18=14-0-0
Max Horiz 2=-123 (LC 12)
Max Uplift 2=-46 (LC 10), 10=-12 (LC 11), 12=-68 (LC 15), 13=-60 (LC 15), 14=-60 (LC 15), 16=-61 (LC 14), 17=-59 (LC 14), 18=-77 (LC 14)
Max Grav 2=130 (LC 26), 10=114 (LC 22), 12=128 (LC 26), 13=227 (LC 22), 14=259 (LC 22), 15=146 (LC 28), 16=259 (LC 21), 17=227 (LC 21), 18=138 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/29, 2-3=-69/74, 3-4=-93/76, 4-5=-82/80, 5-6=-91/152, 6-7=-91/152, 7-8=-75/80, 8-9=-61/34, 9-10=-67/56, 10-11=0/29
BOT CHORD 2-18=-39/118, 17-18=-39/118, 16-17=-39/118, 15-16=-39/118, 14-15=-39/118, 13-14=-39/118, 12-13=-39/118, 10-12=-39/118
WEBS 6-15=-106/0, 5-16=-219/106, 4-17=-186/119, 3-18=-114/116, 7-14=-219/106, 8-13=-186/119, 9-12=-114/116

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-0-0, Corner(3R) 4-0-0 to 10-0-0, Exterior(2N) 10-0-0 to 11-10-8, Corner(3E) 11-10-8 to 14-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 2, 12 lb uplift at joint 10, 61 lb uplift at joint 16, 59 lb uplift at joint 17, 77 lb uplift at joint 18, 60 lb uplift at joint 14, 60 lb uplift at joint 13, 68 lb uplift at joint 12, 46 lb uplift at joint 2 and 12 lb uplift at joint 10.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	H	Common	5	1	I73150313 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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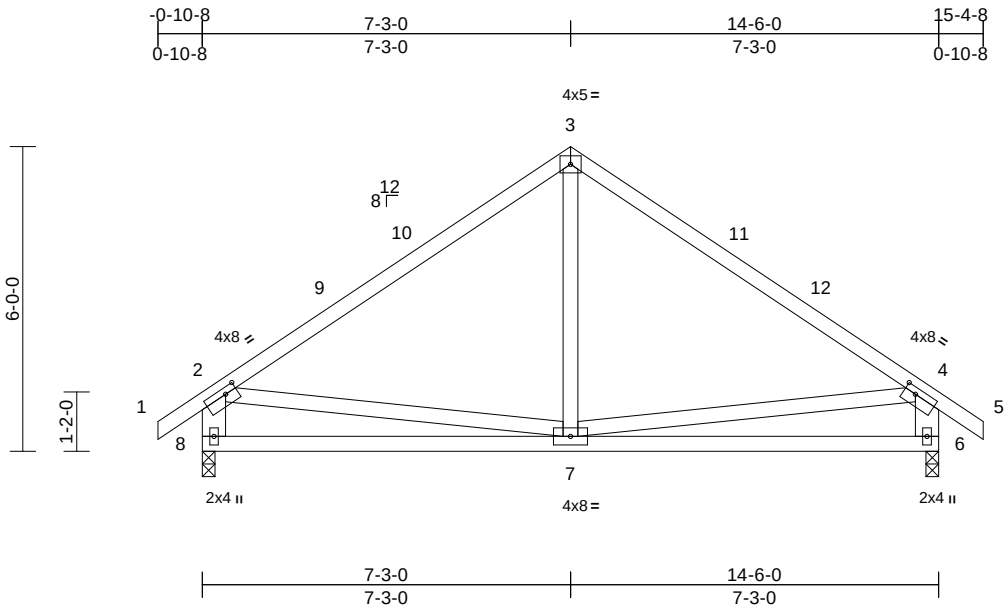

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Plate Offsets (X, Y): [2:0-2-12,0-1-8], [4:0-2-12,0-1-8]

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	0.97	Vert(LL)	-0.05	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.10	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 83 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-2,6-4:2x6 SP No.2

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

REACTIONS (size) 6=0-3-0, 8=0-3-0
Max Horiz 8=-161 (LC 12)
Max Uplift 6=-66 (LC 15), 8=-66 (LC 14)
Max Grav 6=706 (LC 22), 8=706 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-658/274, 3-4=-658/274, 4-5=0/37, 2-8=-644/259, 4-6=-644/255
BOT CHORD 7-8=-237/445, 6-7=-161/445
WEBS 3-7=-128/277, 2-7=-145/255, 4-7=-150/255

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-3-0, Exterior(2R) 4-3-0 to 10-3-0, Interior (1) 10-3-0 to 12-4-8, Exterior(2E) 12-4-8 to 15-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	HGE	Common Supported Gable	1	1	I73150314 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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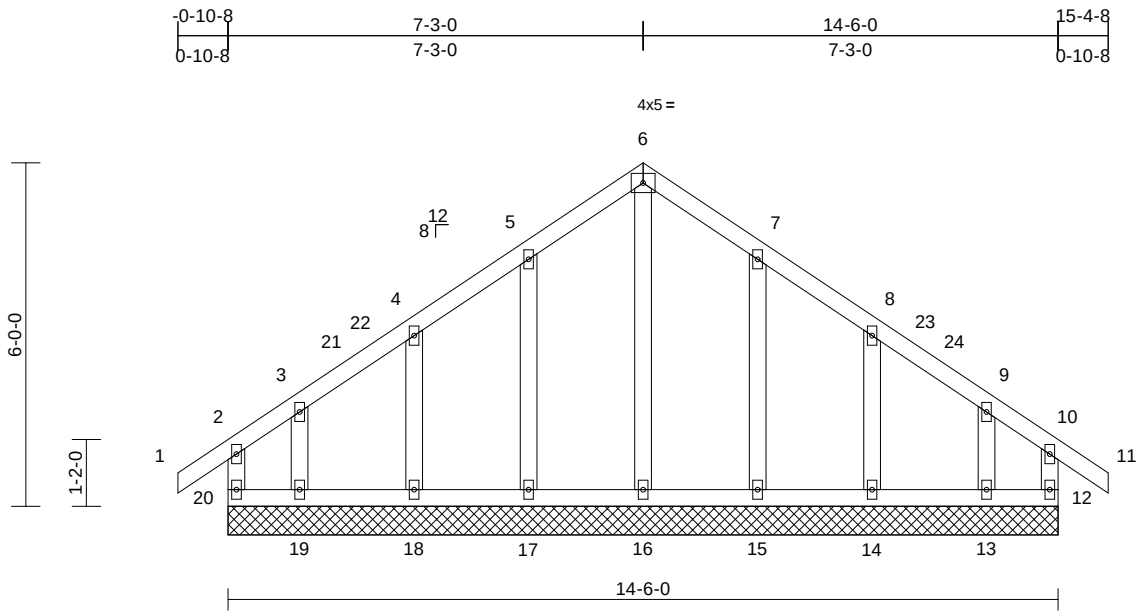

Scale = 1:40.2

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 86 lb	FT = 20%

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

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

REACTIONS (size) 12=14-6-0, 13=14-6-0, 14=14-6-0, 15=14-6-0, 16=14-6-0, 17=14-6-0, 18=14-6-0, 19=14-6-0, 20=14-6-0
Max Horiz 20=-160 (LC 12)
Max Uplift 12=-74 (LC 11), 13=-92 (LC 15), 14=-56 (LC 15), 15=-59 (LC 15), 17=-59 (LC 14), 18=-55 (LC 14), 19=-98 (LC 14), 20=-95 (LC 10)
Max Grav 12=142 (LC 25), 13=171 (LC 26), 14=229 (LC 22), 15=259 (LC 22), 16=180 (LC 28), 17=259 (LC 21), 18=229 (LC 21), 19=182 (LC 25), 20=159 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-20=-124/107, 1-2=0/34, 2-3=-97/98, 3-4=-64/95, 4-5=-60/173, 5-6=-96/242, 6-7=-96/242, 7-8=-60/173, 8-9=-52/96, 9-10=-77/80, 10-11=0/34, 10-12=-112/92
BOT CHORD 19-20=-78/90, 18-19=-78/90, 17-18=-78/90, 16-17=-78/90, 15-16=-78/90, 14-15=-78/90, 13-14=-78/90, 12-13=-78/90
WEBS 6-16=-193/16, 5-17=-219/100, 4-18=-188/116, 3-19=-123/89, 7-15=-219/101, 8-14=-188/114, 9-13=-113/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-3-0, Corner(3R) 4-3-0 to 10-3-0, Exterior(2N) 10-3-0 to 12-4-8, Corner(3E) 12-4-8 to 15-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 20, 74 lb uplift at joint 12, 59 lb uplift at joint 17, 55 lb uplift at joint 18, 98 lb uplift at joint 19, 59 lb uplift at joint 15, 56 lb uplift at joint 14 and 92 lb uplift at joint 13.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	I	Monopitch	5	1	I73150315 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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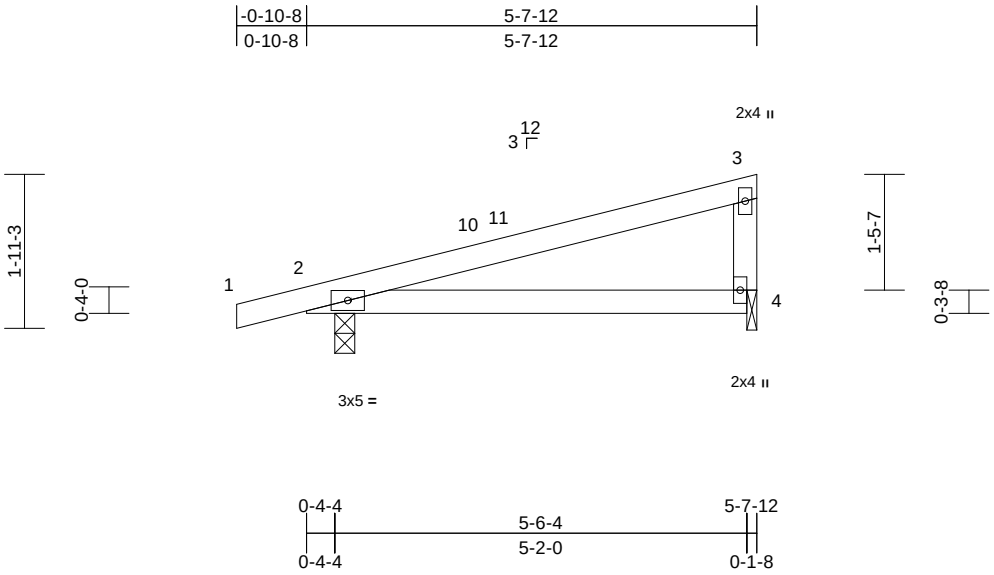

Scale = 1:28.9

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	0.50	Vert(LL)	0.07	4-9	>990	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.08	4-9	>782	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 20 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-1-8
Max Horiz 2=58 (LC 13)
Max Uplift 2=-123 (LC 10), 4=-75 (LC 10)
Max Grav 2=395 (LC 21), 4=258 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-101/118, 3-4=-183/150
BOT CHORD 2-4=-118/127

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 2-6-0, Exterior(2E) 2-6-0 to 5-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: Joint 4 SP No.3 .
8) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	ISE	Monopitch Structural Gable	1	1	I73150316 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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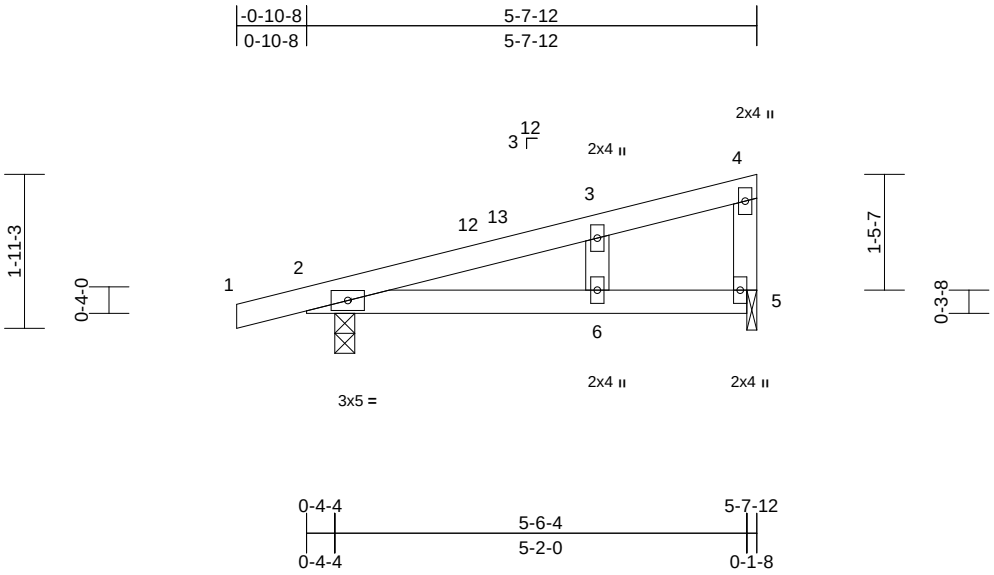

Scale = 1:28.9

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	0.38	Vert(LL)	0.08	6-11	>879	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.10	6-11	>670	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 5=0-1-8
Max Horiz 2=58 (LC 13)
Max Uplift 2=-123 (LC 10), 5=-75 (LC 10)
Max Grav 2=395 (LC 21), 5=258 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-101/118, 3-4=-25/40, 4-5=-149/121
BOT CHORD 2-6=-118/127, 5-6=-18/27
WEBS 3-6=-83/70

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 2-6-0, Exterior(2E) 2-6-0 to 5-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Bearings are assumed to be: Joint 5 SP No.3 .
10) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	J	Jack-Open	23	1	I73150317 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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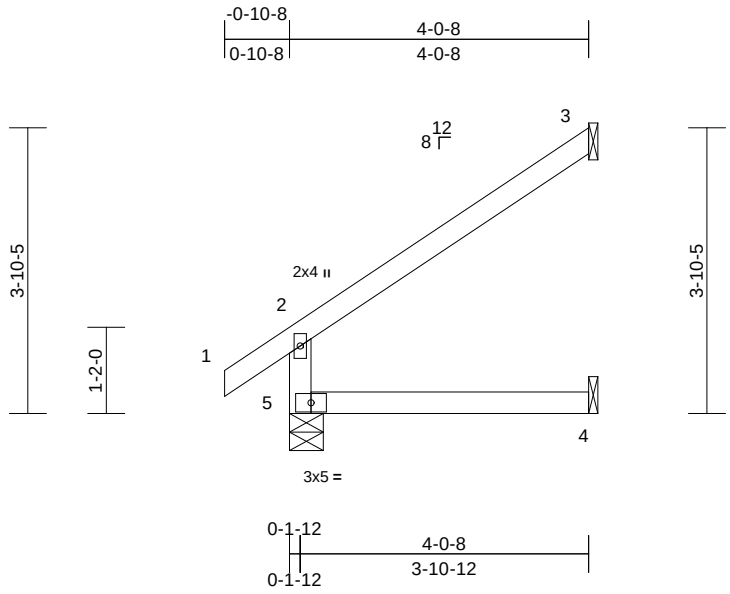

Scale = 1:31.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.02	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 16 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=103 (LC 14)
Max Uplift 3=-79 (LC 14)
Max Grav 3=169 (LC 21), 4=73 (LC 7), 5=348 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-320/95, 1-2=0/57, 2-3=-121/72
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: , Joint 5 User Defined .
8) Refer to girder(s) for truss to truss connections.
9) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 3.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	KGR	Half Hip Girder	1	2	I73150318 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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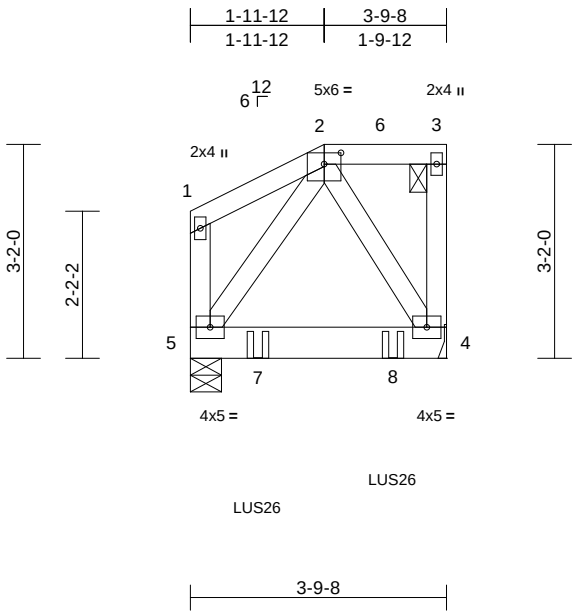

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Plate Offsets (X, Y): [2:0-3-0,0-2-0]

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	0.05	Vert(LL)	-0.01	4-5	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.03	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 59 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-1-12 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-5-8
Max Horiz 5=99 (LC 9)
Max Uplift 4=-138 (LC 9), 5=-98 (LC 12)
Max Grav 4=1041 (LC 32), 5=946 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-44/36, 2-3=-36/27, 3-4=-74/21, 1-5=-81/25
BOT CHORD 4-5=-59/42
WEBS 2-4=-66/65, 2-5=-79/43

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
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 138 lb uplift at joint 4.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 3-4-4 from the left end to 5-4-4 to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-3=-60, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-827 (B), 8=-829 (B)

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	PB1	Piggyback	9	1	I73150319 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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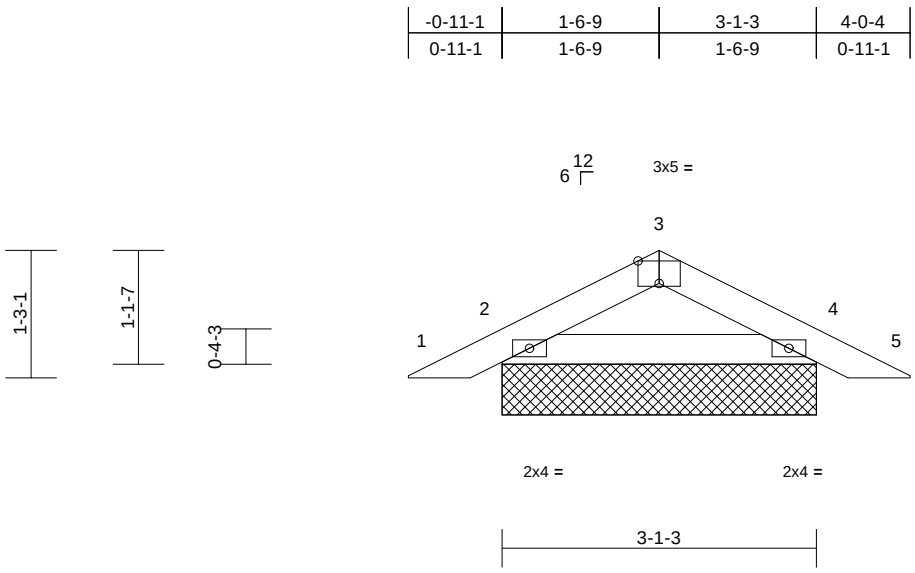


Scale = 1:22.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

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

REACTIONS (size) 2=3-1-3, 4=3-1-3
Max Horiz 2=17 (LC 18)
Max Uplift 2=-24 (LC 14), 4=-19 (LC 15)
Max Grav 2=196 (LC 21), 4=205 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-124/61, 3-4=-125/59, 4-5=0/23
BOT CHORD 2-4=-1/106

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
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) N/A
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

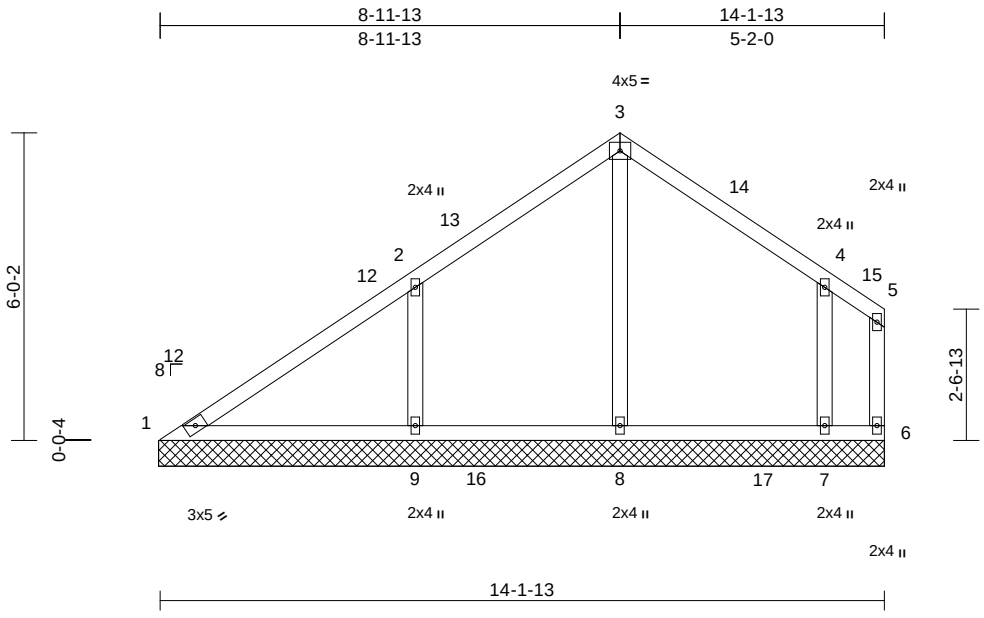
May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V1	Valley	1	1	I73150320 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 ID:?rB5QY9yygQK2QQt7KhNiVzMDAT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:45

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)	20.0	Lumber DOL	1.15	BC	0.24	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 65 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=14-2-3, 6=14-2-3, 7=14-2-3, 8=14-2-3, 9=14-2-3
Max Horiz 1=165 (LC 11)
Max Uplift 1=-12 (LC 10), 6=-134 (LC 6), 7=-131 (LC 15), 9=-156 (LC 14)
Max Grav 1=194 (LC 25), 6=46 (LC 15), 7=501 (LC 21), 8=413 (LC 24), 9=559 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-295/177, 2-3=-128/147, 3-4=-118/146, 4-5=-44/115, 5-6=-52/111
BOT CHORD	1-9=-48/258, 8-9=-38/49, 7-8=-38/49, 6-7=-38/49
WEBS	3-8=-246/34, 2-9=-427/190, 4-7=-419/172

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-0-3, Exterior(2R) 6-0-3 to 11-0-7, Exterior(2E) 11-0-7 to 14-0-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 6, 12 lb uplift at joint 1, 156 lb uplift at joint 9 and 131 lb uplift at joint 7.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V2	Valley	1	1	I73150321 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:11 Page: 1
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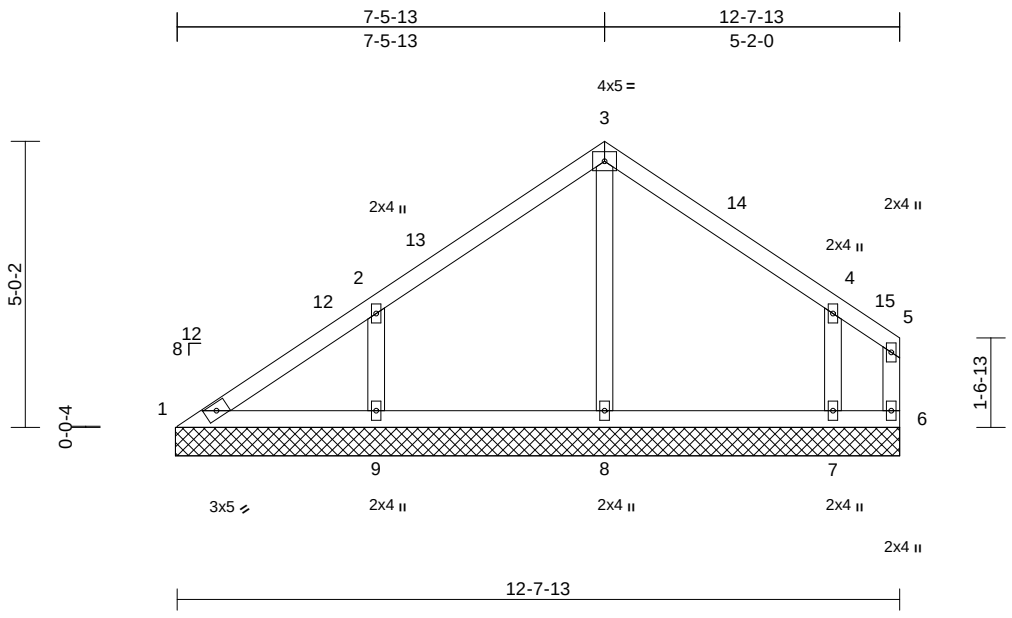

Scale = 1:40.4

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	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 54 lb	FT = 20%

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

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

REACTIONS (size) 1=12-8-3, 6=12-8-3, 7=12-8-3, 8=12-8-3, 9=12-8-3
Max Horiz 1=130 (LC 11)
Max Uplift 1=-18 (LC 10), 6=-120 (LC 21), 7=-139 (LC 15), 9=-126 (LC 14)
Max Grav 1=124 (LC 25), 6=54 (LC 15), 7=488 (LC 21), 8=332 (LC 21), 9=476 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-179/138, 2-3=-125/123, 3-4=-119/124, 4-5=-46/113, 5-6=-55/110
BOT CHORD 1-9=-31/138, 8-9=-31/36, 7-8=-31/36, 6-7=-31/36
WEBS 3-8=-252/19, 2-9=-389/167, 4-7=-418/175

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-6-3, Exterior(2R) 4-6-3 to 9-6-7, Exterior(2E) 9-6-7 to 12-6-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 6, 18 lb uplift at joint 1, 126 lb uplift at joint 9 and 139 lb uplift at joint 7.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V3	Valley	1	1	I73150322 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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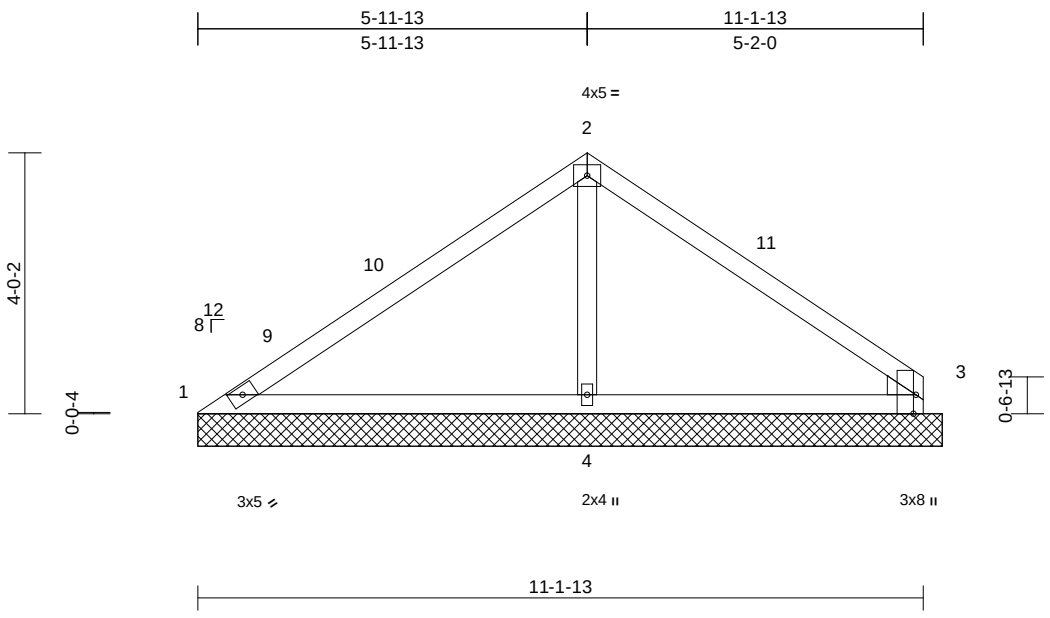

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Plate Offsets (X, Y): [3:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.59	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.24	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 42 lb	FT = 20%

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

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

REACTIONS (lb/size) 1=99/11-5-5, 3=65/11-5-5, 4=751/11-5-5
Max Horiz 1=90 (LC 11)
Max Uplift 1=-20 (LC 15), 3=-113 (LC 20), 4=-141 (LC 14)
Max Grav 1=113 (LC 25), 3=238 (LC 21), 4=984 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-139/511, 2-3=-178/421
BOT CHORD 1-4=-304/115, 3-4=-304/187
WEBS 2-4=-768/192

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 8-5-11, Exterior(2E) 8-5-11 to 11-5-11 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 3 and 20 lb uplift at joint 1.
11) One RT4 MiTek connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 3.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V4	Valley	1	1	I73150323 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:12 Page: 1
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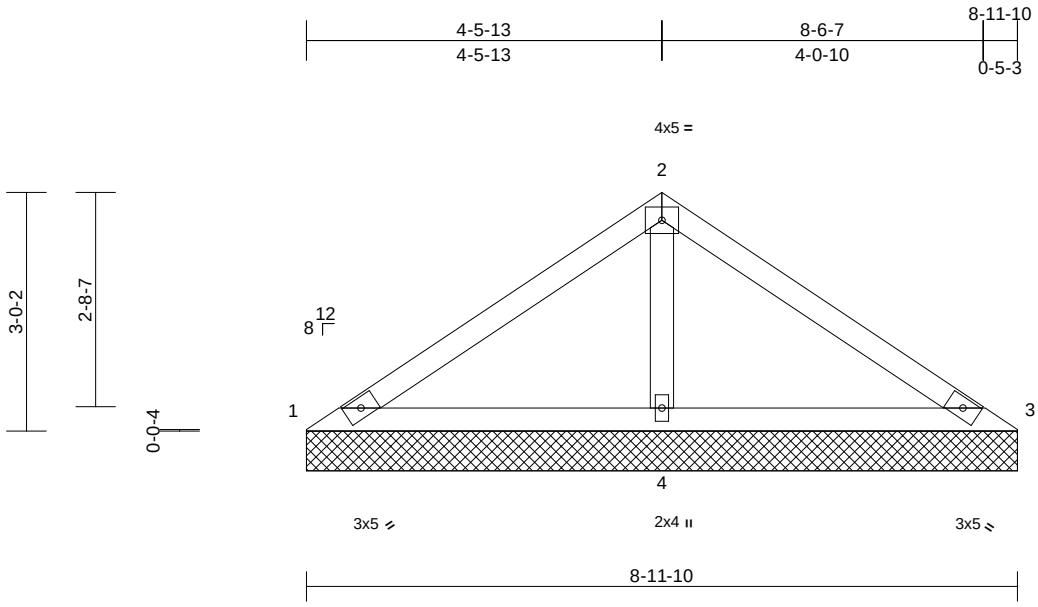

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 31 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 8-11-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=8-11-10, 3=8-11-10, 4=8-11-10
Max Horiz 1=-67 (LC 10)
Max Uplift 1=-48 (LC 21), 3=-48 (LC 20), 4=-81 (LC 14)
Max Grav 1=103 (LC 20), 3=103 (LC 21), 4=712 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-115/359, 2-3=-115/359
BOT CHORD 1-4=-294/167, 3-4=-294/167
WEBS 2-4=-574/216

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 6-0-0, Exterior(2E) 6-0-0 to 9-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 1, 48 lb uplift at joint 3 and 81 lb uplift at joint 4.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V5	Valley	1	1	I73150324 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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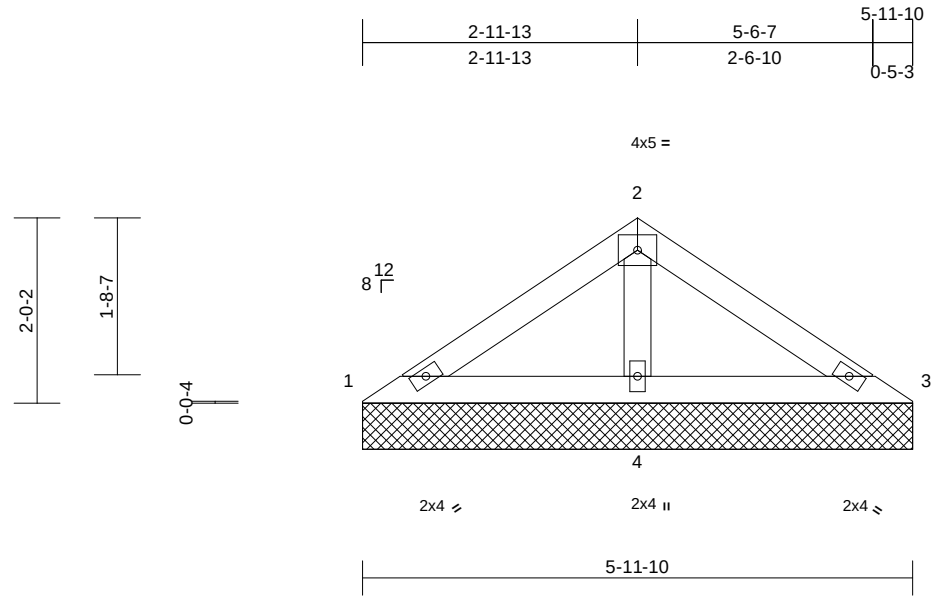

Scale = 1:25

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 20 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-11-10, 3=5-11-10, 4=5-11-10
Max Horiz 1=43 (LC 13)
Max Uplift 1=-3 (LC 14), 3=-11 (LC 15), 4=-36 (LC 14)
Max Grav 1=97 (LC 20), 3=97 (LC 21), 4=385 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-95/159, 2-3=-95/159
BOT CHORD 1-4=-136/103, 3-4=-136/103
WEBS 2-4=-292/129

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 1, 11 lb uplift at joint 3 and 36 lb uplift at joint 4.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V6	Valley	1	1	I73150325 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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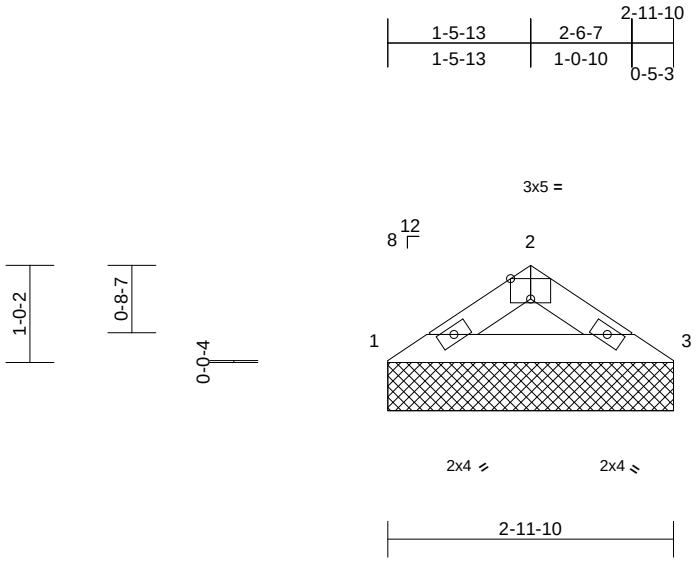

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Plate Offsets (X, Y): [2:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

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

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

REACTIONS (size) 1=2-11-10, 3=2-11-10
Max Horiz 1=-20 (LC 10)
Max Uplift 1=-11 (LC 14), 3=-11 (LC 15)
Max Grav 1=133 (LC 20), 3=133 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-193/70, 2-3=-193/70
BOT CHORD 1-3=-45/152

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1 and 11 lb uplift at joint 3.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V11	Valley	1	1	I73150326 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:12 Page: 1
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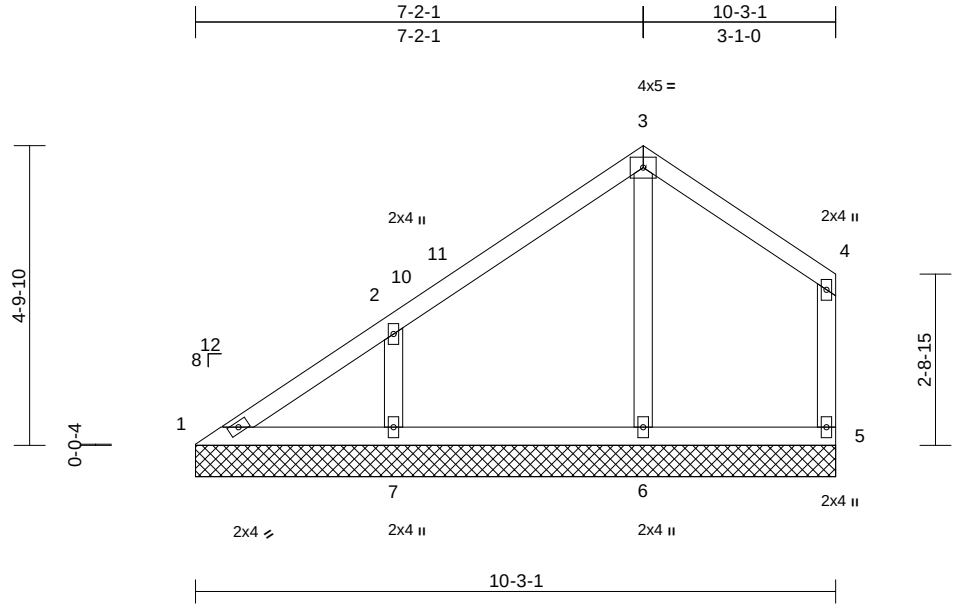

Scale = 1:36.9

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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	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	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 45 lb	FT = 20%

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

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

REACTIONS (size) 1=10-3-1, 5=10-3-1, 6=10-3-1, 7=10-3-1
Max Horiz 1=139 (LC 11)
Max Uplift 1=-18 (LC 10), 5=-38 (LC 15), 7=-119 (LC 14)
Max Grav 1=122 (LC 25), 5=181 (LC 21), 6=296 (LC 20), 7=403 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-174/121, 2-3=-133/110, 3-4=-99/117, 4-5=-156/100
BOT CHORD 1-7=-33/144, 6-7=-31/44, 5-6=-31/44
WEBS 3-6=-236/47, 2-7=-322/191

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-2-7, Interior (1) 3-2-7 to 4-2-7, Exterior(2R) 4-2-7 to 7-2-7, Exterior(2E) 7-2-7 to 10-1-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 5, 18 lb uplift at joint 1 and 119 lb uplift at joint 7.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V12	Valley	1	1	I73150327 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:12 Page: 1
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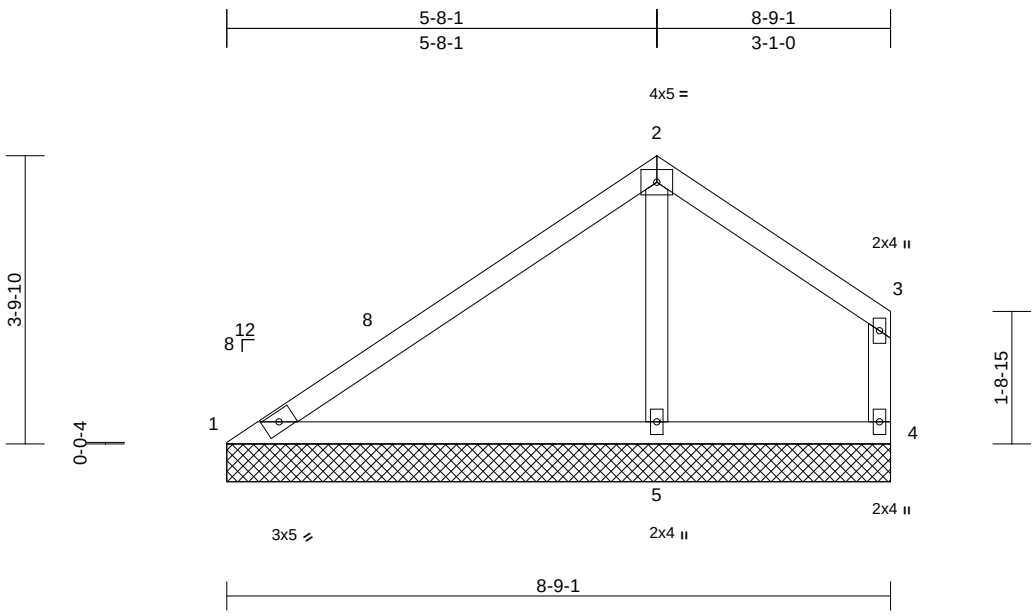

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.62	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=8-9-1, 4=8-9-1, 5=8-9-1
Max Horiz 1=104 (LC 11)
Max Uplift 1=-26 (LC 14), 4=-39 (LC 15), 5=-23 (LC 14)
Max Grav 1=238 (LC 20), 4=149 (LC 21), 5=452 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-334/108, 2-3=-66/97, 3-4=-148/99
BOT CHORD	1-5=-105/314, 4-5=-19/29
WEBS	2-5=-265/40

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 5-8-7, Exterior(2E) 5-8-7 to 8-7-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 4, 26 lb uplift at joint 1 and 23 lb uplift at joint 5.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V13	Valley	1	1	I73150328 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:12 Page: 1
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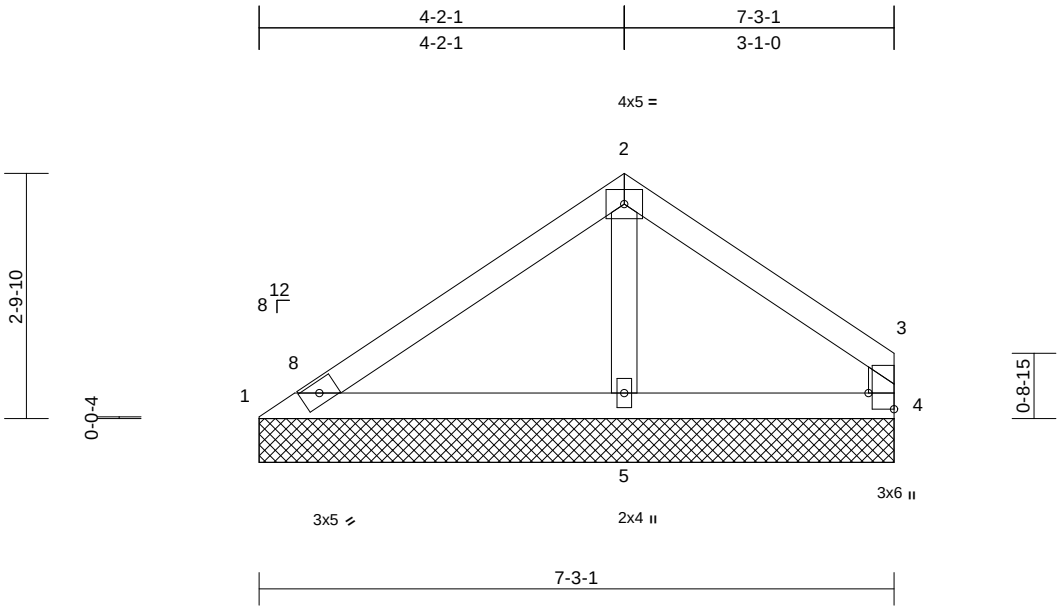

Scale = 1:26.3

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	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
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 Structural wood sheathing directly applied or 7-3-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-3-1, 4=7-3-1, 5=7-3-1
Max Horiz 1=68 (LC 11)
Max Uplift 1=-24 (LC 14), 4=-43 (LC 15), 5=-9 (LC 14)
Max Grav 1=196 (LC 20), 4=157 (LC 21), 5=354 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-274/111, 2-3=-64/80, 3-4=-144/97
BOT CHORD 1-5=-98/226, 4-5=-7/10
WEBS 2-5=-202/38

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 4-2-7, Exterior(2E) 4-2-7 to 7-1-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 4, 24 lb uplift at joint 1 and 9 lb uplift at joint 5.

LOAD CASE(S) Standard

May 2,2025

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

Job	Truss	Truss Type	Qty	Ply	1001 Serenity-Roof-B329 B RH CP
25040099-01	V14	Valley	1	1	I73150329 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Wed Apr 30 15:21:12 Page: 1
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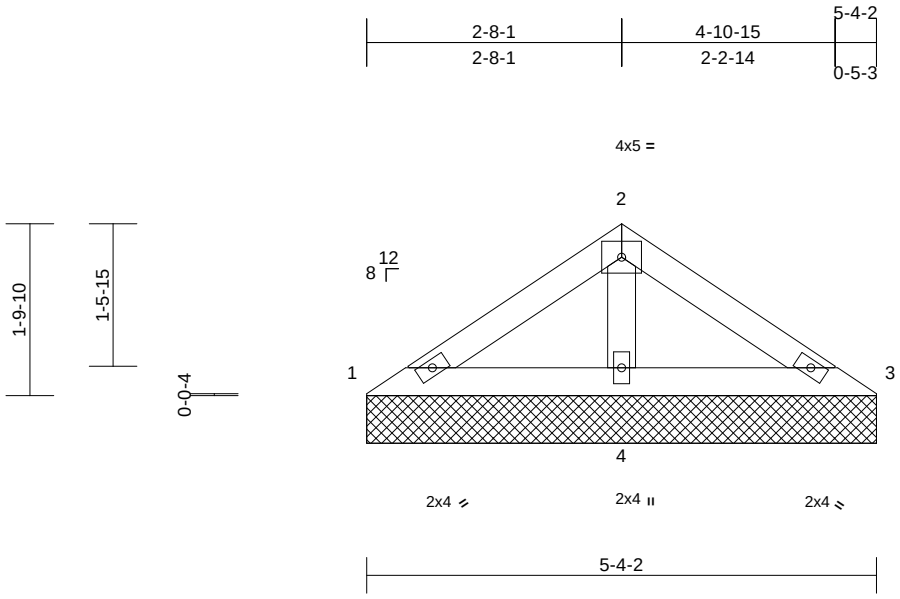


Scale = 1:24.2

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-4-2, 3=5-4-2, 4=5-4-2
Max Horiz 1=-38 (LC 12)
Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-30 (LC 14)
Max Grav 1=91 (LC 20), 3=91 (LC 21), 4=328 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-90/128, 2-3=-90/128
BOT CHORD 1-4=-110/87, 3-4=-110/87
WEBS 2-4=-240/106

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1, 11 lb uplift at joint 3 and 30 lb uplift at joint 4.

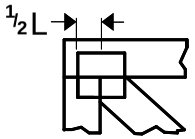
LOAD CASE(S) Standard

May 2,2025

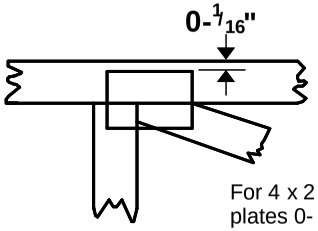
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

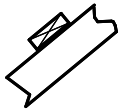
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

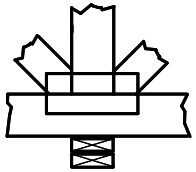
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

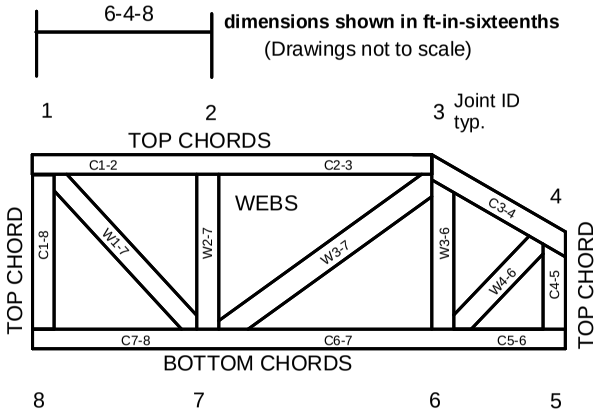


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.