ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 24060145-01
175 Serenity-Roof-B326 B CP TMB BNS GLH

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: I66625032 thru I66625073

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844

July 2,2024

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	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A01	Attic Supported Gable	1	1	I66625032 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:50 Page: 1
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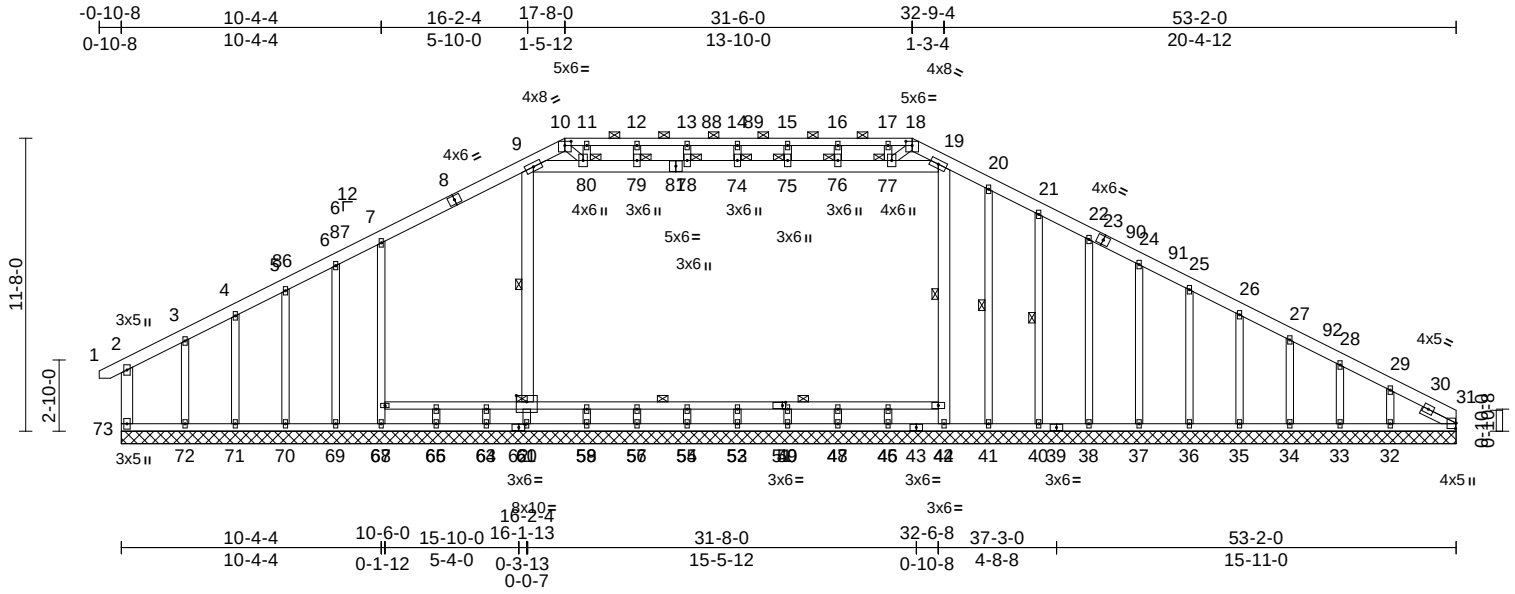

Scale = 1:91.8

Plate Offsets (X, Y): [10:0-3-0,0-2-0], [18:0-3-0,0-2-0], [31:0-2-10,0-0-5], [51:0-1-8,0-1-8], [60:0-5-0,0-3-0], [62:0-2-13,0-1-8]

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	0.58	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.02	31	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 459 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2 *Except* 10-18:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 73-2,9-81,9-60:2x6 SP No.2, 81-19:2x6 SP 2400F 2.0E
OTHERS 2x4 SP No.3 *Except* 42-19:2x6 SP No.2
SLIDER 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, and 2-0-0 oc purlins (3-7-1 max.): 10-18.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 58-60,56-58,54-56,53-54,49-53,47-49,45-47, 44-45.
WEBS 1 Row at midpt 19-42, 20-41, 21-40, 9-60
JOINTS 1 Brace at Jt(s): 74, 75, 76, 77, 78, 79, 80

REACTIONS (size) 31=53-2-0, 32=53-2-0, 33=53-2-0, 34=53-2-0, 35=53-2-0, 36=53-2-0, 37=53-2-0, 38=53-2-0, 40=53-2-0, 41=53-2-0, 42=53-2-0, 46=53-2-0, 48=53-2-0, 50=53-2-0, 52=53-2-0, 55=53-2-0, 57=53-2-0, 59=53-2-0, 61=53-2-0, 64=53-2-0, 66=53-2-0, 68=53-2-0, 69=53-2-0, 70=53-2-0, 71=53-2-0, 72=53-2-0, 73=53-2-0, 82=53-2-0
Max Horiz 73=-190 (LC 12)
Max Uplift 31=-53 (LC 11), 32=-104 (LC 15), 33=-28 (LC 15), 34=-47 (LC 15), 35=-43 (LC 15), 36=-44 (LC 15), 37=-43 (LC 15), 38=-45 (LC 15), 40=-45 (LC 15), 41=-121 (LC 22), 42=-183 (LC 10), 61=-98 (LC 11), 68=-123 (LC 14), 69=-10 (LC 14), 70=-43 (LC 14), 71=-35 (LC 14), 72=-92 (LC 14), 73=-56 (LC 15), 82=-53 (LC 11)
Max Grav 31=163 (LC 29), 32=246 (LC 54), 33=155 (LC 6), 34=173 (LC 54), 35=170 (LC 6), 36=180 (LC 40), 37=222 (LC 46), 38=234 (LC 46), 40=223 (LC 46), 41=160 (LC 54), 42=950 (LC 41), 46=185 (LC 7), 48=153 (LC 21), 50=162 (LC 7), 52=159 (LC 21), 55=162 (LC 7), 57=153 (LC 21), 59=185 (LC 7), 61=856 (LC 41), 64=203 (LC 21), 66=280 (LC 21), 68=491 (LC 44), 69=141 (LC 38), 70=190 (LC 38), 71=173 (LC 5), 72=210 (LC 52), 73=188 (LC 22), 82=163 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-73=-158/120, 1-2=0/24, 2-3=-93/82, 3-4=-95/112, 4-5=-109/167, 5-6=-119/212, 6-7=-125/242, 7-9=-208/343, 9-10=-1208/423, 10-11=-1883/667, 11-12=-1883/667, 12-13=-1883/667, 13-14=-1883/667, 14-15=-1883/667, 15-16=-1883/667, 16-17=-1883/667, 17-18=-1883/667, 18-19=-1175/423, 19-20=-138/352, 20-21=-167/350, 21-22=-154/306, 22-24=-136/259, 24-25=-123/215, 25-26=-111/192, 26-27=-116/168, 27-28=-126/145, 28-29=-139/127, 29-31=-178/131

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818 Soundside Road
Edenton, NC 27932

BOT CHORD 72-73=-96/169, 71-72=-96/169, 70-71=-96/169, 69-70=-96/169, 68-69=-96/169, 66-68=-92/160, 64-66=-92/160, 61-64=-92/160, 59-61=-90/161, 57-59=-90/161, 55-57=-90/161, 52-55=-90/161, 50-52=-90/161, 48-50=-90/161, 46-48=-90/161, 42-46=-90/161, 41-42=-96/170, 40-41=-96/170, 38-40=-96/170, 37-38=-96/170, 36-37=-96/170, 35-36=-96/170, 34-35=-96/170, 33-34=-96/170, 32-33=-96/170, 31-32=-96/170, 65-67=-5/14, 63-65=-5/14, 60-63=-5/14, 58-60=-9/10, 56-58=-9/10, 54-56=-9/10, 53-54=-9/10, 49-53=-9/10, 47-49=-9/10, 45-47=-9/10, 44-45=-9/10

WEBS 14-74=-151/49, 52-53=-79/0, 15-75=-156/50, 49-50=-81/0, 16-76=-123/41, 47-48=-75/0, 17-77=-476/142, 45-46=-98/0, 42-44=-910/208, 19-44=-893/218, 20-41=-96/157, 21-40=-182/76, 22-38=-194/81, 24-37=-181/77, 25-36=-133/77, 26-35=-126/77, 27-34=-128/81, 28-33=-114/99, 29-32=-174/171, 13-78=-160/51, 54-55=-81/0, 12-79=-82/26, 56-57=-76/0, 11-80=-584/192, 58-59=-93/0, 63-64=-101/0, 65-66=-146/0, 6-69=-96/46, 5-70=-144/75, 4-71=-129/98, 3-72=-127/133, 9-80=-171/883, 79-80=-443/1851, 78-79=-443/1851, 74-78=-443/1851, 74-75=-443/1851, 75-76=-443/1851, 76-77=-443/1851, 19-77=-140/793, 67-68=-451/147, 7-67=-434/158, 9-60=-783/189, 10-80=-505/1431, 18-77=-496/1470, 60-61=-814/162

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) -0-7-14 to 4-6-8, Exterior(2N) 4-6-8 to 12-4-3, Corner(3R) 12-4-3 to 22-11-13, Exterior(2N) 22-11-13 to 26-2-3, Corner(3R) 26-2-3 to 36-6-8, Exterior(2N) 36-6-8 to 47-10-3, Corner(3E) 47-10-3 to 53-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 9-80, 79-80, 78-79, 74-78, 74-75, 75-76, 76-77, 19-77; Wall dead load (5.0psf) on member(s).42-44, 19-44, 67-68, 7-67, 9-60
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 73, 42, 41, 40, 38, 37, 36, 35, 34, 33, 32, 69, 70, 71, 72, 68, 31, and 61. This connection is for uplift only and does not consider lateral forces.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A02	Attic	1	2	I66625033 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:52 Page: 1

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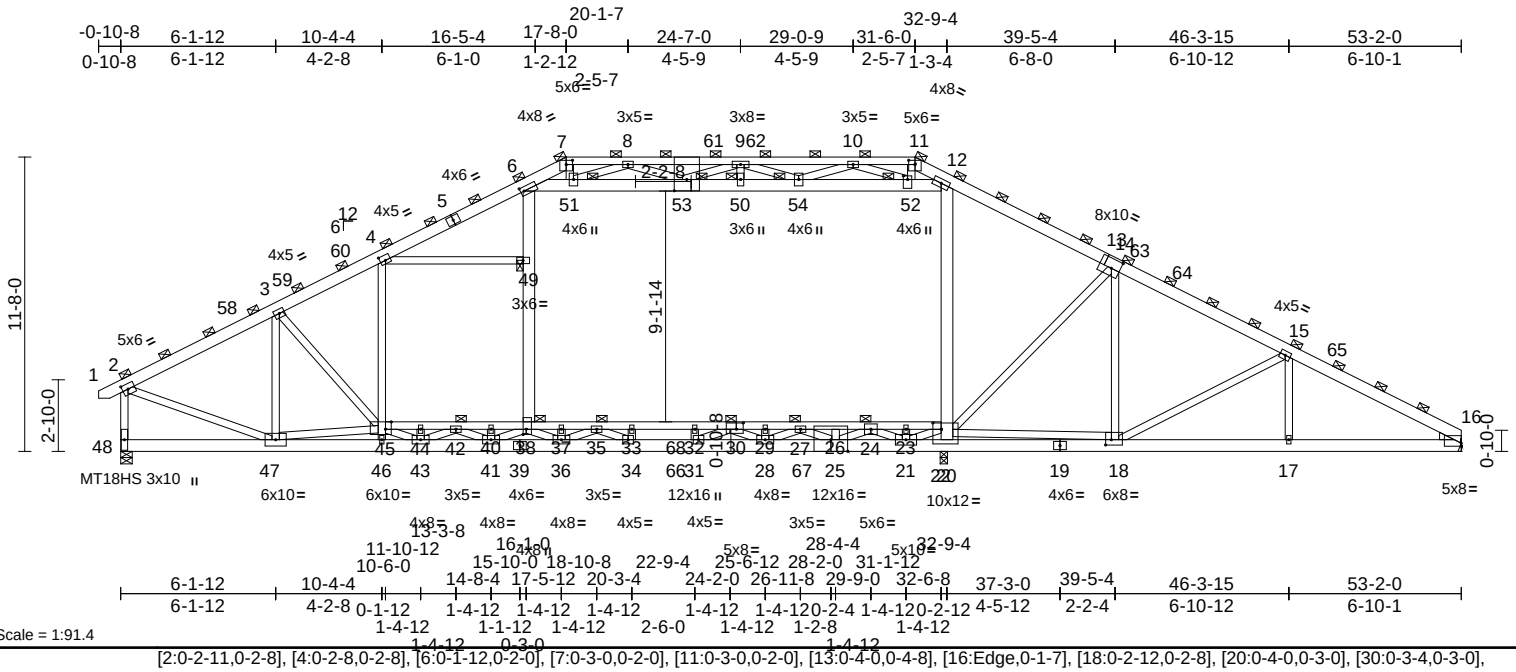

Scale = 1:91.4

Plate Offsets (X, Y): [2:0-2-11,0-2-8], [4:0-2-8,0-2-8], [6:0-1-12,0-2-0], [7:0-3-0,0-2-0], [11:0-3-0,0-2-0], [13:0-4-0,0-4-8], [16:Edge,0-1-7], [18:0-2-12,0-2-8], [20:0-4-0,0-3-0], [30:0-3-4,0-3-0], [38:0-2-8,0-1-8], [45:0-2-12,Edge], [52:0-1-12,0-2-0], [53:0-5-6,0-6-0]

Loading	(psf)	Spacing	3-2-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.25	32-33	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.50	33-35	>780	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.10	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.15	22-38	>999	360		
BCDL	10.0										Weight: 1049 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 45-30,30-22:2x4 SP No.2, 19-16,39-25:2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 4-46,47-2,22-18:2x4 SP No.2, 12-20,6-53,6-38,53-12:2x6 SP No.2

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD 2-0-0 oc purlins (5-1-14 max.), except end verticals
(Switched from sheeted: Spacing > 2-8-0).

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

JOINTS 1 Brace at Jt(s): 7, 11, 2, 24, 42, 27, 38, 30, 35, 49, 50, 51, 52, 53, 54

REACTIONS (size) 16= Mechanical, 20=0-3-8, 48=0-5-8
Max Horiz 48=-296 (LC 12)
Max Uplift 20=-253 (LC 15)
Max Grav 16=3920 (LC 48), 20=1840 (LC 46), 48=5236 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/34, 2-3=-6283/0, 3-4=-7455/0, 4-6=-7208/0, 6-7=-2528/121, 7-8=-2394/61, 8-9=-4791/607, 9-10=-4742/604, 10-11=-2205/74, 11-12=-2632/87, 12-14=-7332/0, 14-15=-7422/0, 15-16=-7925/0, 2-48=-5343/0

BOT CHORD 47-48=-167/324, 46-47=-315/5345, 43-46=-366/5397, 41-43=0/5780, 36-41=0/4628, 34-36=0/7760, 31-34=0/8974, 28-31=0/8904, 21-28=0/7189, 20-21=-2122/0, 18-20=-1435/292, 17-18=0/6898, 16-17=0/6898, 44-45=-342/1555, 42-44=-342/1555, 40-42=0/1277, 38-40=0/1277, 37-38=-433/297, 35-37=-433/297, 33-35=-3428/0, 32-33=-3428/0, 29-32=-3428/0, 27-29=-2992/0, 26-27=-543/1445, 24-26=-543/1445, 23-24=0/5222, 22-23=0/5222

WEBS 3-47=-2080/0, 3-45=0/1650, 45-46=-199/136, 4-45=-712/109, 20-22=-1214/553, 12-22=0/2331, 14-22=-823/649, 14-18=-639/49, 15-18=-649/360, 15-17=-51/263, 6-51=-5035/0, 50-51=-4383/1366, 50-54=-3871/1366, 52-54=-4344/0, 12-52=-5337/0, 2-47=0/5789, 21-22=0/3251, 43-45=0/1131, 21-23=-535/0, 43-44=-392/0, 21-24=-2804/0, 42-43=-348/526, 24-25=0/2806, 41-42=-374/302, 25-26=-396/0, 40-41=-338/0, 25-27=-1843/0, 38-41=0/1260, 27-28=0/1483, 36-38=0/2626, 28-29=-241/13, 36-37=-305/0, 28-30=-550/0, 35-36=-1936/0, 30-31=-109/415, 34-35=0/1839, 33-34=-532/0, 31-32=-257/0, 38-49=0/2164, 6-49=0/2270, 4-49=-331/0, 9-50=0/296, 7-51=-154/1021, 11-52=-66/1758, 8-51=-2123/491, 8-53=-103/783, 9-53=-1128/184, 9-54=-1174/191, 10-54=-128/814, 10-52=-2220/495, 45-47=-580/1381, 18-22=0/7222

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered 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.

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ENGINEERING BY TRENCO
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Edenton, NC 27932

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 and C-C Exterior(2E) -0-7-14 to 4-7-15, Interior (1) 4-7-15 to 10-1-12, Exterior(2R) 10-1-12 to 39-0-4, Interior (1) 39-0-4 to 47-10-3, Exterior(2E) 47-10-3 to 53-2-0 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) 200.0lb AC unit load placed on the bottom chord, 24-6-8 from left end, supported at two points, 5-0-0 apart.
9) Provide adequate drainage to prevent water ponding.
10) All plates are MT20 plates unless otherwise indicated.
11) All plates are 2x4 MT20 unless otherwise indicated.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * 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.
14) Ceiling dead load (5.0 psf) on member(s). 6-51, 51-53, 50-53, 50-54, 52-54, 12-52, 4-49; Wall dead load (5.0psf) on member(s).4-45, 12-22, 38-49, 6-49
15) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 44-45, 42-44, 40-42, 38-40, 37-38, 35-37, 33-35, 32-33, 30-32, 29-30, 27-29, 26-27, 24-26, 23-24, 22-23
16) Refer to girder(s) for truss to truss connections.
17) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20. This connection is for uplift only and does not consider lateral forces.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A03	Attic	3	1	I66625034 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:53 Page: 1

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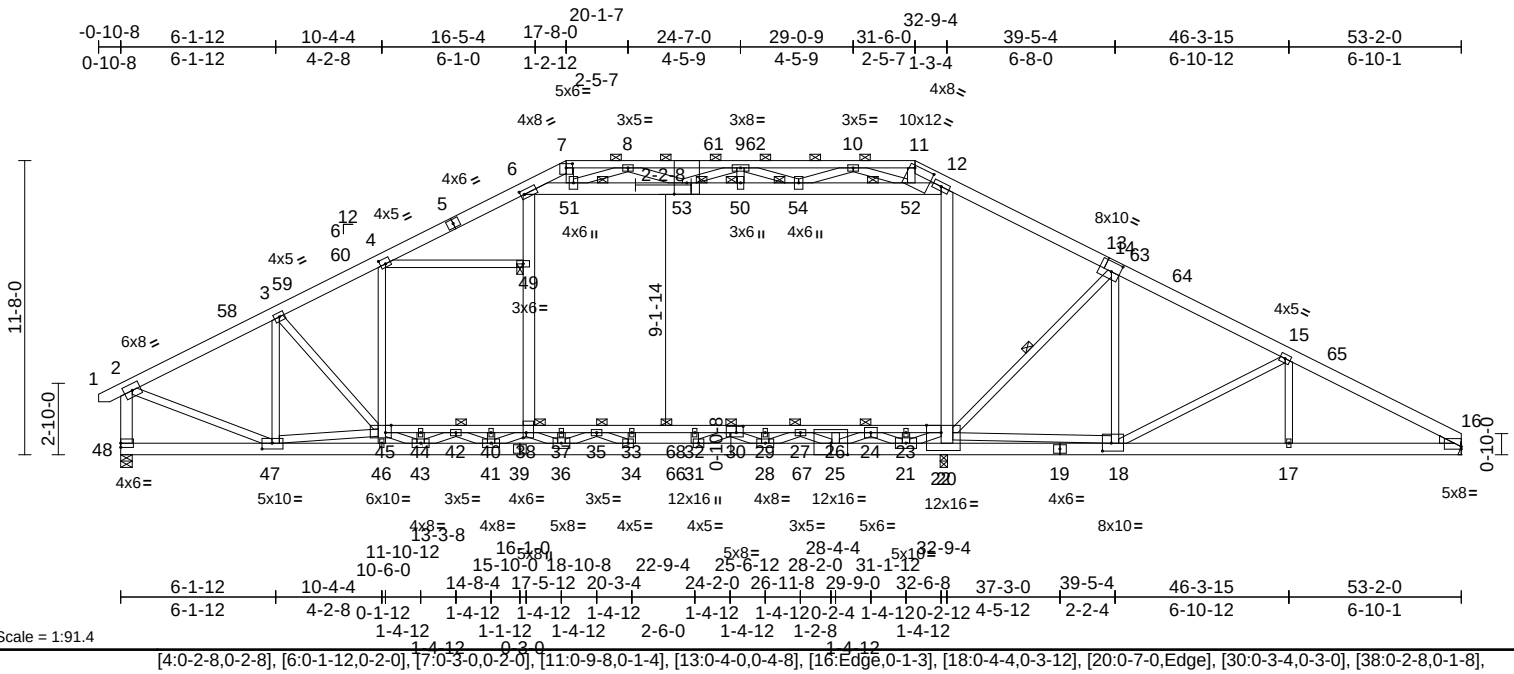

[4:0-2-8,0-2-8], [6:0-1-12,0-2-0], [7:0-3-0,0-2-0], [11:0-9-8,0-1-4], [13:0-4-0,0-4-8], [16:Edge,0-1-3], [18:0-4-4,0-3-12], [20:0-7-0,Edge], [30:0-3-4,0-3-0], [38:0-2-8,0-1-8], [45:0-2-12,Edge], [47:0-4-12,0-2-12], [53:0-5-6,0-6-0]

Plate Offsets (X, Y):

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	0.62	Vert(LL)	-0.30	32-33	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.63	32-33	>623	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.12	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.19	22-38	>999	360		
BCDL	10.0										Weight: 526 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 45-30:2x4 SP No.2, 19-16,39-25:2x6 SP 2400F 2.0E, 30-22:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 4-46,47-2,21-22,43-45,21-24,43-42,25-24,41-42,25-27,41-38,28-27,36-38,28-30,36-35,31-30,34-35:2x4 SP No.2, 12-20,6-53,48-2,6-38,53-12:2x6 SP No.2, 22-18:2x4 SP No.1

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-2 max.): 7-11.

BOT CHORD Rigid ceiling directly applied or 3-6-8 oc bracing.

WEBS 1 Row at midpt 14-22, 6-53, 12-54

JOINTS 1 Brace at Jt(s): 24, 42, 27, 38, 30, 35, 49, 50, 53, 54

REACTIONS (size) 16= Mechanical, 20=0-3-8, 48=0-5-8

Max Horiz 48=-188 (LC 12)

Max Uplift 20=-129 (LC 15)

Max Grav 16=2471 (LC 48), 20=1204 (LC 46), 48=3329 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-3942/0, 3-4=-4714/0, 4-6=-4572/0, 6-7=-1603/66, 7-8=-1519/26, 8-9=-3034/373, 9-10=-3005/372, 10-11=-1405/37, 11-12=-1673/44, 12-14=-4646/0, 14-15=-4676/0, 15-16=-4995/0, 2-48=-3387/0

BOT CHORD 47-48=-102/239, 46-47=-216/3276, 43-46=-250/3304, 41-43=0/3573, 36-41=0/2881, 34-36=0/4947, 31-34=0/5767, 28-31=0/5737, 21-28=0/4588, 20-21=-1628/0, 18-20=-1215/0, 17-18=0/4348, 16-17=0/4348, 44-45=-115/1066, 42-44=-115/1066, 40-42=0/862, 38-40=0/862, 37-38=-267/211, 35-37=-267/211, 33-35=-2258/0, 32-33=-2258/0, 29-32=-2258/0, 27-29=-1984/0, 26-27=-398/929, 24-26=-398/929, 23-24=0/3535, 22-23=0/3535

WEBS 3-47=-1342/0, 3-45=0/1093, 45-46=-116/92, 4-45=-470/66, 20-22=-805/332, 12-22=0/1482, 14-22=-494/439, 14-18=-435/3, 15-18=-410/229, 15-17=-32/165, 6-51=-3185/0, 50-51=-2776/848, 50-54=-2451/848, 52-54=-2748/0, 12-52=-3370/0, 2-47=0/3571, 21-22=0/2157, 43-45=0/730, 21-23=-348/0, 43-44=-252/0, 21-24=-1875/0, 42-43=-232/322, 24-25=0/1895, 41-42=-216/212, 25-26=-259/0, 40-41=-220/0, 25-27=-1220/0, 38-41=0/789, 27-28=0/1011, 36-38=0/1709, 28-29=-156/13, 36-37=-198/0, 28-30=-351/0, 35-36=-1277/0, 30-31=-87/262, 34-35=0/1223, 33-34=-340/0, 31-32=-160/7, 38-49=0/1380, 6-49=0/1447, 4-49=-204/0, 9-50=0/188, 7-51=-97/645, 11-52=-35/1110, 8-51=-1341/311, 8-53=-66/495, 9-53=-714/115, 9-54=-741/118, 10-54=-81/513, 10-52=-1401/313, 45-47=-301/932, 18-22=0/4894

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) -0-7-14 to 4-7-15, Interior (1) 4-7-15 to 10-1-12, Exterior(2R) 10-1-12 to 39-0-4, Interior (1) 39-0-4 to 47-10-3, Exterior(2E) 47-10-3 to 53-2-0 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; 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.

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Edenton, NC 27932

6) 200.0lb AC unit load placed on the bottom chord, 24-6-8 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 MT20 unless otherwise indicated.
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) Ceiling dead load (5.0 psf) on member(s). 6-51, 51-53, 50-53, 50-54, 52-54, 12-52, 4-49; Wall dead load (5.0psf) on member(s).4-45, 12-22, 38-49, 6-49
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 44-45, 42-44, 40-42, 38-40, 37-38, 35-37, 33-35, 32-33, 30-32, 29-30, 27-29, 26-27, 24-26, 23-24, 22-23
13) Refer to girder(s) for truss to truss connections.
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20. This connection is for uplift only and does not consider lateral forces.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A03T	Attic	3	1	I66625035 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:54 Page: 1

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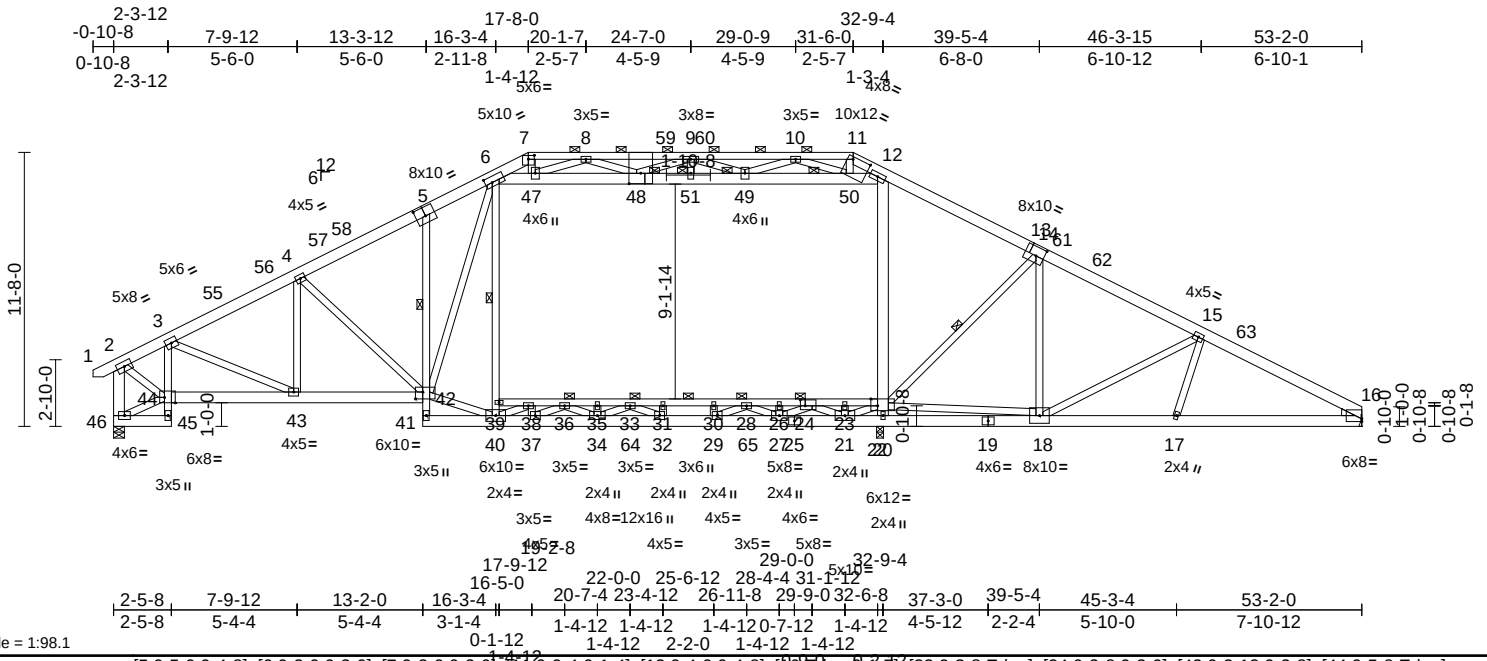

Plate Offsets (X, Y): [5:0-5-0,0-4-8], [6:0-3-9,0-3-0], [7:0-3-0,0-2-0], [11:0-9-4,0-1-4], [13:0-4-0,0-4-8], [16:Edge,0-1-7], [22:0-3-8,Edge], [24:0-2-8,0-3-0], [42:0-3-12,0-3-8], [44:0-5-8,Edge], [48:0-5-6,0-6-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.29	32-34	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.61	32-34	>636	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.17	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.19	22-39	>999	360		
BCDL	10.0										Weight: 519 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 45-3,5-41:2x4 SP No.3, 41-25:2x6 SP 2400F 2.0E, 39-24,24-22:2x4 SP No.2

WEBS 2x4 SP No.3 *Except* 40-42,6-40,44-2,40-38,37-36,36-34,34-33,33-32,29-28,28-27,27-24,24-21,21-22:2x4 SP No.2, 12-20,6-48,46-2,48-12:2x6 SP No.2, 22-18:2x4 SP No.1

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-14 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-7 max.): 7-11.

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

1 Row at midpt 5-42

WEBS 1 Row at midpt 6-39, 14-22, 12-49

JOINTS 1 Brace at Jt(s): 36, 33, 28, 24, 48, 49, 51

REACTIONS (size) 16= Mechanical, 20=0-3-8, 46=0-5-8

Max Horiz 46=-188 (LC 12)

Max Uplift 20=-6 (LC 15)

Max Grav 16=2007 (LC 48), 20=1552 (LC 40), 46=2641 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-2505/0, 3-4=-4026/0, 4-6=-4152/0, 6-7=-1795/75, 7-8=-1696/52, 8-9=-3122/365, 9-10=-2972/390, 10-11=-1234/81, 11-12=-1491/93, 12-14=-3569/0, 14-15=-3666/0, 15-16=-4064/0, 2-46=-2725/0

BOT CHORD 45-46=-17/49, 44-45=-4/23, 3-44=-1445/0, 43-44=-62/2222, 42-43=0/3505, 41-42=-125/55, 5-42=-490/103, 40-41=-31/227, 37-40=0/3816, 34-37=0/4678, 32-34=0/5471, 29-32=0/5376, 27-29=0/4355, 21-27=0/2014, 20-21=-1740/0, 18-20=-1517/0, 17-18=0/3533, 16-17=-19/3518, 38-39=-20/42, 36-38=-754/0, 35-36=-2696/0, 33-35=-2696/0, 31-33=-2917/0, 30-31=-2917/0, 28-30=-2917/0, 26-28=-761/587, 23-26=-761/2751, 22-23=0/2751

WEBS 3-43=0/1410, 4-43=-443/12, 4-42=-102/291, 40-42=0/3042, 6-42=-174/1516, 39-40=-498/286, 6-39=-470/433, 20-22=-1073/193, 12-22=-1/959, 14-22=-526/364, 14-18=-353/35, 6-47=-1844/0, 47-51=-1511/1254, 49-51=-1393/1254, 49-50=-1856/67, 12-50=-2550/0, 2-44=0/2603, 15-17=0/227, 15-18=-467/190, 44-46=-108/200, 38-40=-895/0, 36-37=-1269/0, 34-36=0/964, 33-34=-347/100, 32-33=-230/71, 28-29=0/1211, 27-28=-1305/0, 24-27=0/1506, 21-24=-2051/0, 21-22=0/2161, 21-23=-344/0, 26-27=-260/0, 29-30=-290/0, 31-32=-109/14, 34-35=-110/3, 37-38=0/221, 18-22=0/4392, 8-47=-1308/319, 8-48=-77/460, 9-48=-631/140, 9-49=-774/123, 10-49=-62/557, 10-50=-1439/285, 11-50=-69/1014, 9-51=0/156, 7-47=-79/741

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) -0-7-14 to 4-7-15, Interior (1) 4-7-15 to 10-1-12, Exterior(2R) 10-1-12 to 39-0-4, Interior (1) 39-0-4 to 47-10-3, Exterior(2E) 47-10-3 to 53-2-0 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) TCLL: ASCE 7-16; 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) 200.0lb AC unit load placed on the bottom chord, 24-6-8 from left end, supported at two points, 5-0-0 apart.

7) Provide adequate drainage to prevent water ponding.

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8) All plates are 2x4 MT20 unless otherwise indicated.
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) Ceiling dead load (5.0 psf) on member(s). 6-47, 47-48, 48-51, 49-51, 49-50, 12-50; Wall dead load (5.0psf) on member(s).6-39, 12-22
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 38-39, 36-38, 35-36, 33-35, 31-33, 30-31, 28-30, 26-28, 24-26, 23-24, 22-23
13) Refer to girder(s) for truss to truss connections.
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20. This connection is for uplift only and does not consider lateral forces.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A04	Attic	1	1	I66625036 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:55 Page: 1

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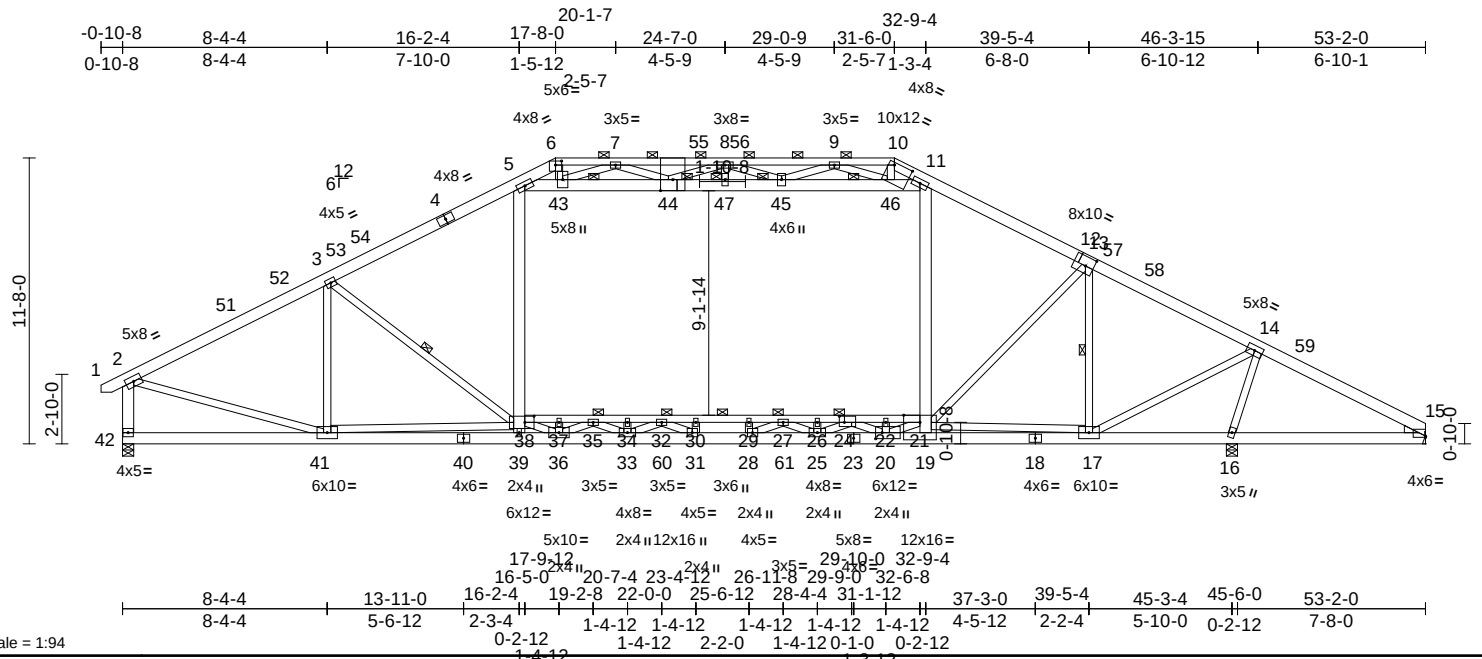

Scale = 1:94

Plate Offsets (X, Y): [6:0-3-0,0-2-0], [10:0-9-4,0-1-4], [12:0-4-0,0-4-8], [15:Edge,0-0-11], [20:0-3-4,0-3-0], [24:0-2-8,0-3-0], [38:0-4-8,0-3-0], [44:0-5-6,0-6-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.28	34-35	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.53	31-33	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.07	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.18	21-38	>999	360		
BCDL	10.0										Weight: 506 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 6-10:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 38-24,24-21:2x4 SP No.2, 18-15,40-23:2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 5-39,11-19,5-44,42-2,44-11:2x6 SP No.2, 17-14,41-2,21-17:2x4 SP No.2

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-4 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-14 max.): 6-10.

BOT CHORD Rigid ceiling directly applied or 3-6-6 oc bracing.

WEBS 1 Row at midpt 3-38, 13-17, 5-44, 11-45

JOINTS 1 Brace at Jt(s): 24, 35, 27, 32, 44, 45, 47

REACTIONS (size) 15= Mechanical, 16=0-5-8, 42=0-5-8

Max Horiz 42=-188 (LC 12)

Max Uplift 15=-127 (LC 14), 16=-53 (LC 15)

Max Grav 15=1026 (LC 44), 16=2681 (LC 40), 42=2717 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-3682/0, 3-5=-4090/0, 5-6=-1619/70, 6-7=-1475/46, 7-8=-3051/370, 8-9=-3024/353, 9-10=-1416/15, 10-11=-1646/36, 11-13=-4033/0, 13-14=-3120/0, 14-15=-1811/304, 2-42=-2822/0

BOT CHORD 41-42=-121/261, 39-41=-400/2529, 36-39=-551/2596, 33-36=0/4116, 31-33=0/5113, 28-31=0/5233, 25-28=0/4445, 20-25=0/2705, 19-20=-1088/619, 17-19=-613/770, 16-17=-433/1234, 15-16=-217/1570, 37-38=-377/930, 35-37=-377/930, 34-35=-1595/0, 32-34=-1595/0, 30-32=-2361/0, 29-30=-2361/0, 27-29=-2361/0, 26-27=-722/716, 22-26=-722/2661, 21-22=0/2661

WEBS 3-41=-926/0, 3-38=-93/680, 38-39=0/375, 5-38=0/1074, 19-21=0/523, 11-21=0/1114, 13-21=0/1168, 13-17=-1541/0, 14-17=0/2700, 14-16=-2581/120, 5-43=-2707/0, 43-47=-2170/1023, 45-47=-1872/1023, 45-46=-2162/0, 11-46=-2774/0, 2-41=0/3146, 20-21=0/2046, 36-38=0/1657, 20-22=-328/0, 36-37=-226/0, 20-24=-1804/0, 35-36=-1345/0, 24-25=0/1339, 33-35=0/1133, 25-26=-257/0, 33-34=-164/0, 25-27=-1079/0, 32-33=-599/106, 27-28=0/1052, 31-32=-228/381, 28-29=-254/0, 30-31=-167/10, 7-43=-1356/306, 7-44=-77/501, 8-44=-694/117, 8-45=-719/129, 9-45=-75/505, 9-46=-1390/307, 10-46=-58/1009, 8-47=0/170, 6-43=-75/788, 17-21=0/3112, 38-41=0/1521

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) -0-7-14 to 4-7-15, Interior (1) 4-7-15 to 10-1-12, Exterior(2R) 10-1-12 to 39-0-4, Interior (1) 39-0-4 to 47-10-3, Exterior(2E) 47-10-3 to 53-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) 200.0lb AC unit load placed on the bottom chord, 24-6-8 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.

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Edenton, NC 27932

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) Ceiling dead load (5.0 psf) on member(s). 5-43, 43-44, 44-47, 45-47, 45-46, 11-46; Wall dead load (5.0psf) on member(s).5-38, 11-21
11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 37-38, 35-37, 34-35, 32-34, 30-32, 29-30, 27-29, 26-27, 24-26, 22-24, 21-22
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 15.
14) One H2.5A 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.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A04T	Attic	2	1	I66625037 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:55 Page: 1
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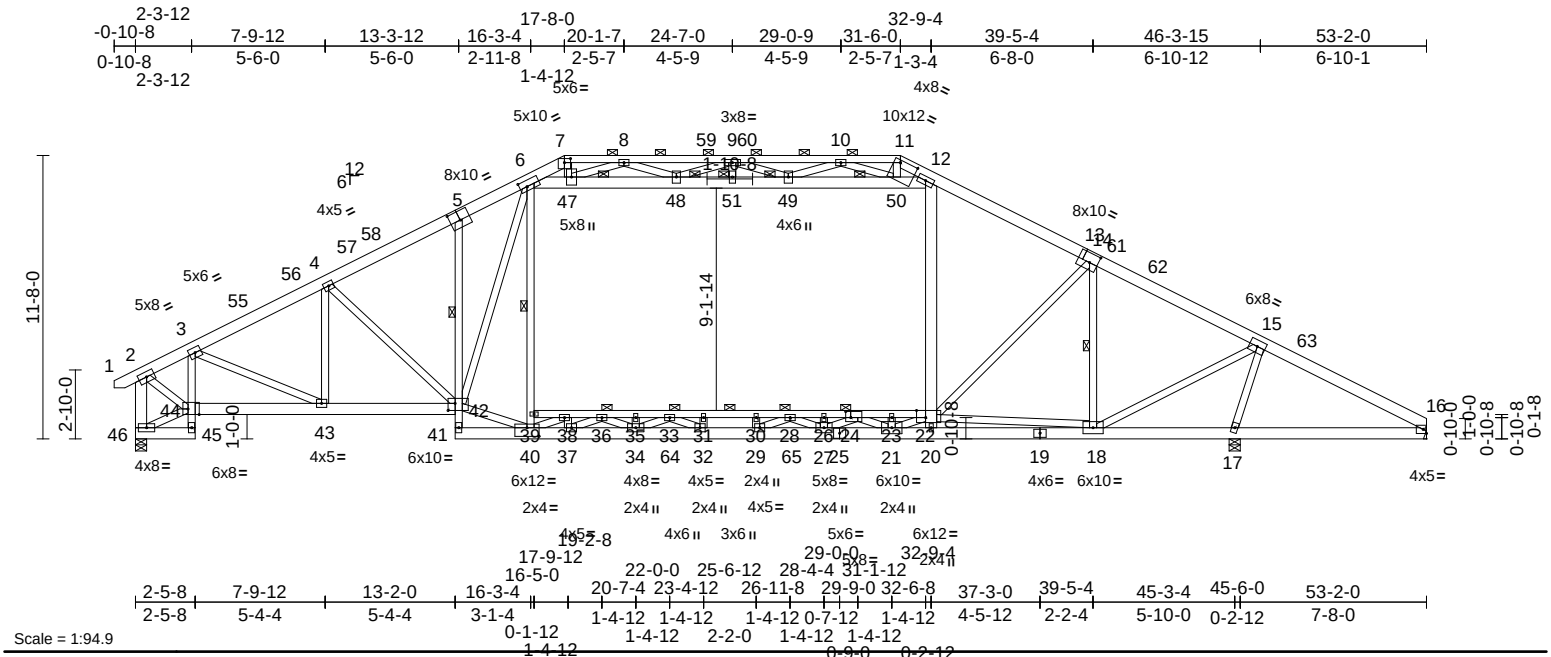

Scale = 1:94.9

Plate Offsets (X, Y): [5:0-5-0,0-4-8], [6:0-3-9,0-3-0], [7:0-3-0,0-2-0], [11:0-2-0,0-1-4], [13:0-4-0,0-4-8], [22:0-4-8,Edge], [24:0-2-8,0-3-0], [40:0-6-0,0-4-4], [42:0-3-8,0-3-8], [44:0-5-8,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	0.49	Vert(LL)	-0.28	35-36	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.56	32-34	>967	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.14	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.19	22-39	>999	360		
BCDL	10.0										Weight: 518 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 45-3,5-41:2x4 SP No.3, 41-25:2x6 SP 2400F 2.0E, 39-24,24-22:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 40-42,18-15,44-2,38-40,37-36,36-34,34-33,33-32,29-28,28-27,27-24,24-21,21-22,22-18:2x4 SP No.2, 12-20,6-12,46-2:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-8 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-15 max.): 7-11.
BOT CHORD Rigid ceiling directly applied or 3-0-3 oc bracing. Except:
1 Row at midpt 5-42
WEBS 1 Row at midpt 6-39, 14-18, 6-48, 12-49
JOINTS 1 Brace at Jt(s): 36, 33, 28, 24, 48, 49, 51

REACTIONS (size) 16= Mechanical, 17=0-5-8, 46=0-5-8
Max Horiz 46=-188 (LC 12)
Max Uplift 16=-231 (LC 14)
Max Grav 16=876 (LC 44), 17=3031 (LC 40), 46=2680 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-2599/0, 3-4=-4191/0, 4-6=-4300/0, 6-7=-1671/140, 7-8=-1517/146, 8-9=-3064/389, 9-10=-3037/356, 10-11=-1435/7, 11-12=-1652/38, 12-14=-3847/0, 14-15=-2815/15, 15-16=-1512/513, 2-46=-2826/0
BOT CHORD 45-46=-17/50, 44-45=-4/22, 3-44=-1501/0, 43-44=-19/2304, 42-43=0/3654, 41-42=-305/54, 5-42=-496/163, 40-41=-55/228, 37-40=0/3589, 34-37=0/4546, 32-34=0/5613, 29-32=0/5675, 27-29=0/4812, 21-27=0/2910, 20-21=-1096/606, 18-20=-639/738, 17-18=-881/914, 16-17=-400/1305, 38-39=-19/99, 36-38=-499/226, 35-36=-2519/0, 33-35=-2519/0, 31-33=-3016/0, 30-31=-3016/0, 28-30=-3016/0, 26-28=-1140/621, 23-26=-1140/2458, 22-23=0/2458
WEBS 3-43=0/1483, 4-43=-476/6, 4-42=-109/312, 40-42=0/3321, 6-42=-281/1524, 39-40=-498/403, 6-39=-470/559, 20-22=0/498, 12-22=0/1023, 14-22=0/1303, 14-18=-1692/0, 15-18=0/3102, 15-17=-2939/29, 6-47=-2279/0, 47-48=-1775/46, 48-51=-1555/1111, 49-51=-1555/1111, 49-50=-1924/7, 12-50=-2561/0, 2-44=0/2699, 38-40=-599/177, 37-38=-166/135, 36-37=-1381/0, 34-36=0/1113, 33-34=-484/106, 32-33=-236/179, 28-29=0/1119, 27-28=-1165/0, 24-27=0/1383, 21-24=-1919/0, 21-22=0/2168, 21-23=-323/0, 26-27=-250/0, 29-30=-263/0, 31-32=-138/10, 34-35=-125/0, 7-47=-59/831, 8-47=-1361/315, 8-48=-79/505, 9-48=-688/128, 9-49=-712/155, 10-49=-96/508, 10-50=-1386/317, 11-50=-75/978, 9-51=0/164, 44-46=-107/200, 18-22=0/2900

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) -0-7-14 to 4-7-15, Interior (1) 4-7-15 to 10-1-12, Exterior(2R) 10-1-12 to 39-0-4, Interior (1) 39-0-4 to 47-10-3, Exterior(2E) 47-10-3 to 53-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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) 200.0lb AC unit load placed on the bottom chord, 24-6-8 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.

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8) All plates are 3x5 MT20 unless otherwise indicated.
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) Ceiling dead load (5.0 psf) on member(s). 6-47, 47-48, 48-51, 49-51, 49-50, 12-50; Wall dead load (5.0psf) on member(s).6-39, 12-22
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 38-39, 36-38, 35-36, 33-35, 31-33, 30-31, 28-30, 26-28, 24-26, 23-24, 22-23
13) Refer to girder(s) for truss to truss connections.
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 231 lb uplift at joint 16.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A05	Attic Girder	1	4	I66625038 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:56 Page: 1

ID:VIY0g5gMUgwQZRyxiBXYltzRA_f-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

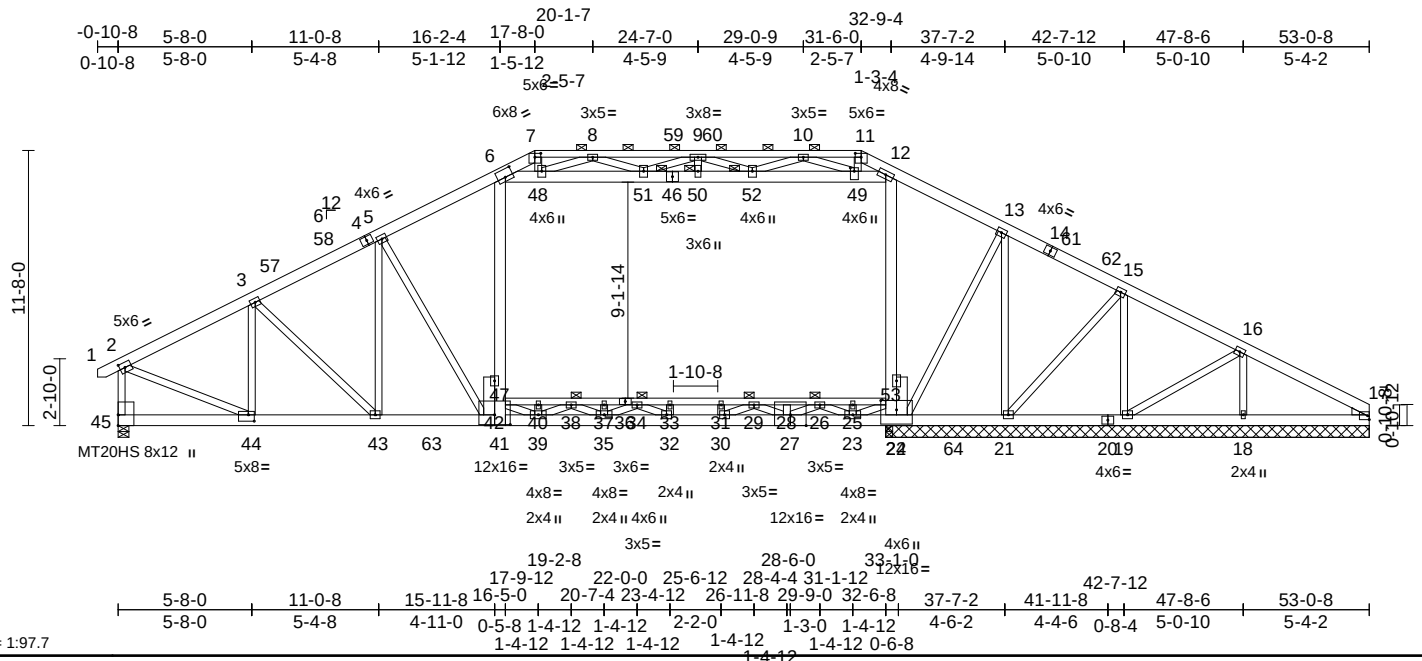

Plate Offsets (X, Y): [2:0-2-11,0-2-8], [6:0-4-0,0-4-0], [7:0-3-0,0-2-0], [11:0-3-0,0-2-0], [22:0-8-0,0-4-12], [41:0-8-0,0-5-0], [44:0-3-0,0-3-4], [49:0-1-12,0-2-0]

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	0.74	Vert(LL)	-0.38	38-40	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.57	38-40	>691	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.12	17	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.20	24-42	>999	360		
BCDL	10.0										Weight: 2083 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 42-36:2x4 SP No.3, 41-27,20-27:2x6 SP 2400F 2.0E, 36-24:2x4 SP No.2

WEBS 2x4 SP No.3 *Except* 12-22,6-46,41-47,41-6,46-12,53-22:2x6 SP No.2, 44-2:2x4 SP No.2

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-11.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

JOINTS 1 Brace at Jt(s): 26, 38, 29, 34, 50, 51, 52

REACTIONS (size) 17=20-6-0, 18=20-6-0, 19=20-6-0, 21=20-6-0, 22=20-6-0, 45=0-5-8, 54=20-6-0

Max Horiz 45=-186 (LC 10)

Max Uplift 17=-144 (LC 12), 18=-334 (LC 12), 19=-195 (LC 12), 21=-157 (LC 13), 22=-9168 (LC 46), 45=-755 (LC 12), 54=-144 (LC 12)

Max Grav 17=2640 (LC 46), 18=6186 (LC 46), 19=3880 (LC 46), 21=671 (LC 46), 22=1060 (LC 12), 45=11801 (LC 46), 54=2640 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-13774/878, 3-5=-17583/1152, 5-6=-19015/1247, 6-7=-4739/384, 7-8=-4856/375, 8-9=-5414/652, 9-10=-5081/633, 10-11=-3715/303, 11-12=-4281/354, 12-13=-18405/1252, 13-15=-15577/1034, 15-16=-10982/719, 16-17=-4744/309, 2-45=-11645/776

BOT CHORD 44-45=-120/299, 43-44=-824/12329, 41-43=-966/15822, 40-42=-2044/0, 38-40=-2044/0, 37-38=-3975/0, 34-37=-3975/0, 33-34=-4180/0, 31-33=-4180/0, 29-31=-4180/0, 28-29=-1672/334, 26-28=-1487/451, 25-26=-399/4325, 24-25=-399/4325, 39-41=-1178/17130, 35-39=-516/19399, 32-35=-83/20015, 30-32=0/19938, 23-30=-298/18554, 22-23=-765/11781, 21-22=-777/13896, 19-21=-551/9846, 18-19=-232/4131, 17-18=-232/4131

PROVIDE CONNECTION OF TRUSS TO BEARING PLATE AT JOINT 22 CAPABLE OF WITHSTANDING 9168 LBS UPLIFT REACTION DUE TO GRAVITY LOADING APPLIED TO THE TRUSS. IT IS THE RESPONSIBILITY OF THE PROJECT ARCHITECT/ENGINEER TO DESIGN THE CONNECTION OF THE TRUSS TO THE BEARING PLATE, PROVIDE AND DESIGN CONNECTION SYSTEM FOR A CONTINUOUS LOAD PATH FROM THE TRUSS TO THE FOUNDATION, AND DESIGN FOOTING/FOUNDATION TO RESIST SUCH UPLIFT. FAILURE TO DO SO WILL VOID THIS CONSTRUCTION.

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WEBS 3-44=-5190/400, 3-43=-227/4869, 5-43=-3030/192, 5-41=-163/2230, 22-24=-672/7141, 12-24=-542/7515, 13-22=-315/5531, 13-21=-6013/388, 15-21=-338/6051, 15-19=-6897/448, 16-19=-373/6695, 16-18=-6290/413, 6-48=-12398/807, 48-51=-12309/590, 50-51=-11921/545, 50-52=-11921/545, 49-52=-12963/773, 12-49=-13904/947, 2-44=-777/13136, 41-42=-678/7351, 6-42=-473/8475, 23-24=0/1099, 39-42=0/2190, 23-25=-596/0, 39-40=-291/0, 23-26=-2739/0, 38-39=-1134/5, 26-27=0/3052, 35-38=0/1155, 27-28=-1201/68, 35-37=-412/19, 27-29=-1339/0, 34-35=-226/307, 29-30=0/1597, 32-34=-149/107, 30-31=-436/0, 32-33=-197/0, 7-48=-150/1360, 11-49=-226/2857, 9-50=-35/667, 8-48=-1169/283, 8-51=-256/307, 9-51=-1003/173, 10-49=-1476/304, 10-52=-56/501, 9-52=-1359/194

NOTES

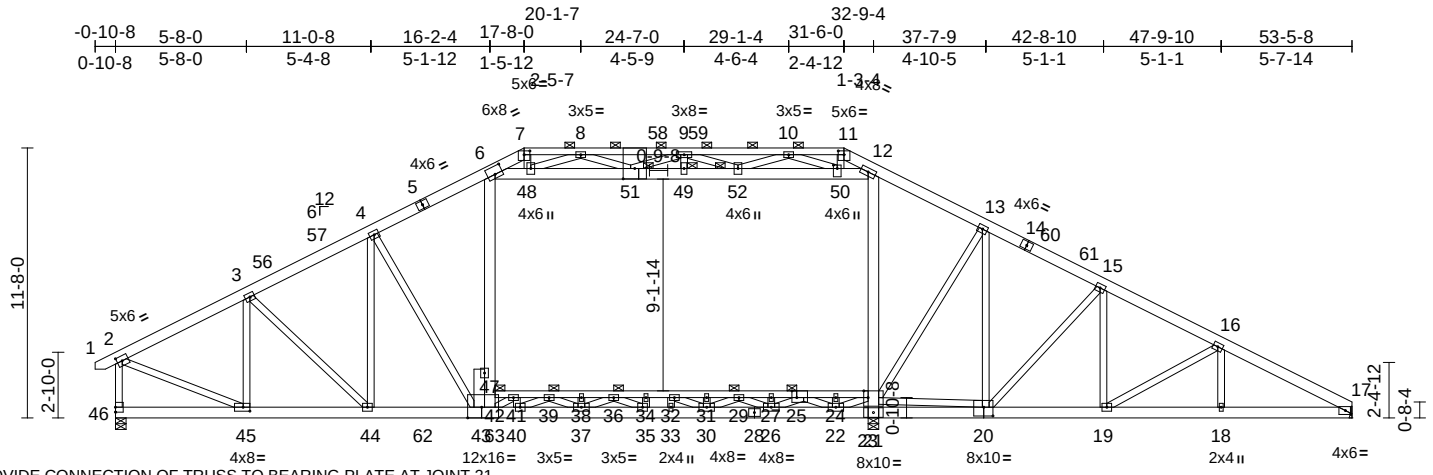
1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
   Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
   Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
   Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, Except member 41-47 2x6 - 3 rows staggered at 0-4-0 oc, member 6-41 2x6 - 2 rows staggered at 0-4-0 oc.
   Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 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) All plates are MT20 plates unless otherwise indicated.
10) All plates are 4x5 MT20 unless otherwise indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 6-48, 48-51, 50-51, 50-52, 49-52, 12-49; Wall dead load (5.0psf) on member(s).12-24, 6-42
14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 40-42, 38-40, 37-38, 34-37, 33-34, 31-33, 29-31, 28-29, 26-28, 25-26, 24-25
15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9168 lb uplift at joint 22.
16) LGT4-SDS3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 45. This connection is for uplift only and does not consider lateral forces.
17) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 21, 19, 18, and 17. This connection is for uplift only and does not consider lateral forces.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
21) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 608 lb down and 52 lb up at 28-7-12, and 9100 lb down and 774 lb up at 16-2-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
22) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

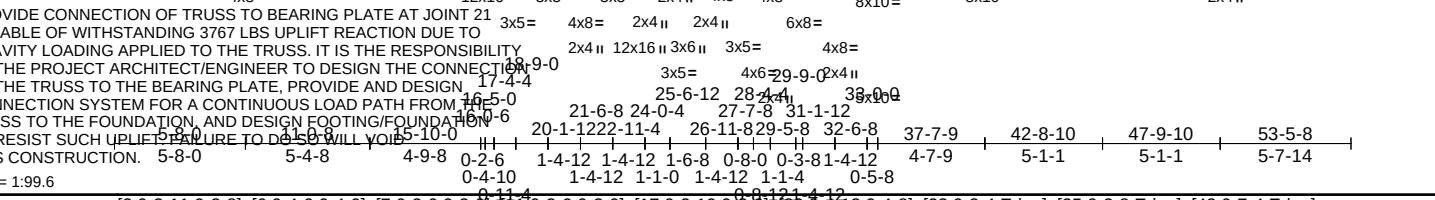
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-60, 2-7=-60, 7-11=-60, 11-17=-60, 45-54=-20, 24-42=-30, 6-48=-10, 48-51=-10, 46-51=-10, 46-50=-10, 50-52=-10, 49-52=-10, 12-49=-10
   Drag: 24-53=-10, 12-53=-10, 42-47=-10, 6-47=-10
   Concentrated Loads (lb)
   Vert: 41=-4881 (F), 28=-326 (F)

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A06	Attic Girder	1	4	I66625039
					Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:57 Page: 1
ID:pGeZvt1?lwruiNEY_xH4fkzRAp7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



PROVIDE CONNECTION OF TRUSS TO BEARING PLATE AT JOINT 21 CAPABLE OF WITHSTANDING 3767 LBS UPLIFT REACTION DUE TO GRAVITY LOADING APPLIED TO THE TRUSS. IT IS THE RESPONSIBILITY OF THE PROJECT ARCHITECT/ENGINEER TO DESIGN THE CONNECTION OF THE TRUSS TO THE BEARING PLATE, PROVIDE AND DESIGN CONNECTION SYSTEM FOR A CONTINUOUS LOAD PATH FROM THE TRUSS TO THE FOUNDATION, AND DESIGN FOOTING/FOUNDATION TO RESIST SUCH UPLIFT. FAILURE TO DESIGN WILL VOID THIS CONSTRUCTION.



Scale = 1:99.6

Plate Offsets (X, Y): [2:0-2-11,0-2-8], [6:0-4-0,0-4-0], [7:0-3-0,0-2-0], [11:0-3-0,0-2-0], [17:0-2-10,0-2-0], [20:0-4-12,0-4-8], [23:0-2-4,Edge], [25:0-2-8,Edge], [43:0-7-4,Edge], [45:0-3-8,0-2-0], [50:0-1-12,0-2-0], [51:0-5-6,0-6-0]

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	0.70	Vert(LL)	-0.37	43	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.56	43	>701	180		
TCDL	10.0	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.11	17	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.18	23-42	>999	360		
BCDL	10.0										Weight: 2106 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2 *Except* 7-11:2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 46-43,43-28:2x6 SP 2400F 2.0E, 42-25:2x4 SP No.2, 25-23:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 6-43,12-21,51-12,47-43,51-6:2x6 SP No.2, 45-2,23-20:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing:
21-22,39-41,38-39,36-38,20-21.
JOINTS 1 Brace at Jt(s): 42, 25, 39, 29, 36, 49, 51, 52

REACTIONS (size) 17= Mechanical, 21=0-5-8, 46=0-5-8
Max Horiz 46=-189 (LC 10)
Max Uplift 17=-454 (LC 12), 21=-3767 (LC 45), 46=-741 (LC 12)
Max Grav 17=7895 (LC 46), 21=771 (LC 12), 46=11113 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-12934/859, 3-4=-16570/1138, 4-6=-17590/1199, 6-7=-4436/372, 7-8=-4557/364, 8-9=-5058/640, 9-10=-4579/617, 10-11=-3043/286, 11-12=-3677/338, 12-13=-16839/1189, 13-15=-15896/1121, 15-16=-16181/1063, 16-17=-15722/960, 2-46=-10932/758
BOT CHORD 45-46=-119/304, 44-45=-802/11583, 40-44=-948/15675, 37-40=-470/15737, 35-37=0/14475, 33-35=0/13303, 30-33=0/13303, 26-30=0/9073, 22-26=0/4726, 21-22=-2131/0, 41-42=0/1816, 39-41=-279/0, 38-39=-1172/349, 36-38=-1172/349, 34-36=-1134/2171, 32-34=-1134/2171, 31-32=-1150/3801, 29-31=-1150/3801, 27-29=-1070/8224, 24-27=-1070/13147, 23-24=-641/13147, 19-21=-857/14533, 18-19=-809/13886, 17-18=-809/13886
WEBS 3-45=-4981/408, 3-44=-236/4646, 4-44=-2362/140, 4-43=-120/1666, 42-43=-360/7203, 6-42=-450/7853, 21-23=-715/4597, 12-23=-520/6692, 13-23=-131/2167, 13-20=-1905/111, 15-20=-659/160, 15-19=-24/223, 16-19=-115/856, 16-18=-372/94, 6-48=-11335/773, 48-49=-11324/559, 49-52=-11110/521, 50-52=-12247/755, 12-50=-13242/930, 2-45=-757/12319, 22-23=0/4433, 22-24=-842/0, 40-41=0/1173, 22-25=-2875/0, 39-40=-642/333, 25-26=0/3161, 37-39=-273/411, 26-27=-995/39, 37-38=-425/15, 26-29=-2092/0, 36-37=-314/1436, 29-30=-35/3006, 35-36=-1349/197, 30-31=-490/11, 34-35=-121/0, 30-32=-1832/17, 32-33=-44/722, 41-43=-2284/0, 7-48=-147/1245, 9-49=-33/615, 11-50=-225/2799, 8-48=-1132/281, 8-51=-304/284, 9-51=-879/171, 10-50=-1510/303, 10-52=-60/557, 9-52=-1388/196, 20-23=-170/13641

NOTES
1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-4-0 oc, Except member 43-47 2x6 - 3 rows staggered at 0-4-0 oc, member 12-21 2x6 - 2 rows staggered at 0-9-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 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.

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818 Soundside Road
Edenton, NC 27932

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) All plates are 4x5 MT20 unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 6-48, 48-51, 49-51, 49-52, 50-52, 12-50; Wall dead load (5.0psf) on member(s).6-42, 12-23
13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 41-42, 39-41, 38-39, 36-38, 34-36, 32-34, 31-32, 29-31, 27-29, 25-27, 24-25, 23-24
14) Refer to girder(s) for truss to truss connections.
15) Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
16) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 454 lb uplift at joint 17 and 3767 lb uplift at joint 21.
17) LGT4-SDS3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 46. This connection is for uplift only and does not consider lateral forces.
18) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
21) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 9100 lb down and 774 lb up at 16-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
22) Attic room checked for L/360 deflection.

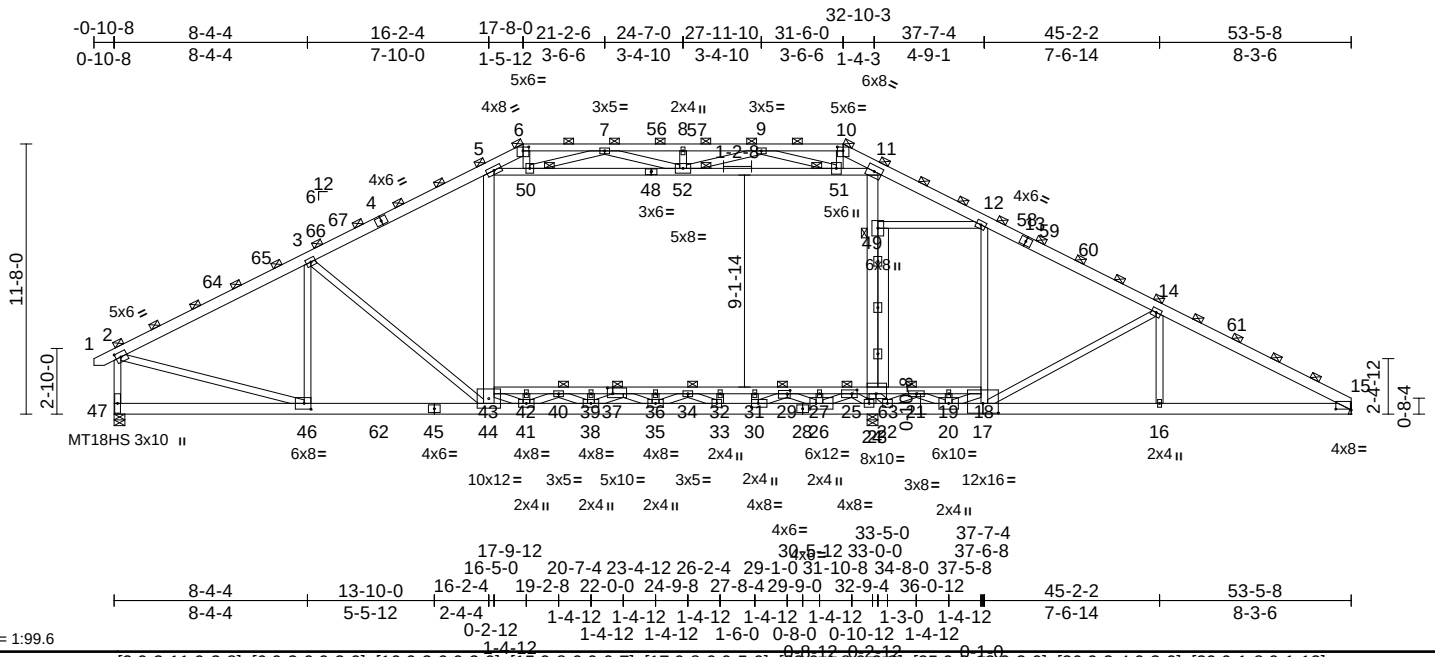
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-60, 2-7=-60, 7-11=-60, 11-17=-60, 46-53=-20, 23-42=-30, 6-48=-10, 48-51=-10, 49-51=-10, 49-52=-10, 50-52=-10, 12-50=-10
   Drag: 42-47=-10, 6-47=-10, 12-23=-10
   Concentrated Loads (lb)
   Vert: 43=-4881 (F)

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A07	Attic	1	2	I66625040 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:58 Page: 1

ID:h5TFO2tlZyfWTvVspKto8_zRQij-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:99.6

Plate Offsets (X, Y): [2:0-2-11,0-2-8], [6:0-3-0,0-2-0], [10:0-3-0,0-2-0], [14:0-3-0,0-0-7], [17:0-8-0,0-5-0], [23:0-4-8,0-2-8], [25:0-2-12,0-2-0], [26:0-3-4,0-3-0], [29:0-1-8,0-1-12], [30:0-3-8,0-2-0], [37:0-2-12,0-3-0], [46:0-3-8,0-3-0]

Loading	(psf)	Spacing	3-2-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.35	36-37	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.55	39-40	>706	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.09	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.23	23-43	>866	360		
BCDL	10.0										Weight: 1000 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 6-10:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 43-37:2x4 SP No.2, 17-15,45-28:2x6 SP 2400F 2.0E, 37-18:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 5-44,23-11,49-23:2x6 SP No.2, 5-48,46-2,48-11:2x4 SP No.2

BRACING

TOP CHORD 2-0-0 oc purlins (5-1-14 max.), except end verticals
(Switched from sheeted: Spacing > 2-8-0).

BOT CHORD Rigid ceiling directly applied or 5-5-4 oc bracing.

JOINTS 1 Brace at Jt(s): 6, 10, 37, 2, 21, 40, 25, 29, 34, 49, 50, 51, 52

REACTIONS (size) 15= Mechanical, 24=0-5-8, 47=0-5-8
Max Horiz 47=-299 (LC 12)
Max Uplift 24=-178 (LC 15), 47=-34 (LC 14)
Max Grav 15=3627 (LC 48), 24=3604 (LC 40), 47=4781 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 6-7=-2801/87, 7-8=-5632/743, 8-9=-5632/743, 9-10=-2446/154, 10-11=-2765/188, 11-12=-6381/0, 12-14=-6256/0, 14-15=-7338/0, 2-47=-4665/101, 1-2=0/34, 2-3=-6237/5, 3-5=-6383/0, 5-6=-3015/140

BOT CHORD 46-47=-176/359, 44-46=-15/5401, 41-44=0/5404, 38-41=0/8338, 35-38=0/10222, 33-35=0/9619, 30-33=0/7779, 26-30=-860/4807, 24-26=-3740/1091, 22-24=-5345/610, 20-22=-1978/560, 16-20=0/6398, 15-16=0/6398, 42-43=-1850/0, 40-42=-1850/0, 39-40=-4898/0, 36-39=-5894/0, 34-36=-5894/0, 32-34=-3078/1820, 31-32=-3078/1820, 29-31=-3078/1820, 27-29=-461/5648, 25-27=-461/5648, 23-25=0/10792, 21-23=0/9747, 19-21=0/3525, 18-19=0/3525

WEBS 3-46=-1026/107, 3-44=-277/575, 43-44=0/626, 5-43=0/1898, 17-18=0/1129, 12-18=-774/35, 14-17=-1273/513, 14-16=0/467, 5-50=-3671/51, 50-52=-2859/1138, 51-52=-2947/986, 11-51=-4015/90, 2-46=0/5444, 18-20=-3952/0, 41-43=0/2272, 19-20=-326/0, 41-42=-316/0, 20-21=-1/3960, 40-41=-2053/0, 21-22=-3287/87, 38-40=-5/1450, 38-39=-210/10, 37-38=-816/250, 25-26=0/4042, 35-37=-316/405, 26-27=-503/0, 35-36=-273/0, 26-29=-3617/0, 34-35=0/1449, 29-30=0/3812, 33-34=-2203/0, 32-33=0/205, 30-31=-827/0, 23-49=-302/2166, 11-49=-132/2215, 23-24=-1634/519, 24-25=-2963/0, 22-23=0/1803, 12-49=-375/424, 6-50=-97/1209, 10-51=-99/1371, 8-52=-385/141, 7-50=-2541/572, 7-52=-137/833, 9-52=-120/973, 9-51=-2716/555

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, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered 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.

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ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
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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 and C-C Exterior(2E) -0-7-14 to 4-8-4, Interior (1) 4-8-4 to 10-1-6, Exterior(2R) 10-1-6 to 39-0-10, Interior (1) 39-0-10 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are MT20 plates unless otherwise indicated.
10) All plates are 4x5 MT20 unless otherwise indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 5-50, 50-52, 51-52, 11-51, 12-49; Wall dead load (5.0psf) on member (s).5-43, 23-49, 11-49
14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 42-43, 40-42, 39-40, 37-39, 36-37, 34-36, 32-34, 31-32, 29-31, 27-29, 25-27, 23-25
15) Refer to girder(s) for truss to truss connections.
16) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 47 and 24. This connection is for uplift only and does not consider lateral forces.
17) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
19) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A08	Attic	1	2	I66625041 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 09:59:59 Page: 1

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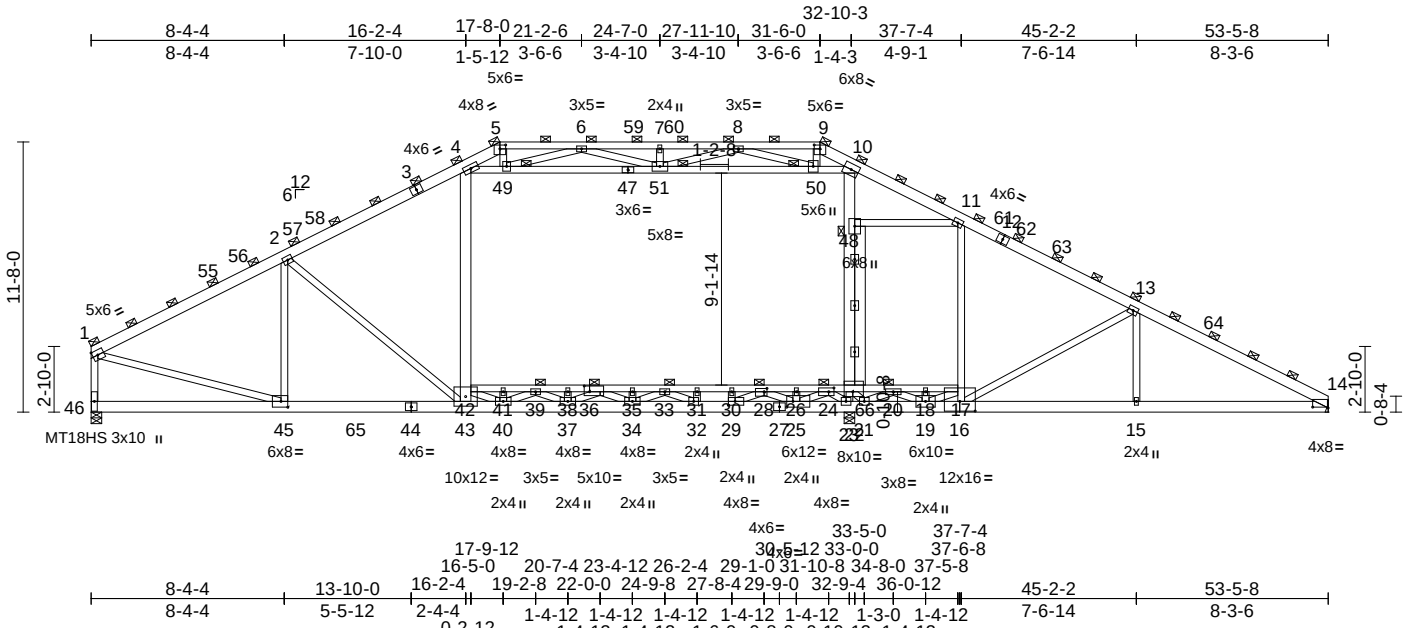

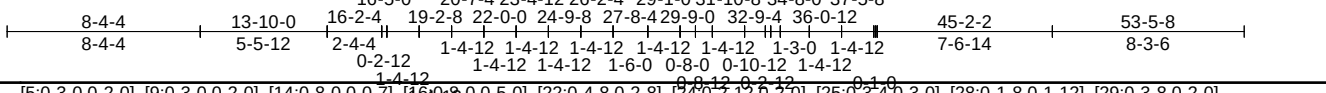

Scale = 1:99.6

[5:0-3-0,0-2-0], [9:0-3-0,0-2-0], [14:0-8-0,0-0-7], [16:0-3-0,0-5-0], [22:0-4-8,0-2-8], [24:0-2-12,0-2-0], [25:0-3-4,0-3-0], [28:0-1-8,0-1-12], [29:0-3-8,0-2-0], [36:0-2-12,0-3-0], [45:0-3-8,0-3-0]

Plate Offsets (X, Y):

Loading	(psf)	Spacing	3-2-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.35	35-36	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.55	38-39	>706	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.09	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.23	22-42	>866	360		
BCDL	10.0										Weight: 996 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 5-9:2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 42-36:2x4 SP No.2, 16-14,44-27:2x6 SP 2400F 2.0E, 36-17:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 4-43,22-10,48-22:2x6 SP No.2, 4-47,45-1,47-10:2x4 SP No.2

BRACING

TOP CHORD 2-0-0 oc purlins (5-1-14 max.), except end verticals
(Switched from sheeted: Spacing > 2-8-0).

BOT CHORD Rigid ceiling directly applied or 5-5-4 oc bracing.

JOINTS 1 Brace at Jt(s): 5, 9, 36, 1, 20, 39, 24, 28, 33, 48, 49, 50, 51

REACTIONS (size) 14= Mechanical, 23=0-5-8, 46=0-5-8
Max Horiz 46=-351 (LC 15)
Max Uplift 23=-182 (LC 15), 46=-9 (LC 14)
Max Grav 14=3628 (LC 47), 23=3592 (LC 39), 46=4717 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-6220/8, 2-4=-6373/0, 4-5=-3017/138, 5-6=-2804/86, 6-7=-5632/741, 7-8=-5632/741, 8-9=-2443/151, 9-10=-2762/185, 10-11=-6369/0, 11-13=-6245/0, 13-14=-7328/0, 1-46=-4610/77

BOT CHORD 45-46=-171/360, 43-45=-20/5390, 40-43=0/5394, 37-40=0/8338, 34-37=0/10223, 32-34=0/9620, 29-32=0/7779, 25-29=-833/4809, 23-25=-3716/1096, 21-23=-5323/615, 19-21=-1966/566, 15-19=0/6389, 14-15=0/6389, 41-42=-1851/0, 39-41=-1851/0, 38-39=-4898/0, 35-38=-5894/0, 33-35=-5894/0, 31-33=-3077/1821, 30-31=-3077/1821, 28-30=-3077/1821, 26-28=-458/5645, 24-26=-458/5645, 22-24=0/10789, 20-22=0/9742, 18-20=0/3522, 17-18=0/3522

WEBS 2-45=-1032/107, 2-43=-284/576, 42-43=0/627, 4-42=0/1900, 16-17=0/1129, 11-17=-773/36, 13-16=-1265/514, 13-15=0/467, 4-49=-3657/50, 49-51=-2850/1141, 50-51=-2941/987, 10-50=-4008/92, 1-45=0/5502, 17-19=-3949/0, 40-42=0/2272, 18-19=-326/0, 40-41=-315/0, 19-20=0/3959, 39-40=-2053/0, 20-21=-3287/87, 37-39=-5/1450, 37-38=-210/10, 36-37=-816/250, 24-25=0/4042, 34-36=-315/405, 25-26=-503/0, 34-35=-273/0, 25-28=-3617/0, 33-34=0/1448, 28-29=0/3812, 32-33=-2203/0, 31-32=0/205, 29-30=-827/0, 22-48=-295/2166, 10-48=-125/2215, 22-23=-1621/523, 23-24=-2963/0, 21-22=0/1802, 11-48=-369/425, 5-49=-96/1207, 9-50=-101/1370, 7-51=-385/141, 6-49=-2540/571, 6-51=-137/832, 8-51=-121/974, 8-50=-2717/555

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered 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.

July 2,2024

Continued on page 2

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

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 and C-C Exterior(2E) 0-1-12 to 5-5-14, Interior (1) 5-5-14 to 10-1-6, Exterior(2R) 10-1-6 to 39-0-10, Interior (1) 39-0-10 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone;C-C for members and forces & MWFRS for reactions shown; 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) All plates are MT20 plates unless otherwise indicated.
9) All plates are 4x5 MT20 unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 4-49, 49-51, 50-51, 10-50, 11-48; Wall dead load (5.0psf) on member (s).4-42, 22-48, 10-48
13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 41-42, 39-41, 38-39, 36-38, 35-36, 33-35, 31-33, 30-31, 28-30, 26-28, 24-26, 22-24
14) Refer to girder(s) for truss to truss connections.
15) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 46 and 23. This connection is for uplift only and does not consider lateral forces.
16) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
17) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
18) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A09	Attic	4	1	I66625042 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:00 Page: 1

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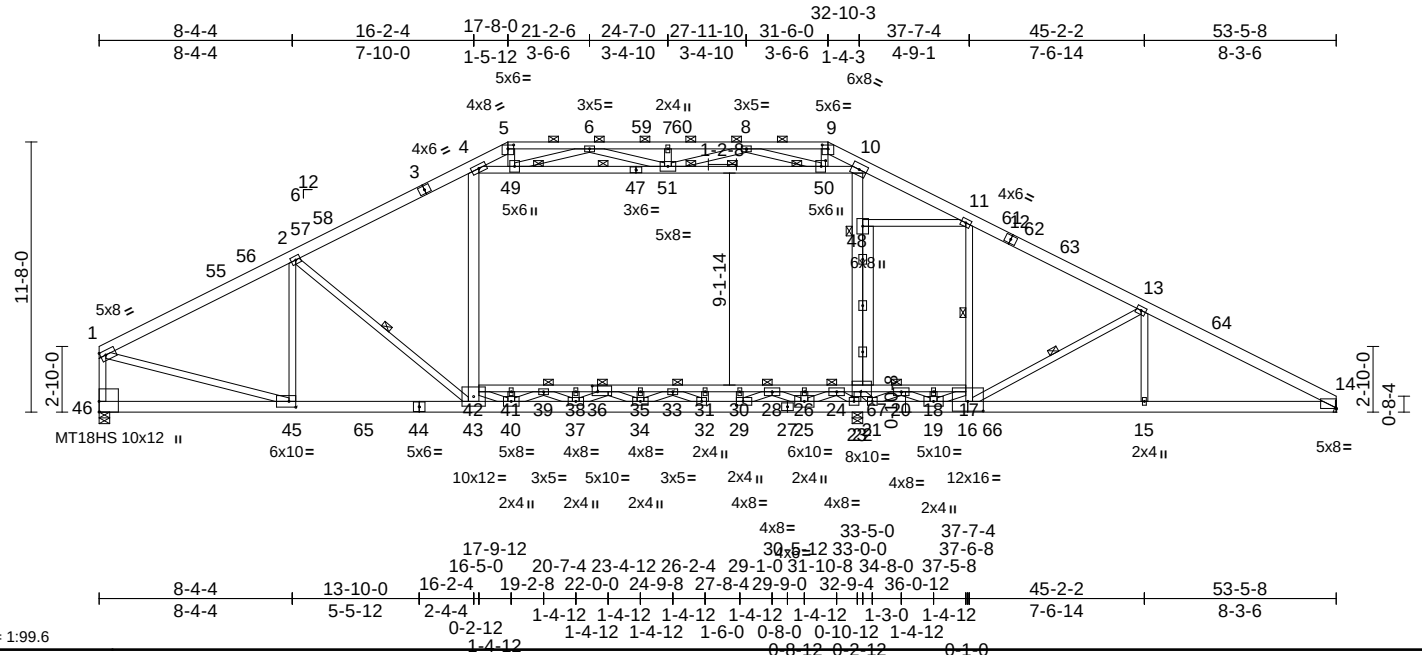

Scale = 1:99.6

Plate Offsets (X, Y): [1:Edge,0-2-4], [5:0-3-0,0-2-0], [9:0-3-0,0-2-0], [14:Edge,0-0-5], [16:0-8-0,0-5-0], [22:0-4-8,0-2-8], [29:0-3-8,0-2-0], [36:0-2-12,0-3-0], [45:0-3-8,0-3-0], [50:0-3-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.44	38	>898	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.68	38-39	>578	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.11	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.29	22-42	>697	360		
BCDL	10.0										Weight: 498 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 5-9:2x4 SP No.2

BOT CHORD 2x6 SP 2400F 2.0E *Except* 46-44:2x6 SP No.2, 42-36:2x4 SP No.2, 36-17:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 4-43,22-10,48-22:2x6 SP No.2, 4-47,45-1,19-17,40-42,19-20,40-39,21-20,37-39,37-36,25-24,34-36,25-28,34-33,29-28,32-33,47-10:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-11-13 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-1 max.): 5-9.

BOT CHORD Rigid ceiling directly applied or 3-1-9 oc bracing.

WEBS 1 Row at midpt 2-43, 11-16, 13-16

WEBS 2 Rows at 1/3 pts 4-51, 10-51

JOINTS 1 Brace at Jt(s): 36, 20, 39, 24, 28, 33, 48, 51

REACTIONS (size) 14= Mechanical, 23=0-5-8, 46=0-5-8

Max Horiz 46=-222 (LC 15)

Max Uplift 46=-26 (LC 14)

Max Grav 14=2283 (LC 47), 23=2502 (LC 39), 46=2956 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-3893/33, 2-4=-3980/21, 4-5=-1888/102, 5-6=-1753/69, 6-7=-3529/497, 7-8=-3529/497, 8-9=-1504/139, 9-10=-1712/155, 10-11=-3940/68, 11-13=-3913/16, 13-14=-4616/0, 1-46=-2886/68

BOT CHORD 45-46=-108/227, 43-45=-38/3372, 40-43=0/3376, 37-40=0/5176, 34-37=0/6303, 32-34=0/5834, 29-32=0/4622, 25-29=-876/2735, 23-25=-2730/415, 21-23=-3655/150, 19-21=-1454/234, 15-19=0/4024, 14-15=0/4024, 41-42=-1155/0, 39-41=-1155/0, 38-39=-3006/0, 35-38=-3567/55, 33-35=-3567/55, 31-33=-1692/1397, 30-31=-1692/1397, 28-30=-1692/1397, 26-28=-36/3923, 24-26=-36/3923, 22-24=0/7084, 20-22=0/6375, 18-20=0/2308, 17-18=0/2308

WEBS 2-45=-641/77, 2-43=-187/355, 42-43=0/389, 4-42=0/1181, 16-17=0/814, 11-17=-453/77, 13-16=-826/296, 13-15=0/312, 4-49=-2286/48, 49-51=-1784/729, 50-51=-1850/620, 10-50=-2524/43, 1-45=0/3442, 17-19=-2617/0, 40-42=0/1409, 18-19=-213/0, 40-41=-199/0, 19-20=0/2595, 39-40=-1254/36, 20-21=-2143/0, 37-39=-42/875, 37-38=-137/4, 36-37=-479/191, 24-25=0/2506, 34-36=-244/212, 25-26=-346/0, 34-35=-176/0, 25-28=-2337/0, 33-34=0/973, 28-29=0/2473, 32-33=-1454/0, 31-32=0/138, 29-30=-528/0, 22-48=-231/1315, 10-48=-121/1350, 22-23=-1158/183, 23-24=-1793/0, 21-22=0/1191, 11-48=-265/219, 5-49=-65/758, 9-50=-58/868, 7-51=-243/88, 6-49=-1597/368, 6-51=-95/520, 8-51=-68/621, 8-50=-1723/342

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) 0-1-12 to 5-5-14, Interior (1) 5-5-14 to 10-1-6, Exterior(2R) 10-1-6 to 39-0-10, Interior (1) 39-0-10 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone;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) 200.0lb AC unit load placed on the bottom chord, 36-1-8 from left end, supported at two points, 5-0-0 apart.

6) Provide adequate drainage to prevent water ponding.

7) All plates are MT20 plates unless otherwise indicated.

8) All plates are 2x4 MT20 unless otherwise indicated.

9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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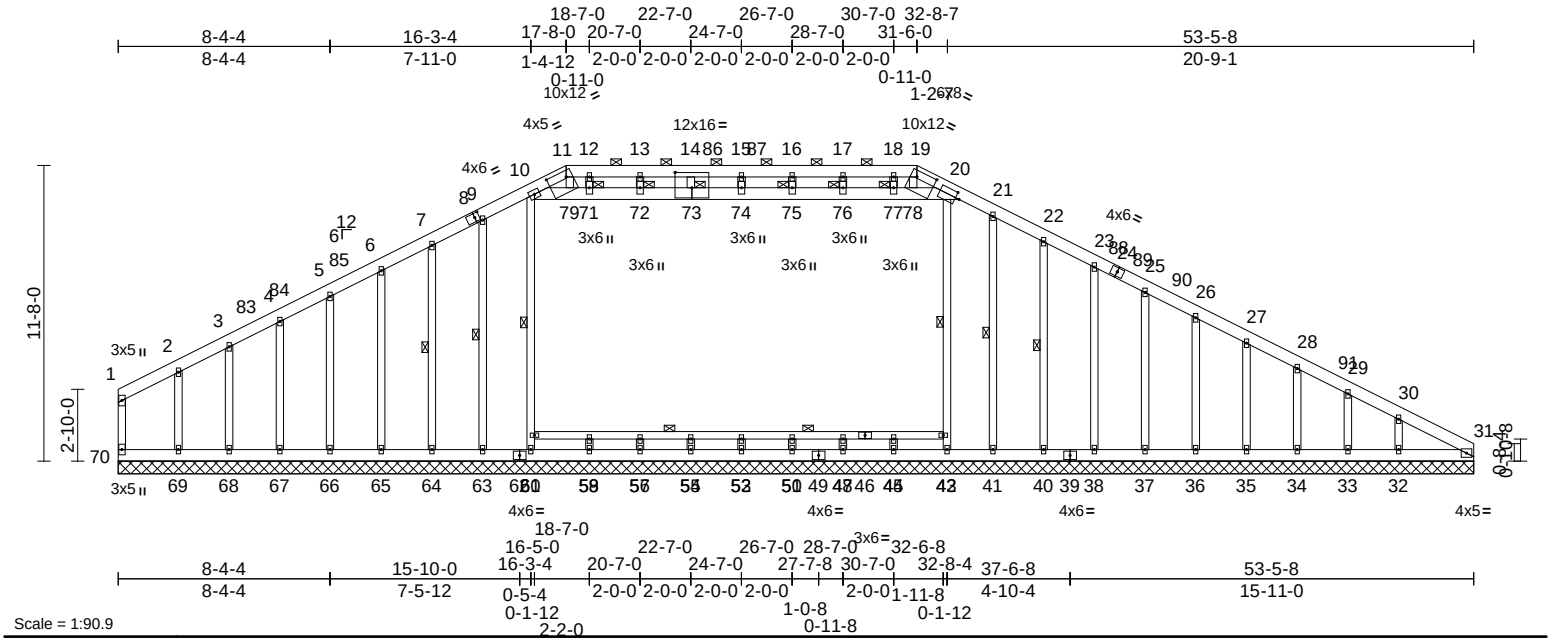
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Ceiling dead load (5.0 psf) on member(s). 4-49, 49-51, 50-51, 10-50, 11-48; Wall dead load (5.0psf) on member (s).4-42, 22-48, 10-48
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 41-42, 39-41, 38-39, 36-38, 35-36, 33-35, 31-33, 30-31, 28-30, 26-28, 24-26, 22-24
13) Refer to girder(s) for truss to truss connections.
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 46. This connection is for uplift only and does not consider lateral forces.
15) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
17) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	A10	Attic Supported Gable	1	1	I66625043 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:01 Page: 1

ID:8kdnaNVfrXy7X5iJovJ26tzRBB2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:90.9

Plate Offsets (X, Y): [8:0-2-2,0-2-0], [11:0-9-0,0-3-0], [14:0-8-0,0-7-4], [19:0-9-0,0-3-0], [20:0-1-14,0-2-12]

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	0.48	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	0.42	Horiz(TL)	0.01	31	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 502 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 60-46,46-43:2x4 SP No.2

WEBS 2x4 SP No.3 *Except* 10-61:2x4 SP No.2, 10-73,73-20:2x6 SP 2400F 2.0E

OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-12 oc purlins, except end verticals, and 2-0-0 oc purlins (4-5-12 max.): 11-19.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing:
58-60,56-58,54-56,52-54,50-52,48-50,44-48, 43-44.

WEBS 1 Row at midpt 10-61, 20-42, 21-41, 22-40, 9-63, 7-64

JOINTS 1 Brace at Jt(s): 71, 72, 73, 75, 76, 77

REACTIONS (size) 31=53-5-8, 32=53-5-8, 33=53-5-8, 34=53-5-8, 35=53-5-8, 36=53-5-8, 37=53-5-8, 38=53-5-8, 40=53-5-8, 41=53-5-8, 42=53-5-8, 45=53-5-8, 47=53-5-8, 51=53-5-8, 53=53-5-8, 55=53-5-8, 57=53-5-8, 59=53-5-8, 61=53-5-8, 63=53-5-8, 64=53-5-8, 65=53-5-8, 66=53-5-8, 67=53-5-8, 68=53-5-8, 69=53-5-8, 70=53-5-8, 80=53-5-8

Max Horiz 70=-221 (LC 15)

Max Uplift 31=-50 (LC 14), 32=-91 (LC 15), 33=-28 (LC 15), 34=-47 (LC 15), 35=-43 (LC 15), 36=-44 (LC 15), 37=-44 (LC 15), 38=-46 (LC 15), 40=-37 (LC 15), 42=-157 (LC 10), 61=-121 (LC 10), 63=-10 (LC 44), 64=-43 (LC 14), 65=-46 (LC 14), 66=-43 (LC 14), 67=-44 (LC 14), 68=-38 (LC 14), 69=-72 (LC 14), 70=-25 (LC 15), 80=-50 (LC 14)

Max Grav 31=166 (LC 28), 32=263 (LC 53), 33=142 (LC 6), 34=176 (LC 53), 35=169 (LC 6), 36=178 (LC 39), 37=219 (LC 45), 38=231 (LC 45), 40=212 (LC 45), 41=191 (LC 53), 42=842 (LC 40), 45=268 (LC 20), 47=232 (LC 20), 51=242 (LC 20), 53=239 (LC 20), 55=244 (LC 20), 57=226 (LC 20), 59=285 (LC 20), 61=859 (LC 40), 63=189 (LC 51), 64=222 (LC 43), 65=237 (LC 43), 66=232 (LC 43), 67=187 (LC 37), 68=170 (LC 5), 69=202 (LC 51), 70=114 (LC 21), 80=166 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-70=-81/30, 1-2=-56/35, 2-3=-62/70, 3-4=-73/107, 4-5=-85/140, 5-6=-97/180, 6-7=-116/223, 7-9=-131/263, 9-10=-129/281, 10-11=-2031/599, 11-12=-1938/579, 12-13=-1938/579, 13-14=-1938/579, 14-15=-1934/578, 15-16=-1934/578, 16-17=-1934/578, 17-18=-1934/578, 18-19=-1934/578, 19-20=-2022/599, 20-21=-134/316, 21-22=-135/305, 22-23=-122/282, 23-25=-106/258, 25-26=-94/235, 26-27=-90/211, 27-28=-111/188, 28-29=-133/165, 29-30=-161/141, 30-31=-205/135

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BOT CHORD 69-70=-100/208, 68-69=-100/208, 67-68=-100/208, 66-67=-100/208, 65-66=-100/208, 64-65=-100/208, 63-64=-100/208, 61-63=-100/208, 59-61=-98/204, 57-59=-98/204, 55-57=-98/204, 53-55=-98/204, 51-53=-98/204, 47-51=-98/204, 45-47=-98/204, 42-45=-98/204, 41-42=-98/206, 40-41=-98/206, 38-40=-98/206, 37-38=-98/206, 36-37=-98/206, 35-36=-98/206, 34-35=-98/206, 33-34=-98/206, 32-33=-98/206, 31-32=-98/206, 58-60=-4/4, 56-58=-4/4, 54-56=-4/4, 52-54=-4/4, 50-52=-4/4, 48-50=-4/4, 44-48=-4/4, 43-44=-4/4

WEBS 5-66=-191/68, 60-61=-816/147, 10-60=-798/158, 42-43=-803/180, 20-43=-787/190, 10-79=-393/1707, 71-79=-454/1914, 71-72=-454/1914, 72-74=-454/1914, 74-75=-453/1910, 75-76=-453/1910, 76-77=-453/1910, 77-78=-453/1910, 20-78=-388/1687, 21-41=-141/37, 22-40=-171/62, 23-38=-192/70, 25-37=-179/68, 26-36=-130/68, 27-35=-126/68, 28-34=-129/69, 29-33=-112/60, 30-32=-174/94, 9-63=-146/47, 7-64=-181/67, 6-65=-197/70, 4-67=-143/67, 3-68=-125/64, 2-69=-139/89, 12-71=-419/117, 13-72=-92/26, 14-73=-91/30, 15-74=-119/33, 16-75=-104/29, 17-76=-78/24, 18-77=-428/119, 19-78=-302/996, 11-79=-297/1007, 58-59=-150/0, 56-57=-111/0, 54-55=-122/0, 52-53=-119/0, 50-51=-122/0, 47-48=-114/0, 44-45=-141/0

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) 0-1-12 to 5-5-14, Interior (1) 5-5-14 to 10-1-6, Exterior(2R) 10-1-6 to 39-0-10, Interior (1) 39-0-10 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone;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 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, with BCDL = 10.0psf.
12) Ceiling dead load (5.0 psf) on member(s). 10-79, 71-79, 71-72, 72-73, 73-74, 74-75, 75-76, 76-77, 77-78, 20-78; Wall dead load (5.0psf) on member(s).60-61, 10-60, 42-43, 20-43
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 70, 50 lb uplift at joint 31, 43 lb uplift at joint 66, 121 lb uplift at joint 61, 157 lb uplift at joint 42, 37 lb uplift at joint 40, 46 lb uplift at joint 38, 44 lb uplift at joint 37, 44 lb uplift at joint 36, 43 lb uplift at joint 35, 47 lb uplift at joint 34, 28 lb uplift at joint 33, 91 lb uplift at joint 32, 10 lb uplift at joint 63, 43 lb uplift at joint 64, 46 lb uplift at joint 65, 44 lb uplift at joint 67, 38 lb uplift at joint 68, 72 lb uplift at joint 69 and 50 lb uplift at joint 31.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	B01	Common	1	1	I66625044 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:02 Page: 1

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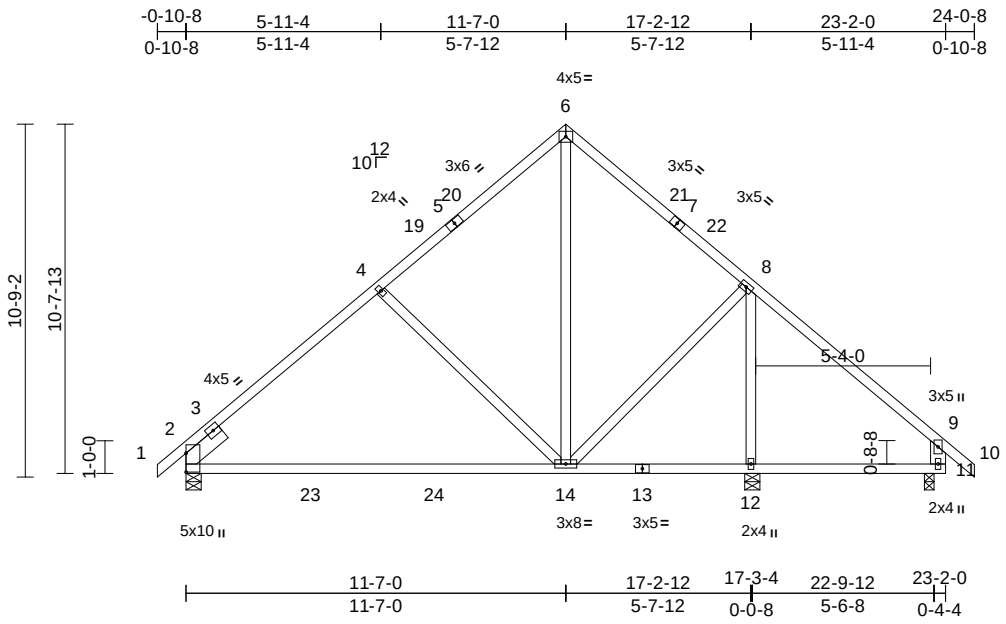

Scale = 1:70.3

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	0.65	Vert(LL)	-0.47	14-17	>436	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.77	14-17	>269	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.07	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 134 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.1 *Except* 13-11:2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 11-9:2x6 SP No.2
SLIDER	Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-5-15 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 11=0-3-8, 12=0-5-8
Max Horiz 2=265 (LC 13)
Max Uplift 2=-84 (LC 14), 11=-139 (LC 15)
Max Grav 2=904 (LC 5), 11=481 (LC 26), 12=838 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/34, 2-4=-1154/186, 4-6=-749/211, 6-8=-742/216, 8-9=-417/212, 9-10=0/42, 9-11=-432/201
BOT CHORD	2-14=-252/732, 12-14=-18/246, 11-12=-18/246
WEBS	6-14=-134/500, 8-14=-31/385, 8-12=-759/44, 4-14=-396/237

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 8-7-0, Exterior(2R) 8-7-0 to 14-7-0, Interior (1) 14-7-0 to 21-0-8, Exterior(2E) 21-0-8 to 24-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch 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. This connection is for uplift only and does not consider lateral forces.
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	B02	Common Girder	1	**2**	I66625045 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:02 Page: 1
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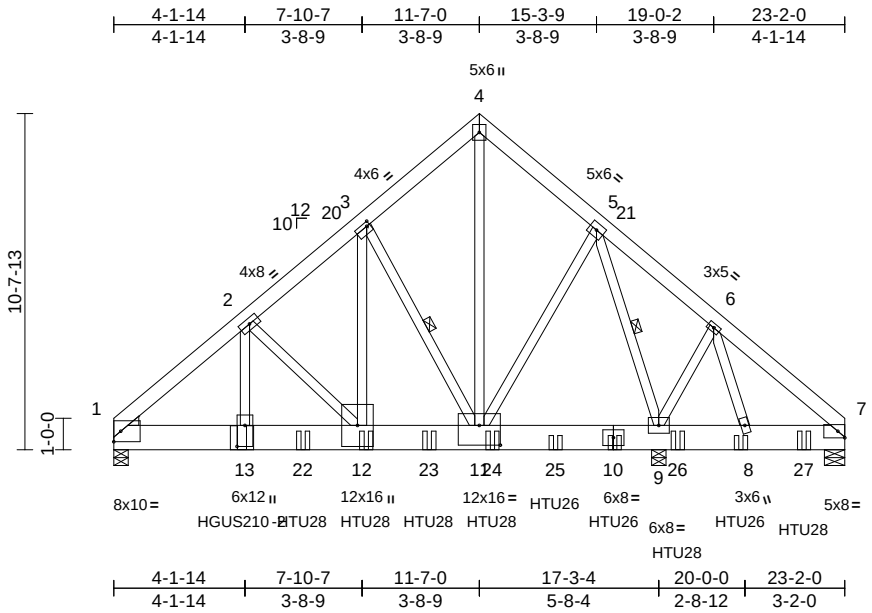

Scale = 1:73

Plate Offsets (X, Y): [3:0-1-4,0-1-8], [11:0-8-0,0-7-8], [13:0-8-0,0-3-0]

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	0.43	Vert(LL)	-0.09	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.19	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 480 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SP No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-11, 5-9

REACTIONS (size) 1=0-5-8, 7=0-7-12, 9=0-5-8
Max Horiz 1=227 (LC 11)
Max Uplift 7=-431 (LC 12)
Max Grav 1=8544 (LC 5), 7=712 (LC 19), 9=12514 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-11367/0, 2-3=-8527/0, 3-4=-5186/0, 4-5=-5130/0, 5-6=-35/255, 6-7=-84/627
BOT CHORD 1-13=0/8590, 12-13=0/8590, 11-12=0/6548, 9-11=0/1889, 8-9=-238/0, 7-8=-405/0
WEBS 2-13=0/3860, 2-12=-2924/0, 3-12=0/6703, 3-11=-5443/0, 4-11=0/6182, 5-11=0/4434, 5-9=-7519/0, 6-9=-260/534, 6-8=-767/0

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 4 rows staggered at 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 2-13 2x4 - 1 row at 0-2-0 oc, member 3-12 2x4 - 1 row at 0-6-0 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 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) 7. This connection is for uplift only and does not consider lateral forces.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Use Simpson Strong-Tie HGUS210-2 (46-10d Girder, 16-10d Truss) or equivalent at 4-0-12 from the left end to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie HTU28 (20-16d Girder, 26-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-0 from the left end to 10-0-0 to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie HTU28 (20-16d Girder, 26-10dx1 1/2 Truss) or equivalent spaced at 9-10-8 oc max. starting at 12-0-0 from the left end to 21-10-8 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie HTU26 (20-10d Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 1-10-8 oc max. starting at 14-0-0 from the left end to 15-10-8 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie HTU28 (20-10d Girder, 26-10dx1 1/2 Truss) or equivalent at 17-10-8 from the left end to connect truss(es) to back face of bottom chord.
16) Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent at 19-10-8 from the left end to connect truss(es) to back face of bottom chord.

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17) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-60, 4-7=-60, 14-17=-20
   Concentrated Loads (lb)
   Vert: 10=-1932 (B), 13=-3478 (B), 12=-2198 (B), 8=-856 (B), 22=-2198 (B), 23=-2198 (B), 24=-1932 (B), 25=-1932 (B), 26=-856 (B), 27=-1006 (B)

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	B03	Common Supported Gable	1	1	I66625046 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:02 Page: 1
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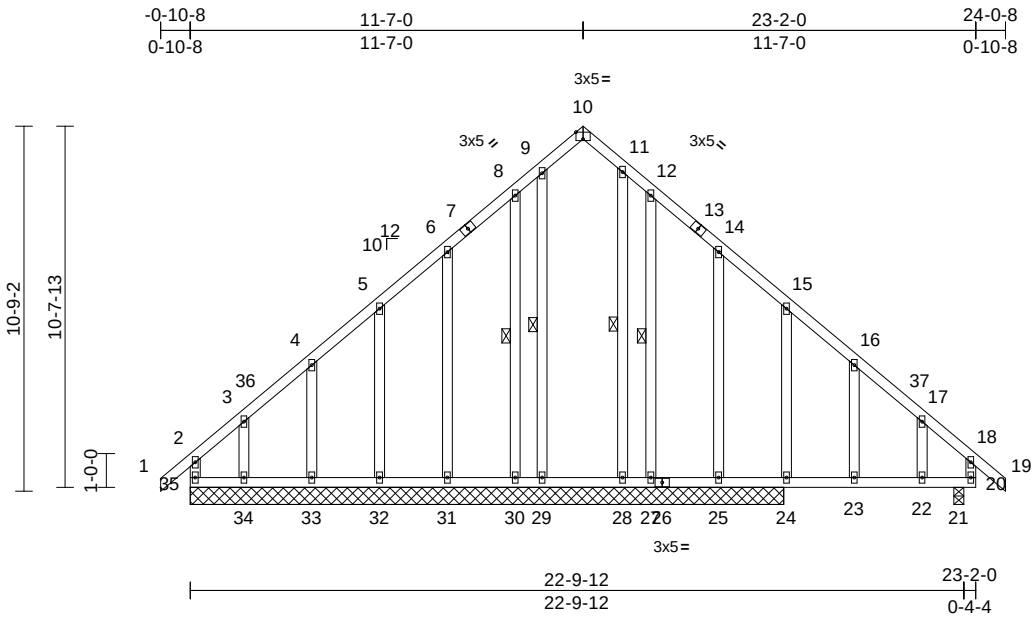

Scale = 1:67.9

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

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	0.25	Vert(LL)	0.05	22-23	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	0.04	22-23	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	21	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 188 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.
WEBS 1 Row at midpt 9-29, 11-28, 8-30, 12-27

REACTIONS (size) 21=0-3-8, 24=17-6-0, 25=17-6-0, 27=17-6-0, 28=17-6-0, 29=17-6-0, 30=17-6-0, 31=17-6-0, 32=17-6-0, 33=17-6-0, 34=17-6-0, 35=17-6-0
Max Horiz 35=-262 (LC 12)
Max Uplift 21=-11 (LC 11), 24=-249 (LC 15), 25=-2 (LC 14), 27=-169 (LC 15), 28=-18 (LC 13), 29=-40 (LC 13), 30=-113 (LC 14), 31=-85 (LC 14), 32=-76 (LC 14), 33=-53 (LC 14), 34=-200 (LC 14), 35=-194 (LC 10)
Max Grav 21=320 (LC 6), 24=447 (LC 26), 25=111 (LC 22), 27=213 (LC 22), 28=252 (LC 15), 29=254 (LC 15), 30=172 (LC 21), 31=211 (LC 5), 32=197 (LC 25), 33=193 (LC 25), 34=228 (LC 30), 35=336 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-35=-262/156, 1-2=0/38, 2-3=-271/227, 3-4=-208/179, 4-5=-207/179, 5-6=-188/192, 6-8=-180/263, 8-9=-210/375, 9-10=-150/215, 10-11=-148/210, 11-12=-212/377, 12-14=-174/257, 14-15=-167/203, 15-16=-81/65, 16-17=-137/48, 17-18=-173/47, 18-19=0/38, 18-20=-188/71
BOT CHORD 34-35=-71/147, 33-34=-71/147, 32-33=-71/147, 31-32=-71/147, 30-31=-71/147, 29-30=-71/147, 28-29=-71/147, 27-28=-71/147, 25-27=-71/147, 24-25=-71/147, 23-24=-71/147, 22-23=-71/147, 21-22=-71/147, 20-21=-71/147
WEBS 9-29=-264/98, 11-28=-275/104, 8-30=-152/162, 6-31=-169/114, 5-32=-142/96, 4-33=-151/95, 3-34=-135/154, 12-27=-167/176, 14-25=-132/78, 15-24=-252/192, 16-23=-73/70, 17-22=-86/56

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 8-7-0, Corner(3R) 8-7-0 to 14-7-0, Exterior(2N) 14-7-0 to 21-0-8, Corner(3E) 21-0-8 to 24-0-8 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) 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 35, 29, 28, 30, 31, 32, 33, 34, 27, 25, and 24. This connection is for uplift only and does not consider lateral forces.
13) H10A 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.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	B03	Common Supported Gable	1	1	I66625046 Job Reference (optional)

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	C01	Half Hip	4	1	I66625047 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:02 Page: 1
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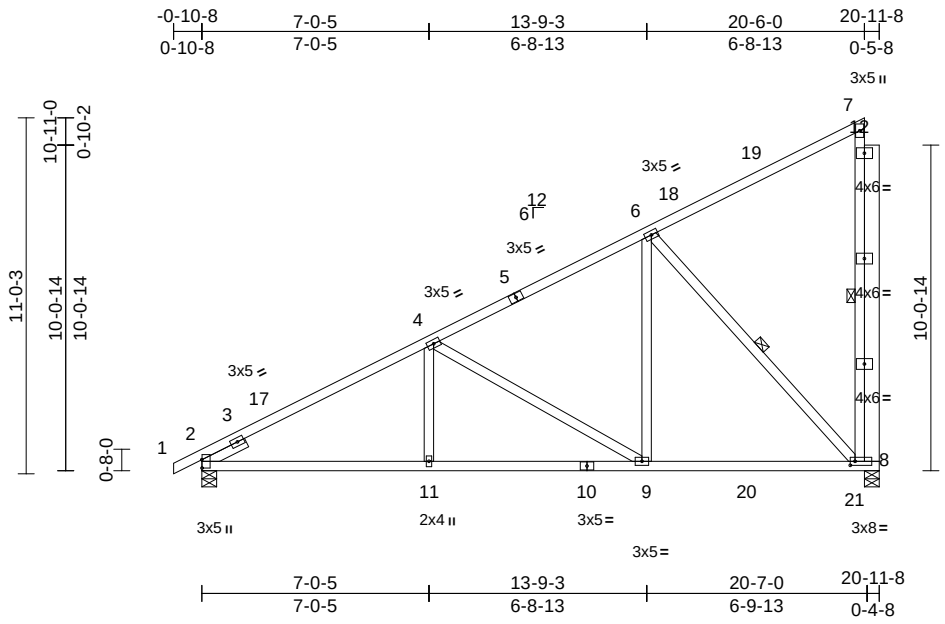

Scale = 1:71.3

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

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	0.83	Vert(LL)	-0.08	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.14	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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* 7-8:2x4 SP No.2
OTHERS 2x6 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-8, 6-8

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=387 (LC 14)
Max Uplift 2=-49 (LC 14), 8=-342 (LC 14)
Max Grav 2=954 (LC 5), 8=1731 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1437/30, 4-6=-824/0, 6-7=-166/102, 7-8=-270/93
BOT CHORD 2-11=-399/1321, 9-11=-320/1321, 8-9=-159/721
WEBS 4-11=0/263, 4-9=-691/185, 6-9=0/637, 6-8=-1026/227

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 17-4-4, Exterior(2E) 17-4-4 to 20-4-4 zone; 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) All plates are 3x5 MT20 unless otherwise indicated.
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) 8 and 2. This connection is for uplift only and does not consider lateral forces.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 752 lb down and 128 lb up at 20-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-60, 8-13=-20
Concentrated Loads (lb)
Vert: 8=-747

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	C02	Half Hip	1	1	I66625048 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:02 Page: 1

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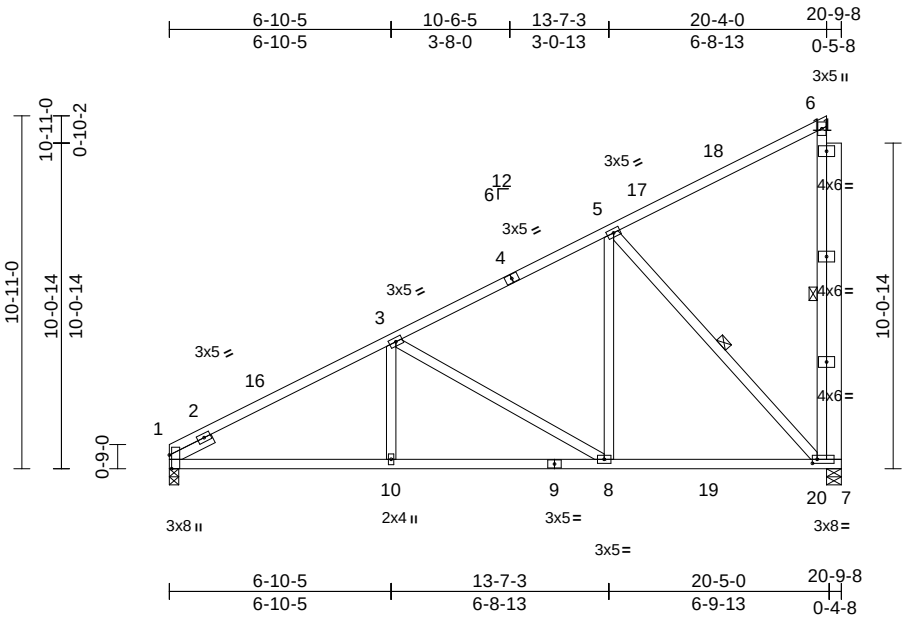

Scale = 1:71.3

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

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	0.82	Vert(LL)	-0.08	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.14	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 146 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=0-3-8, 7=0-5-8
Max Horiz 1=370 (LC 14)
Max Uplift 1=-30 (LC 14), 7=-342 (LC 14)
Max Grav 1=900 (LC 5), 7=1714 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1401/30, 3-5=-812/0, 5-6=-162/100, 6-7=-265/95
BOT CHORD	1-10=-405/1286, 8-10=-319/1286, 7-8=-159/716
WEBS	3-10=0/254, 3-8=-658/185, 5-8=0/624, 5-7=-1018/227

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) 0-2-0 to 3-2-0, Interior (1) 3-2-0 to 17-4-4, Exterior(2E) 17-4-4 to 20-4-4 zone;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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 1. This connection is for uplift only and does not consider lateral forces.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 752 lb down and 129 lb up at 20-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-6=-60, 7-12=-20
   Concentrated Loads (lb)
   Vert: 7=-747

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	D01	Common Supported Gable	1	1	I66625049 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:03 Page: 1

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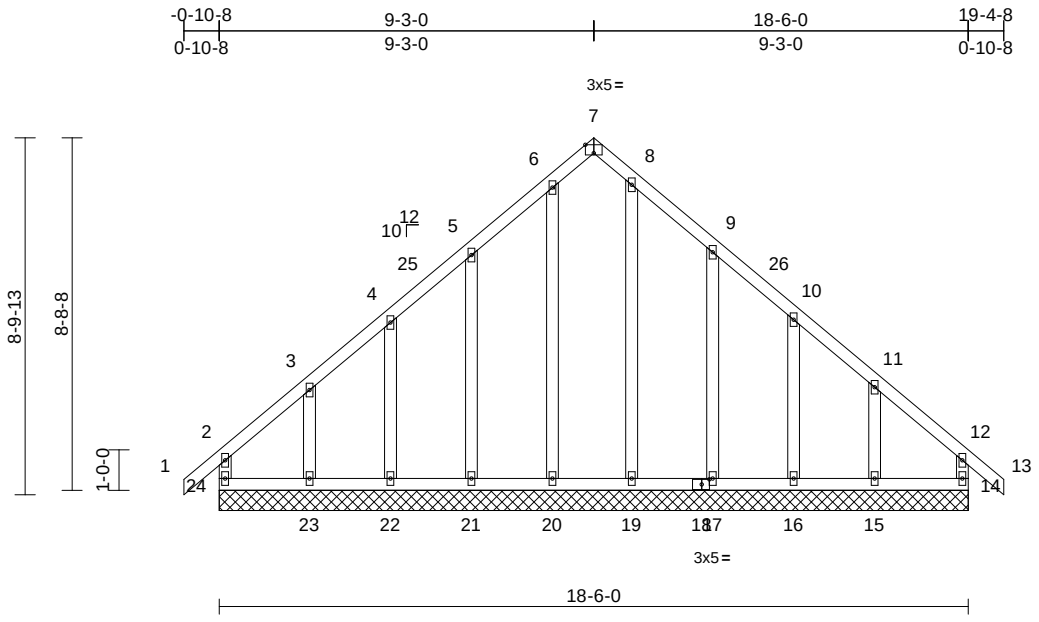

Scale = 1:56.9

Plate Offsets (X, Y): [7:0-2-8,Edge], [18:0-2-4,0-1-8]

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
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
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=18-6-0, 15=18-6-0, 16=18-6-0, 17=18-6-0, 19=18-6-0, 20=18-6-0, 21=18-6-0, 22=18-6-0, 23=18-6-0, 24=18-6-0

Max Horiz 24=-225 (LC 12)

Max Uplift 14=-48 (LC 11), 15=-163 (LC 15), 16=-46 (LC 15), 17=-117 (LC 15), 21=-114 (LC 14), 22=-47 (LC 14), 23=-168 (LC 14), 24=-71 (LC 10)

Max Grav 14=190 (LC 25), 15=223 (LC 26), 16=173 (LC 22), 17=255 (LC 22), 19=222 (LC 22), 20=227 (LC 21), 21=252 (LC 21), 22=172 (LC 21), 23=226 (LC 25), 24=206 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-24=-168/64, 1-2=0/39, 2-3=-165/141, 3-4=-106/91, 4-5=-93/116, 5-6=-115/233, 6-7=-96/175, 7-8=-92/166, 8-9=-117/238, 9-10=-76/119, 10-11=-89/71, 11-12=-151/116, 12-13=0/39, 12-14=-155/46

BOT CHORD 23-24=-105/187, 22-23=-105/187, 21-22=-105/187, 20-21=-105/187, 19-20=-105/187, 17-19=-105/187, 16-17=-105/187, 15-16=-105/187, 14-15=-105/187

WEBS 6-20=-187/8, 8-19=-183/11, 5-21=-212/161, 4-22=-142/94, 3-23=-172/158, 9-17=-214/164, 10-16=-143/90, 11-15=-170/170

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 2-2-12, Exterior(2N) 2-2-12 to 6-2-12, Corner(3R) 6-2-12 to 12-2-4, Exterior (2N) 12-2-4 to 16-2-4, Corner(3E) 16-2-4 to 19-4-8 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 71 lb uplift at joint 24, 48 lb uplift at joint 14, 114 lb uplift at joint 21, 47 lb uplift at joint 22, 168 lb uplift at joint 23, 117 lb uplift at joint 17, 46 lb uplift at joint 16 and 163 lb uplift at joint 15.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	D02	Common Girder	1	3	I66625050 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:03 Page: 1
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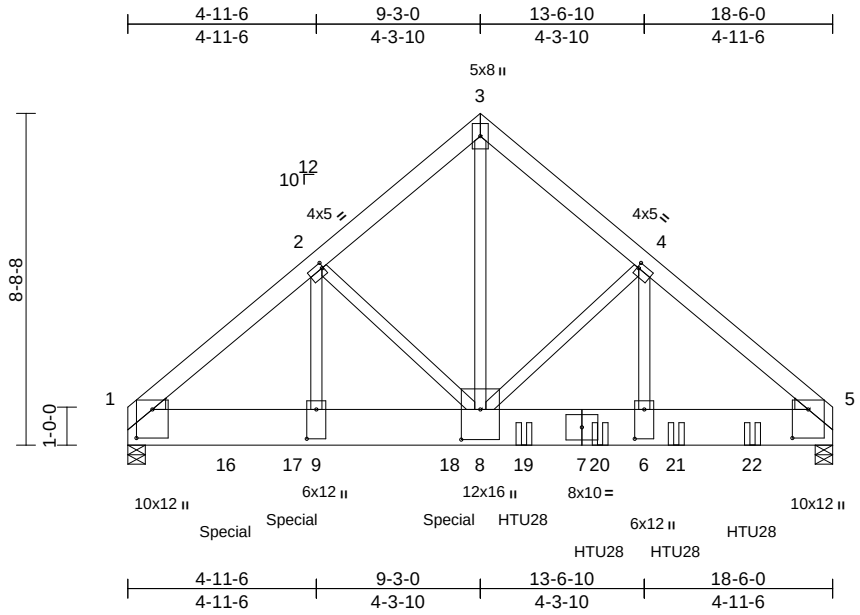

Scale = 1:60.5

Plate Offsets (X, Y): [1:0-9-0,0-5-0], [2:0-0-8,0-1-12], [4:0-0-8,0-1-12], [5:0-9-0,0-5-0], [6:0-9-4,0-3-0], [8:0-9-8,0-6-0], [9:0-9-4,0-3-0]

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	0.35	Vert(LL)	-0.08	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.14	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 556 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x12 SP 2400F 2.0E
WEBS 2x4 SP No.3 *Except* 8-3:2x4 SP No.1
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

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

REACTIONS (size) 1=0-5-8, 5=0-5-8
Max Horiz 1=-181 (LC 10)
Max Grav 1=14270 (LC 21), 5=10749 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-14538/0, 2-3=-10009/0, 3-4=-9999/0, 4-5=-12672/0
BOT CHORD 1-9=0/11144, 8-9=0/11144, 6-8=0/9661, 5-6=0/9661
WEBS 3-8=0/12305, 4-8=-2831/0, 4-6=0/3607, 2-8=-5117/0, 2-9=0/6428

NOTES
1) 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected with Simpson SDS 1/4 x 4-1/2 screws as follows: 2x12 - 3 rows staggered at 0-4-0 oc.
Web chords connected with 10d (0.131"x3") nails 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 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) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie HTU28 (20-16d Girder, 26-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 10-4-12 from the left end to 16-4-12 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 7875 lb down and 559 lb up at 2-7-0, and 3596 lb down at 4-4-0, and 3596 lb down at 8-5-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 10-13=-20
Concentrated Loads (lb)
Vert: 16=-4967 (B), 17=-2857 (B), 18=-2858 (B), 19=-1800 (B), 20=-1800 (B), 21=-1800 (B), 22=-1800 (B)

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	E01	Common	1	1	I66625051 Job Reference (optional)

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

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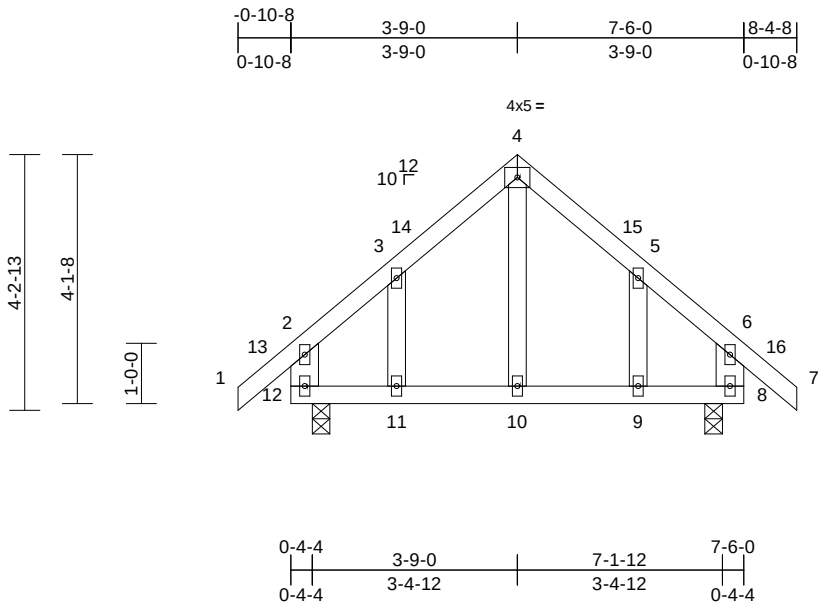

Scale = 1:38.1

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	0.22	Vert(LL)	-0.01	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 44 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2 *Except* 10-4:2x4 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) 8=0-3-8, 12=0-3-8
Max Horiz 12=-116 (LC 12)
Max Uplift 8=-38 (LC 15), 12=-38 (LC 14)
Max Grav 8=451 (LC 22), 12=451 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-282/70, 3-4=-238/145, 4-5=-239/143, 5-6=-282/67, 6-7=0/54, 2-12=-358/141, 6-8=-358/136
BOT CHORD 11-12=-7/164, 10-11=-7/164, 9-10=-7/164, 8-9=-7/164
WEBS 4-10=-65/116, 3-11=-78/91, 5-9=-78/93

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, Exterior(2R) 2-1-8 to 5-4-8, Exterior(2E) 5-4-8 to 8-4-8 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) H10A 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.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	G01	Monopitch	5	1	I66625052 Job Reference (optional)

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

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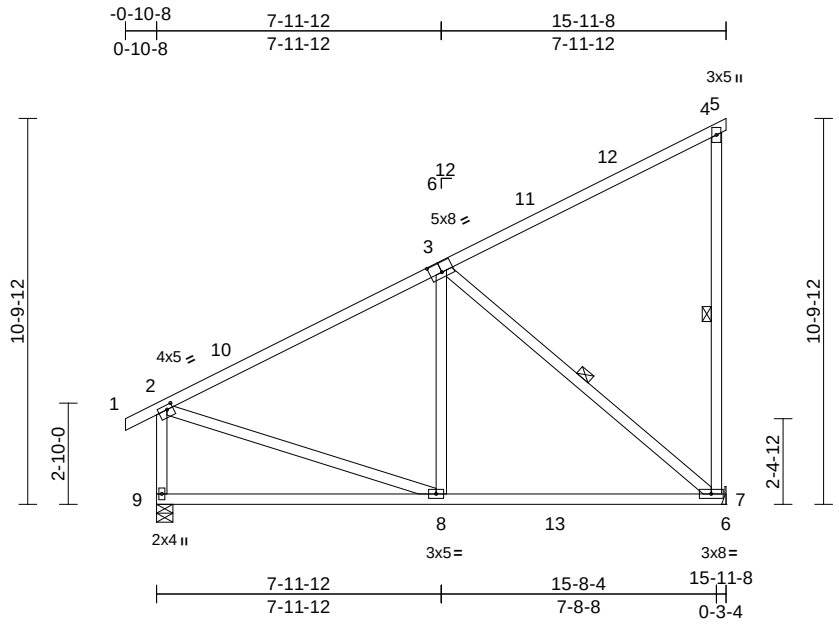

Scale = 1:64.6

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

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	0.95	Vert(LL)	-0.12	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.20	7-8	>923	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	-0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 106 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 4-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-7, 3-7

REACTIONS (size) 7= Mechanical, 9=0-5-8
Max Horiz 9=273 (LC 14)
Max Uplift 7=-221 (LC 14)
Max Grav 7=831 (LC 5), 9=754 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-678/119, 4-5=-12/0, 4-7=-330/123, 2-9=-655/84
BOT CHORD 8-9=-333/217, 7-8=-196/606, 6-7=0/0
WEBS 3-8=0/313, 3-7=-769/250, 2-8=0/489

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 12-11-8, Exterior(2E) 12-11-8 to 15-11-8 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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	H01	Monopitch Supported Gable	2	1	I66625053 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:03 Page: 1
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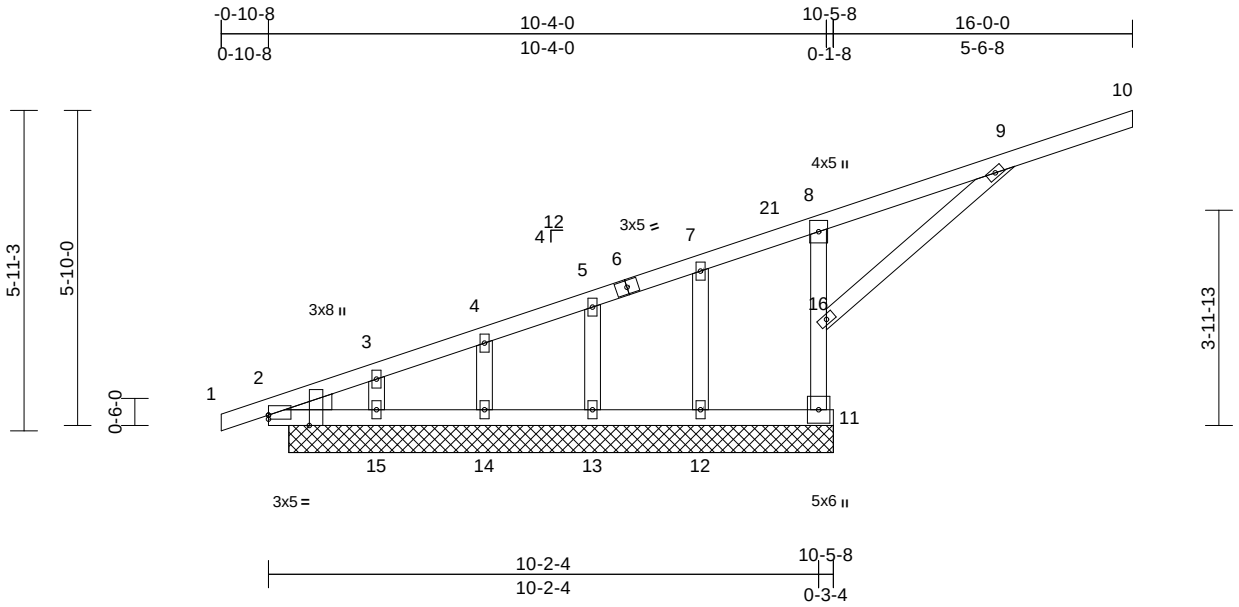

Scale = 1:42.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	-0.01	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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.1 *Except* 9-16:2x4 SP No.3
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. Except: 4-6-0 oc bracing: 11-16
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=10-1-0, 11=10-1-0, 12=10-1-0, 13=10-1-0, 14=10-1-0, 15=10-1-0, 20=10-1-0
Max Horiz 2=174 (LC 11), 20=174 (LC 11)
Max Uplift 2=-3 (LC 11), 11=-237 (LC 14), 12=-1 (LC 10), 13=-18 (LC 10), 14=-151 (LC 14), 20=-3 (LC 11)
Max Grav 2=1 (LC 21), 11=803 (LC 21), 12=136 (LC 1), 13=170 (LC 1), 14=205 (LC 21), 15=236 (LC 27), 20=1 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/17, 2-3=-486/419, 3-4=-476/427, 4-5=-424/423, 5-7=-384/406, 7-8=-387/476, 8-9=-567/841, 9-10=-63/0, 11-16=-877/501, 8-16=-234/114
BOT CHORD	2-15=-382/272, 14-15=-382/272, 13-14=-382/272, 12-13=-382/272, 11-12=-382/272
WEBS	3-15=-143/21, 4-14=-132/140, 5-13=-161/102, 7-12=-42/57, 9-16=-979/590

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 2-0-0, Interior (1) 2-0-0 to 16-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) 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) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 2, 14, 13, and 12. This connection is for uplift only and does not consider lateral forces.
11) Non Standard bearing condition. Review required.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	H02	Monopitch	6	1	I66625054 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:03 Page: 1
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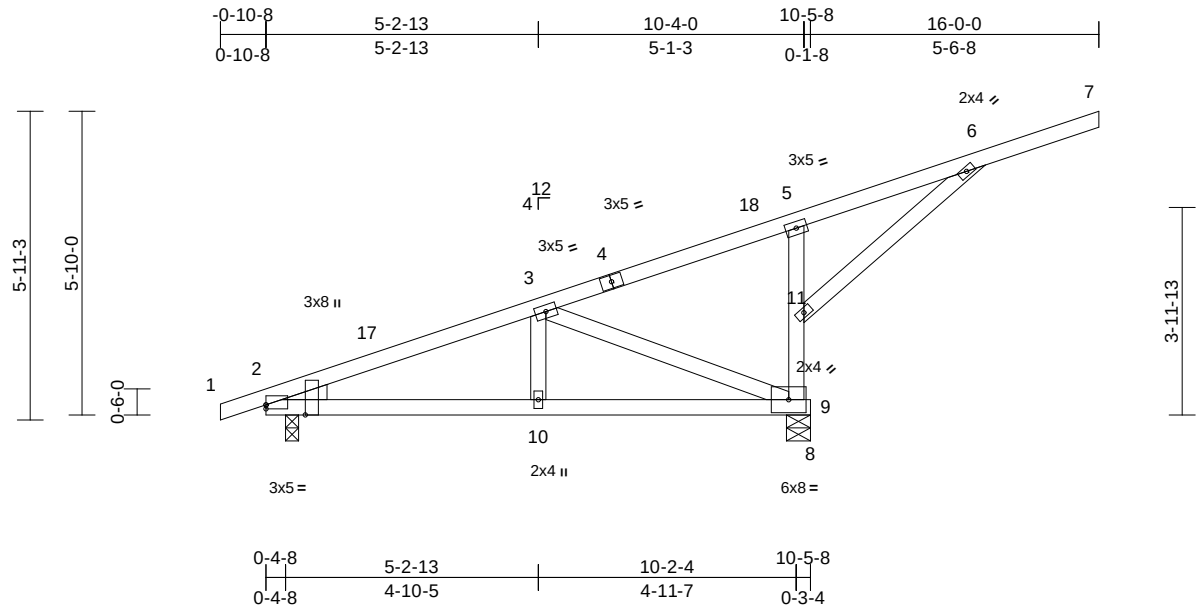


Scale = 1:44.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	0.03	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.06	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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 *Except* 5-9:2x4 SP No.1
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
Except:
4-4-0 oc bracing: 9-11
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 9=0-5-8
Max Horiz 2=206 (LC 10)
Max Uplift 2=-102 (LC 10), 9=-365 (LC 10)
Max Grav 2=377 (LC 1), 9=1084 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-368/82, 3-5=-411/468, 5-6=-576/849, 6-7=-63/0, 9-11=-850/485, 5-11=-235/92
BOT CHORD 2-10=-220/338, 9-10=-220/338, 8-9=0/0
WEBS 3-10=-130/213, 3-9=-616/482, 6-11=-988/599

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 16-0-0 zone; cantilever left exposed ; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 2. This connection is for uplift only and does not consider lateral forces.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

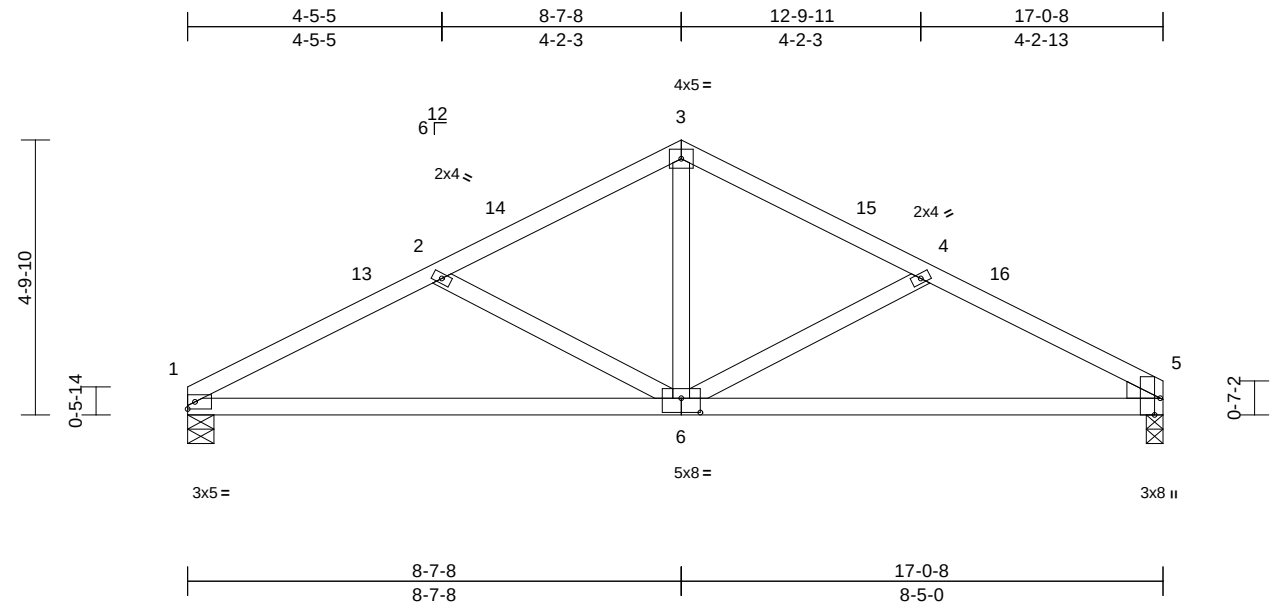
July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	J01	Common	5	1	I66625055 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:03 ID:yPXMLbyKekkHSiWSlZLGINzRR58-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:40.3

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

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	0.38	Vert(LL)	-0.09	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.19	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 75 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-1-15 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 5=0-3-8
Max Horiz 1=71 (LC 14)
Max Uplift 1=-66 (LC 14), 5=-64 (LC 15)
Max Grav 1=747 (LC 20), 5=746 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-1256/309, 2-3=-879/232, 3-4=-871/231, 4-5=-1211/300
BOT CHORD	1-5=-221/1083
WEBS	3-6=-51/474, 4-6=-401/159, 2-6=-439/174

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 5-7-8, Exterior(2R) 5-7-8 to 11-7-8, Interior (1) 11-7-8 to 14-0-8, Exterior(2E) 14-0-8 to 17-0-8 zone;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 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 SP No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 1.
9) 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.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	PBA	Piggyback	2	1	I66625056 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:04 Page: 1
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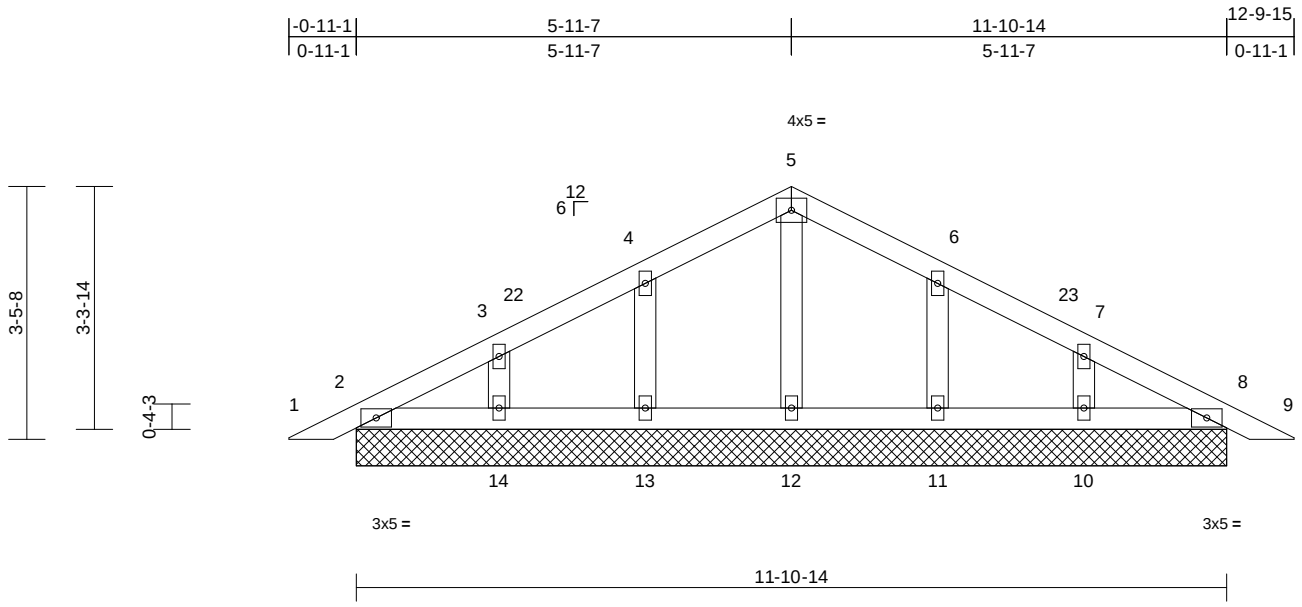

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/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

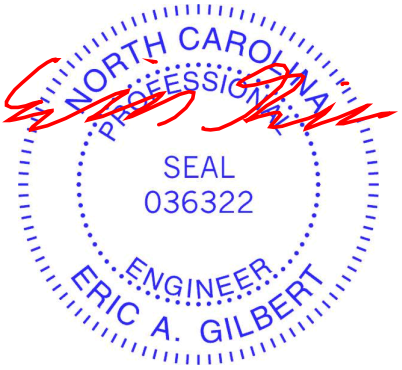
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-10-14, 8=11-10-14, 10=11-10-14, 11=11-10-14, 12=11-10-14, 13=11-10-14, 14=11-10-14, 15=11-10-14, 19=11-10-14
Max Horiz 2=52 (LC 18), 15=52 (LC 18)
Max Uplift 2=-9 (LC 15), 8=-12 (LC 15), 10=-45 (LC 15), 11=-47 (LC 15), 13=-47 (LC 14), 14=-46 (LC 14), 15=-9 (LC 15), 19=-12 (LC 15)
Max Grav 2=125 (LC 21), 8=125 (LC 22), 10=240 (LC 22), 11=243 (LC 22), 12=143 (LC 22), 13=243 (LC 21), 14=240 (LC 21), 15=125 (LC 21), 19=125 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-46/33, 3-4=-56/50, 4-5=-64/116, 5-6=-64/116, 6-7=-56/50, 7-8=-30/26, 8-9=0/17
BOT CHORD 2-14=-9/67, 13-14=-9/67, 12-13=-9/67, 11-12=-9/67, 10-11=-9/67, 8-10=-9/67
WEBS 5-12=-102/0, 4-13=-207/124, 3-14=-183/114, 6-11=-207/124, 7-10=-183/114

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) 0-4-3 to 3-4-3, Exterior(2N) 3-4-3 to 3-11-0, Corner(3R) 3-11-0 to 9-11-0, Exterior(2N) 9-11-0 to 10-5-13, Corner(3E) 10-5-13 to 13-5-13 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 8, 13, 14, 11, and 10. This connection is for uplift only and does not consider lateral forces.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	PBA1	Piggyback	16	1	I66625057 Job Reference (optional)

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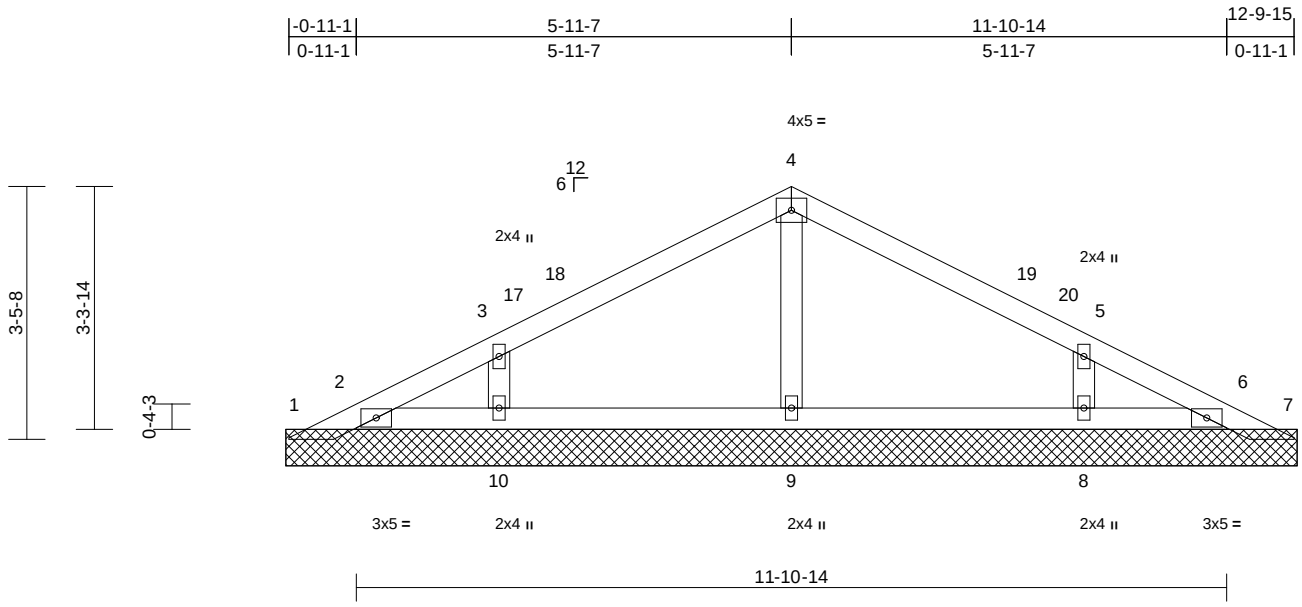

Scale = 1:31.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 47 lb	FT = 20%

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

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

REACTIONS (size) 1=13-10-0, 2=13-10-0, 6=13-10-0, 7=13-10-0, 8=13-10-0, 9=13-10-0, 10=13-10-0, 11=13-10-0, 14=13-10-0
Max Horiz 1=52 (LC 18)
Max Uplift 1=-26 (LC 15), 7=-11 (LC 15), 8=-92 (LC 15), 10=-91 (LC 14)
Max Grav 1=45 (LC 21), 2=69 (LC 1), 6=57 (LC 1), 7=47 (LC 22), 8=439 (LC 22), 9=299 (LC 21), 10=440 (LC 21), 11=69 (LC 1), 14=57 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-56/65, 2-3=-54/48, 3-4=-124/94, 4-5=-124/94, 5-6=-36/48, 6-7=-19/15
BOT CHORD 2-10=-8/45, 9-10=-8/45, 8-9=-8/45, 6-8=-8/45
WEBS 4-9=-213/92, 3-10=-385/205, 5-8=-384/205

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) 0-4-3 to 3-4-3, Interior (1) 3-4-3 to 3-11-0, Exterior(2R) 3-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-13, Exterior(2E) 10-5-13 to 13-5-13 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 26 lb uplift at joint 1 and 11 lb uplift at joint 7.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10 and 8. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	PBA2	Piggyback	2	4	I66625058 Job Reference (optional)

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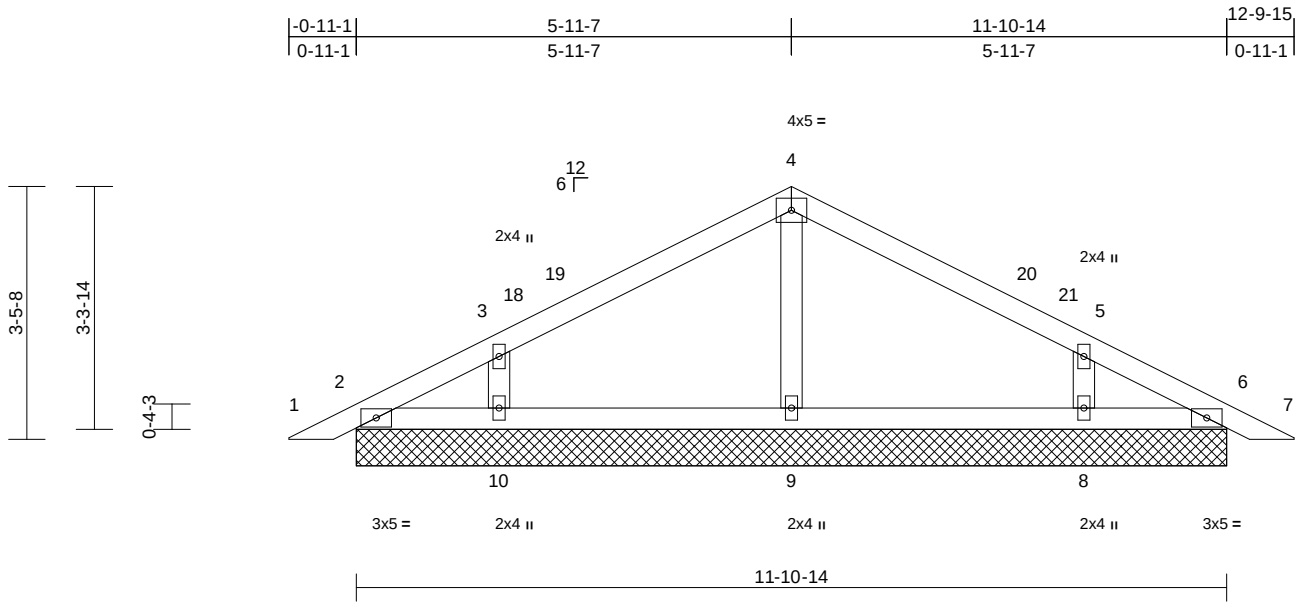

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 188 lb	FT = 20%

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

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

REACTIONS (size) 2=11-10-14, 6=11-10-14, 8=11-10-14, 9=11-10-14, 10=11-10-14, 11=11-10-14, 15=11-10-14
Max Horiz 2=52 (LC 18), 11=52 (LC 18)
Max Uplift 2=-11 (LC 15), 6=-4 (LC 11), 8=-87 (LC 15), 10=-87 (LC 14), 11=-11 (LC 15), 15=-4 (LC 11)
Max Grav 2=86 (LC 1), 6=86 (LC 1), 8=423 (LC 22), 9=302 (LC 21), 10=423 (LC 21), 11=86 (LC 1), 15=86 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-53/45, 3-4=-123/96, 4-5=-123/96, 5-6=-33/45, 6-7=0/17
BOT CHORD 2-10=-8/47, 9-10=-2/46, 8-9=-2/46, 6-8=-8/47
WEBS 4-9=-215/91, 3-10=-375/198, 5-8=-375/198

NOTES
1) 4-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails 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 and C-C Exterior(2E) 0-4-3 to 3-4-3, Interior (1) 3-4-3 to 3-11-0, Exterior(2R) 3-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-13, Exterior(2E) 10-5-13 to 13-5-13 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
5) 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.
6) 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
7) Unbalanced snow loads have been considered for this design.
8) 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.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 4-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 6, 10, and 8. This connection is for uplift only and does not consider lateral forces.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB1	Valley	1	1	I66625059 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:04 Page: 1

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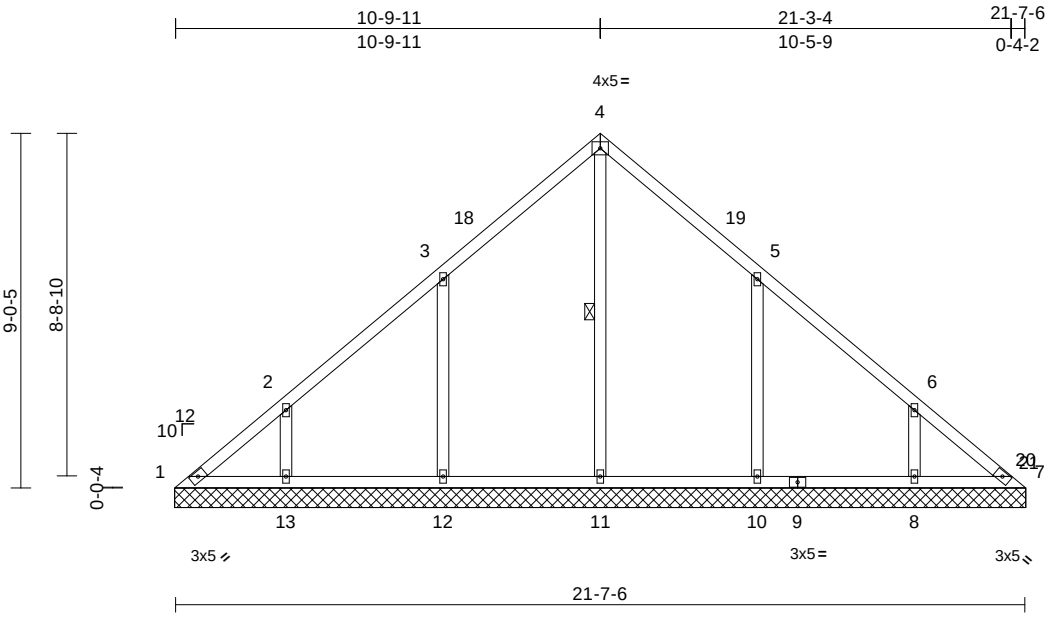

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 106 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 1=21-8-0, 7=21-8-0, 8=21-8-0, 10=21-8-0, 11=21-8-0, 12=21-8-0, 13=21-8-0
Max Horiz 1=207 (LC 11)
Max Uplift 1=-47 (LC 10), 7=-6 (LC 11), 8=-113 (LC 15), 10=-174 (LC 15), 12=-173 (LC 14), 13=-118 (LC 14)
Max Grav 1=148 (LC 25), 7=107 (LC 27), 8=363 (LC 25), 10=473 (LC 6), 11=417 (LC 27), 12=473 (LC 5), 13=370 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-212/174, 2-3=-163/132, 3-4=-186/182, 4-5=-186/155, 5-6=-114/84, 6-7=-167/108
BOT CHORD 1-13=-77/153, 12-13=-77/153, 11-12=-77/153, 10-11=-77/153, 8-10=-77/153, 7-8=-77/153
WEBS 4-11=-210/2, 3-12=-376/222, 2-13=-265/163, 5-10=-376/222, 6-8=-264/161

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 2-10-0, Interior (1) 2-10-0 to 7-10-0, Exterior(2R) 7-10-0 to 13-10-0, Interior (1) 13-10-0 to 18-3-3, Exterior(2E) 18-3-3 to 21-3-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1, 6 lb uplift at joint 7, 173 lb uplift at joint 12, 118 lb uplift at joint 13, 174 lb uplift at joint 10 and 113 lb uplift at joint 8.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB2	Valley	1	1	I66625060 Job Reference (optional)

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

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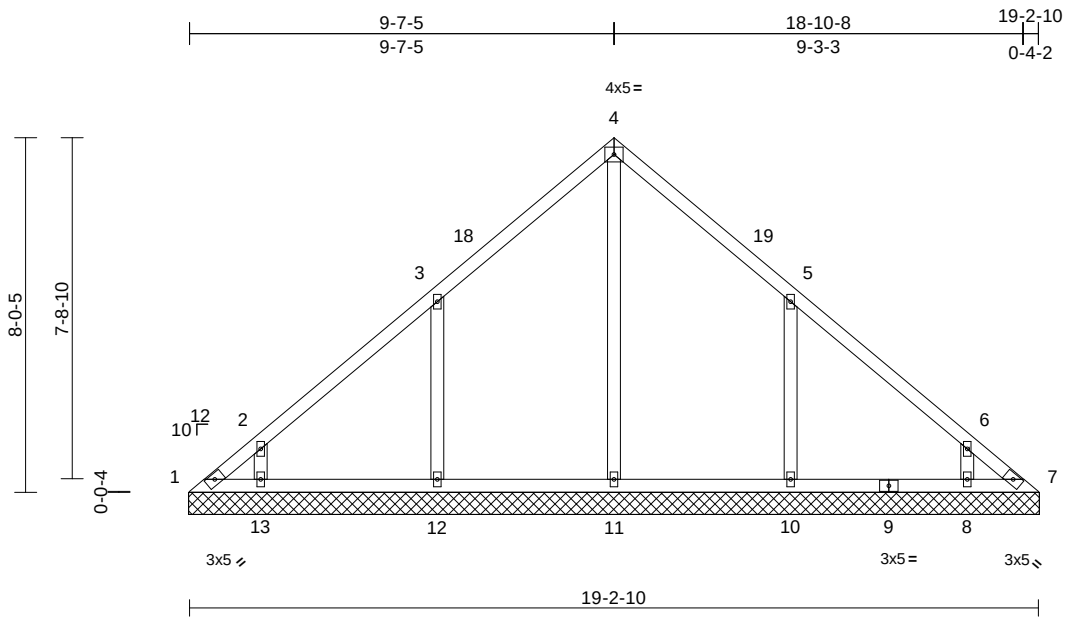

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 90 lb	FT = 20%

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

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

REACTIONS (size) 1=19-3-3, 7=19-3-3, 8=19-3-3, 10=19-3-3, 11=19-3-3, 12=19-3-3, 13=19-3-3
Max Horiz 1=-184 (LC 12)
Max Uplift 1=-69 (LC 12), 7=-24 (LC 13), 8=-88 (LC 15), 10=-175 (LC 15), 12=-175 (LC 14), 13=-93 (LC 14)
Max Grav 1=110 (LC 14), 7=80 (LC 15), 8=318 (LC 25), 10=480 (LC 6), 11=374 (LC 27), 12=480 (LC 5), 13=325 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-219/154, 2-3=-184/117, 3-4=-208/163, 4-5=-208/139, 5-6=-142/63, 6-7=-180/96
BOT CHORD 1-13=-76/140, 12-13=-61/140, 11-12=-61/140, 10-11=-61/140, 8-10=-61/140, 7-8=-61/140
WEBS 4-11=-181/6, 3-12=-379/222, 2-13=-258/169, 5-10=-379/222, 6-8=-258/167

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 6-7-10, Exterior(2R) 6-7-10 to 12-7-10, Interior (1) 12-7-10 to 16-3-3, Exterior(2E) 16-3-3 to 19-3-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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) All plates are 2x4 MT20 unless otherwise indicated.
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, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 1, 24 lb uplift at joint 7, 175 lb uplift at joint 12, 93 lb uplift at joint 13, 175 lb uplift at joint 10 and 88 lb uplift at joint 8.
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 7.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB3	Valley	1	1	I66625061 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:04 Page: 1
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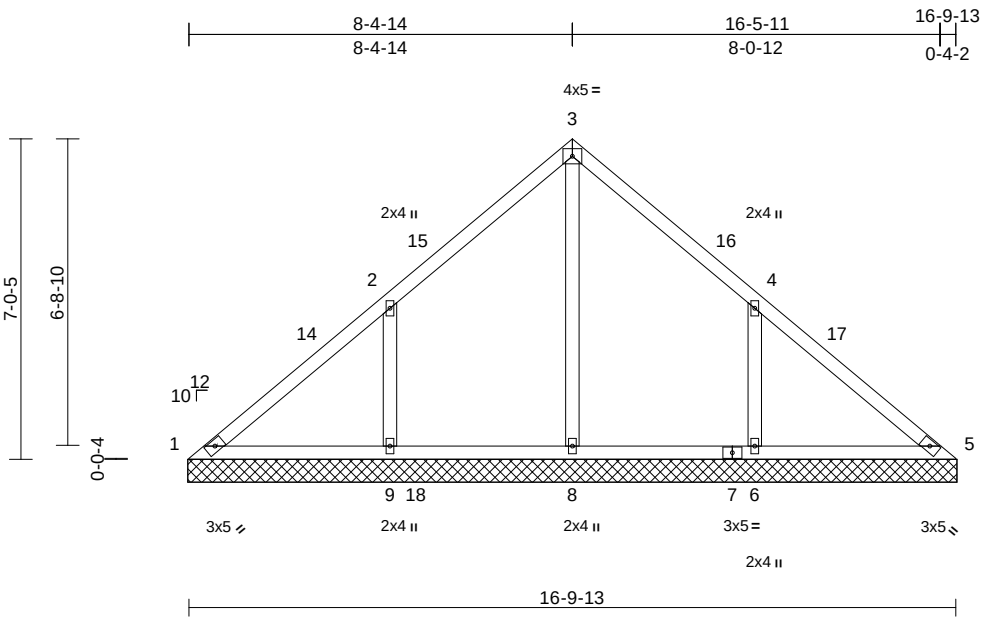

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 75 lb	FT = 20%

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

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

REACTIONS (size) 1=16-10-6, 5=16-10-6, 6=16-10-6, 8=16-10-6, 9=16-10-6
Max Horiz 1=-161 (LC 10)
Max Uplift 1=-22 (LC 10), 6=-182 (LC 15), 9=-184 (LC 14)
Max Grav 1=120 (LC 30), 5=104 (LC 21), 6=519 (LC 6), 8=502 (LC 24), 9=520 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-143/255, 2-3=-106/193, 3-4=-106/173, 4-5=-118/219
BOT CHORD 1-9=-135/136, 8-9=-135/136, 6-8=-135/136, 5-6=-135/136
WEBS 3-8=-316/0, 2-9=-395/219, 4-6=-395/218

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 5-5-3, Exterior(2R) 5-5-3 to 11-5-3, Interior (1) 11-5-3 to 13-10-6, Exterior(2E) 13-10-6 to 16-10-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 22 lb uplift at joint 1, 184 lb uplift at joint 9 and 182 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB4	Valley	1	1	I66625062 Job Reference (optional)

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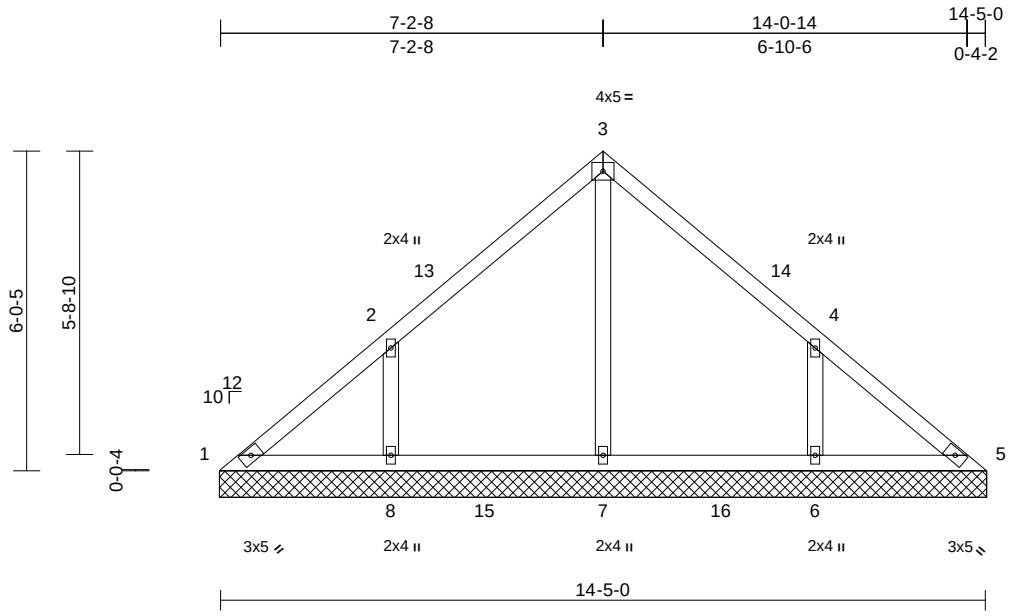

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 62 lb	FT = 20%

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

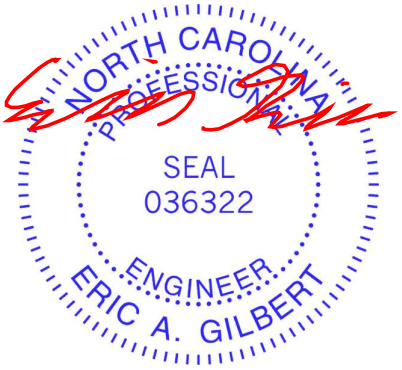
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=14-5-10, 5=14-5-10, 6=14-5-10, 7=14-5-10, 8=14-5-10
Max Horiz 1=-137 (LC 10)
Max Uplift 1=-24 (LC 10), 6=-154 (LC 15), 8=-157 (LC 14)
Max Grav 1=122 (LC 25), 5=98 (LC 24), 6=455 (LC 21), 7=406 (LC 24), 8=455 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-153/144, 2-3=-174/120, 3-4=-174/112, 4-5=-121/109
BOT CHORD 1-8=-60/126, 7-8=-60/99, 6-7=-60/99, 5-6=-60/99
WEBS 3-7=-227/0, 2-8=-375/196, 4-6=-375/195

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 3-2-13, Interior (1) 3-2-13 to 4-2-13, Exterior(2R) 4-2-13 to 10-2-13, Interior (1) 10-2-13 to 11-2-13, Exterior(2E) 11-2-13 to 14-5-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 24 lb uplift at joint 1, 157 lb uplift at joint 8 and 154 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB5	Valley	1	1	I66625063 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:04 Page: 1
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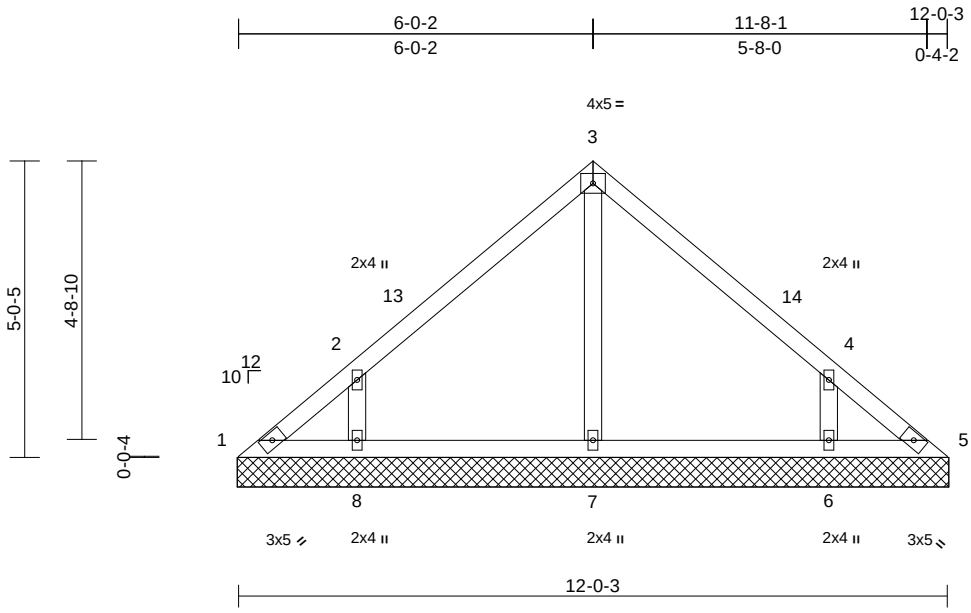

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 50 lb	FT = 20%

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

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

REACTIONS (size) 1=12-0-13, 5=12-0-13, 6=12-0-13, 7=12-0-13, 8=12-0-13
Max Horiz 1=-114 (LC 10)
Max Uplift 1=-33 (LC 10), 5=-5 (LC 11), 6=-135 (LC 15), 8=-139 (LC 14)
Max Grav 1=91 (LC 30), 5=70 (LC 24), 6=435 (LC 21), 7=260 (LC 20), 8=435 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-115/101, 2-3=-218/116, 3-4=-218/116, 4-5=-89/63
BOT CHORD 1-8=-31/76, 7-8=-31/72, 6-7=-31/72, 5-6=-31/72
WEBS 3-7=-172/0, 2-8=-401/220, 4-6=-401/220

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, Exterior(2R) 3-0-0 to 9-0-13, Exterior(2E) 9-0-13 to 12-0-13 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 33 lb uplift at joint 1, 5 lb uplift at joint 5, 139 lb uplift at joint 8 and 135 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB6	Valley	1	1	I66625064
					Job Reference (optional)

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

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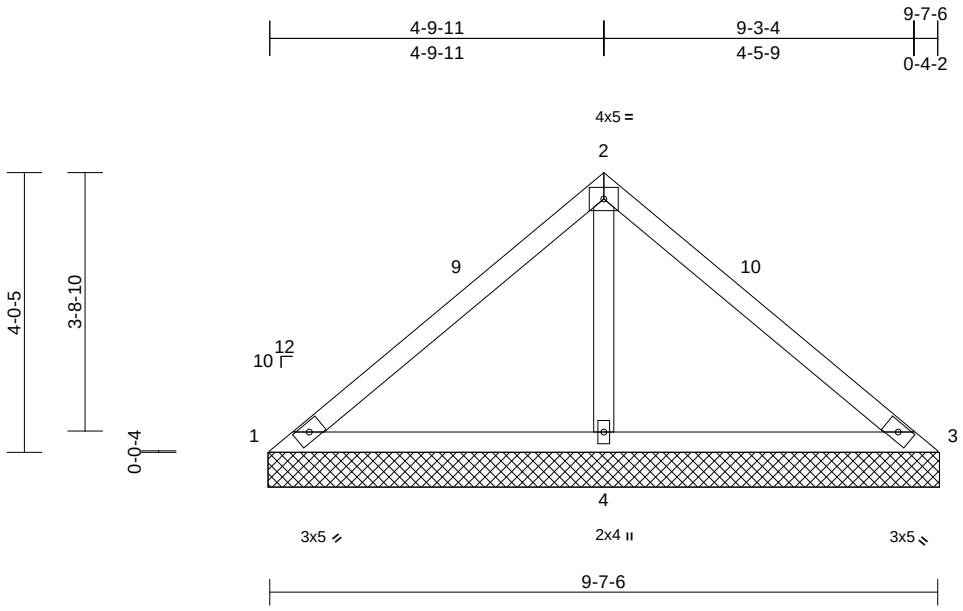

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 37 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-7-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-8-0, 3=9-8-0, 4=9-8-0
Max Horiz 1=90 (LC 11)
Max Uplift 1=-55 (LC 21), 3=-55 (LC 20), 4=-111 (LC 14)
Max Grav 1=89 (LC 20), 3=89 (LC 21), 4=787 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-120/385, 2-3=-120/385
BOT CHORD 1-4=-254/177, 3-4=-254/177
WEBS 2-4=-654/278

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, Exterior(2R) 3-0-0 to 6-8-0, Exterior(2E) 6-8-0 to 9-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 55 lb uplift at joint 1, 55 lb uplift at joint 3 and 111 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB7	Valley	1	1	I66625065
					Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:05 Page: 1
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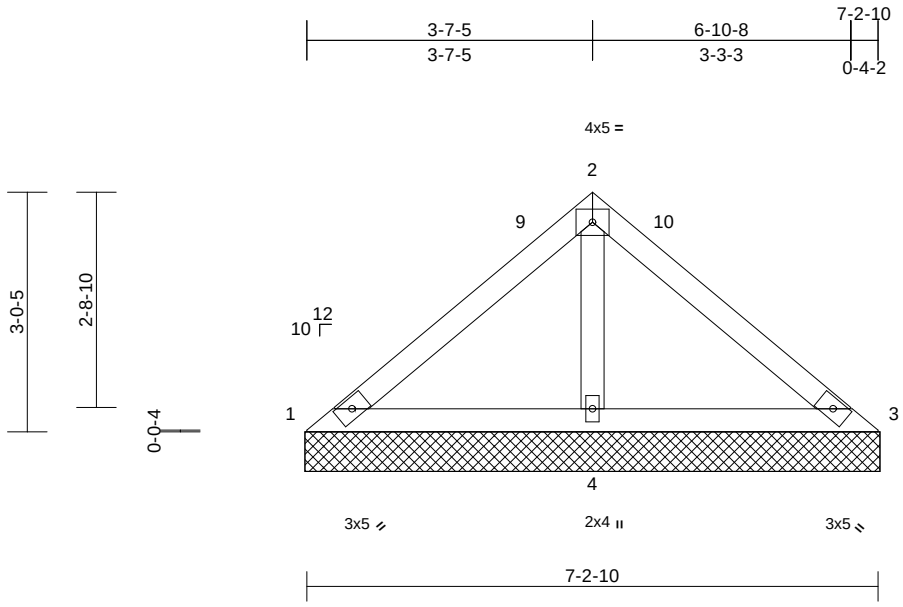

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 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 7-2-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-3-3, 3=7-3-3, 4=7-3-3
Max Horiz 1=-67 (LC 12)
Max Uplift 1=-21 (LC 21), 3=-21 (LC 20), 4=-75 (LC 14)
Max Grav 1=102 (LC 20), 3=102 (LC 21), 4=541 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-93/237, 2-3=-93/237
BOT CHORD 1-4=-186/155, 3-4=-186/155
WEBS 2-4=-432/205

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, Exterior(2R) 3-0-0 to 4-3-3, Exterior(2E) 4-3-3 to 7-3-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 21 lb uplift at joint 1, 21 lb uplift at joint 3 and 75 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLB8	Valley	1	1	I66625066 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:05 Page: 1
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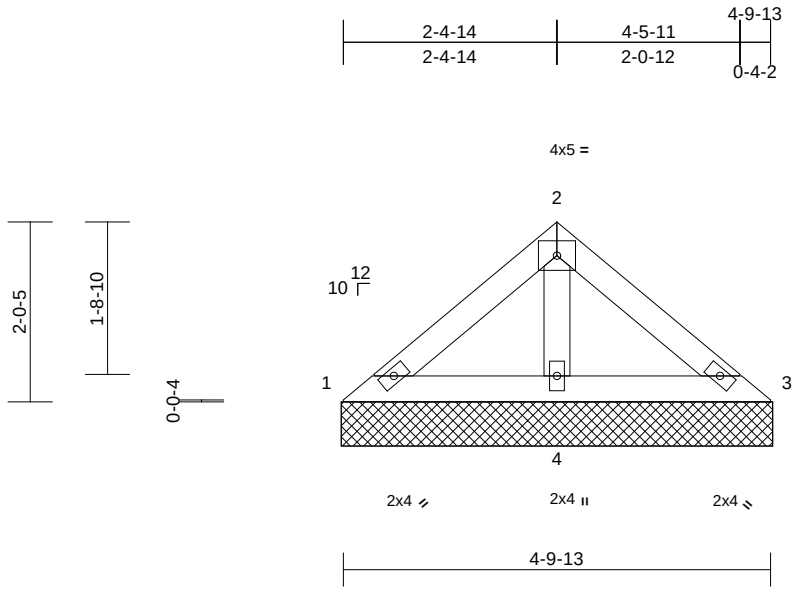

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=4-10-6, 3=4-10-6, 4=4-10-6
Max Horiz 1=-43 (LC 10)
Max Uplift 3=-7 (LC 15), 4=-33 (LC 14)
Max Grav 1=87 (LC 20), 3=87 (LC 21), 4=298 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-80/106, 2-3=-80/106
BOT CHORD 1-4=-86/89, 3-4=-86/89
WEBS 2-4=-213/98

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 7 lb uplift at joint 3 and 33 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD1	Valley	1	1	I66625067 Job Reference (optional)

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

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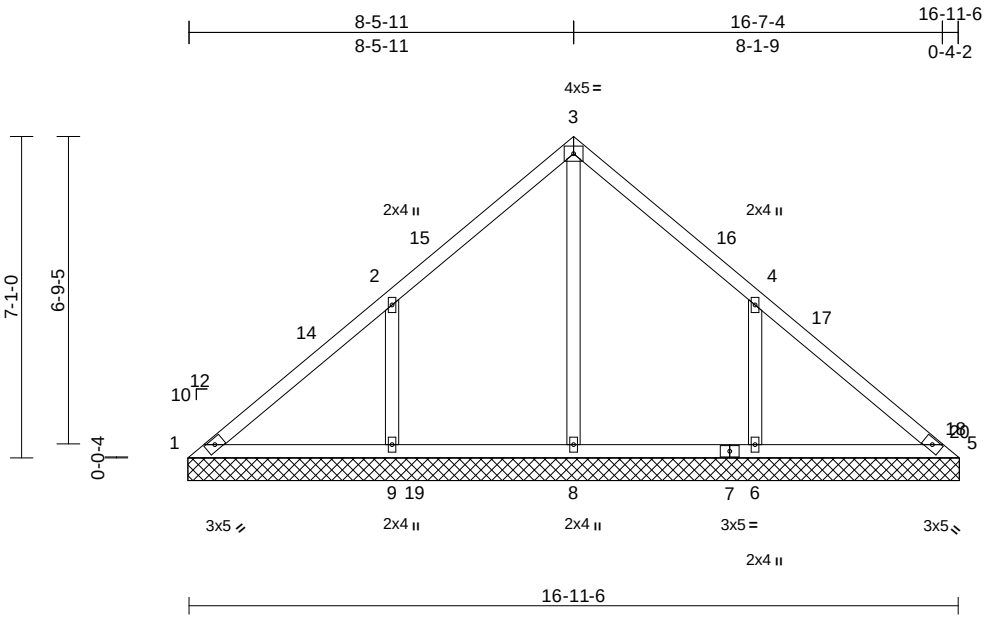

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 76 lb	FT = 20%

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

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

REACTIONS (size) 1=17-0-0, 5=17-0-0, 6=17-0-0, 8=17-0-0, 9=17-0-0
Max Horiz 1=161 (LC 11)
Max Uplift 1=-21 (LC 10), 6=-183 (LC 15), 9=-186 (LC 14)
Max Grav 1=120 (LC 30), 5=82 (LC 21), 6=521 (LC 6), 8=506 (LC 24), 9=526 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-145/261, 2-3=-102/196, 3-4=-103/176, 4-5=-108/226
BOT CHORD 1-9=-137/131, 8-9=-137/131, 6-8=-137/131, 5-6=-137/131
WEBS 3-8=-321/0, 2-9=-397/221, 4-6=-396/219

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 5-6-0, Exterior(2R) 5-6-0 to 11-6-0, Interior (1) 11-6-0 to 13-7-3, Exterior(2E) 13-7-3 to 16-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 21 lb uplift at joint 1, 186 lb uplift at joint 9 and 183 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD2	Valley	1	1	I66625068 Job Reference (optional)

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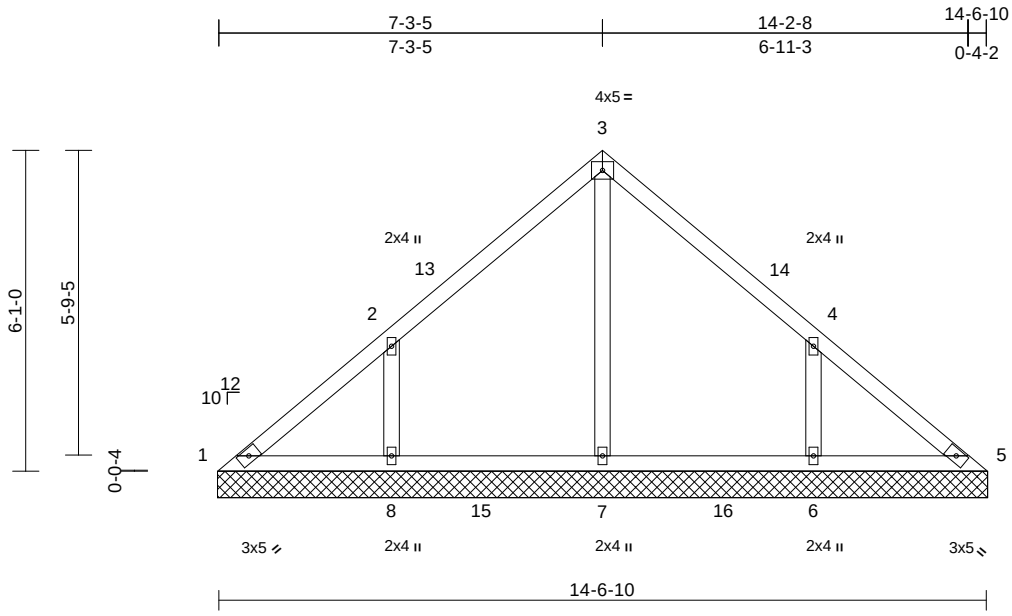

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 63 lb	FT = 20%

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

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

REACTIONS (size) 1=14-7-3, 5=14-7-3, 6=14-7-3, 7=14-7-3, 8=14-7-3
Max Horiz 1=-138 (LC 10)
Max Uplift 1=-23 (LC 10), 6=-155 (LC 15), 8=-158 (LC 14)
Max Grav 1=123 (LC 25), 5=98 (LC 24), 6=457 (LC 21), 7=411 (LC 24), 8=457 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-154/149, 2-3=-171/124, 3-4=-171/112, 4-5=-122/113
BOT CHORD 1-8=-63/127, 7-8=-63/101, 6-7=-63/101, 5-6=-63/101
WEBS 3-7=-231/0, 2-8=-375/197, 4-6=-375/195

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 3-3-10, Interior (1) 3-3-10 to 4-3-10, Exterior(2R) 4-3-10 to 10-3-10, Interior (1) 10-3-10 to 11-3-10, Exterior(2E) 11-3-10 to 14-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 23 lb uplift at joint 1, 158 lb uplift at joint 8 and 155 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD3	Valley	1	1	I66625069 Job Reference (optional)

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

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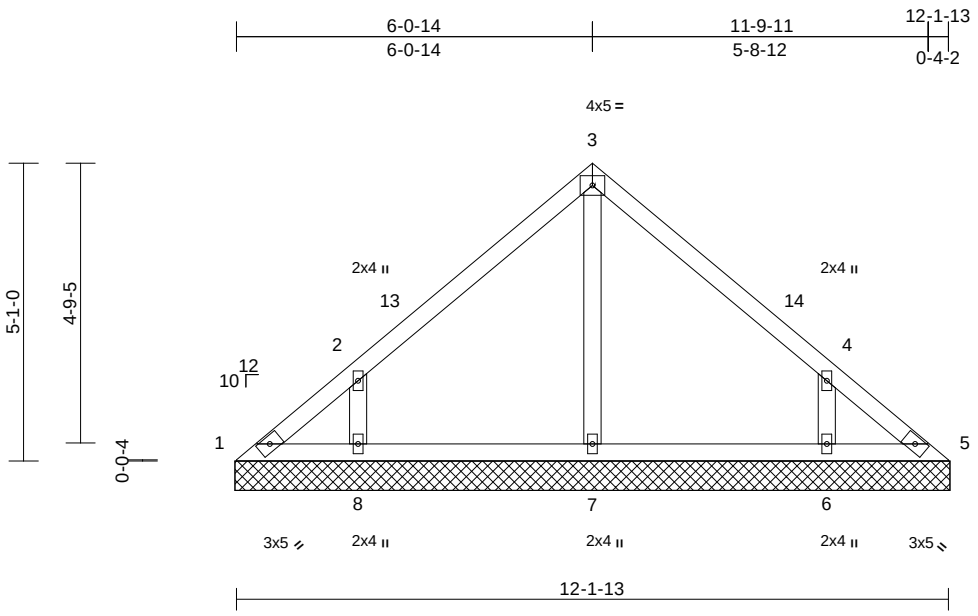

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 50 lb	FT = 20%

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

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

REACTIONS (size) 1=12-2-6, 5=12-2-6, 6=12-2-6, 7=12-2-6, 8=12-2-6
Max Horiz 1=-115 (LC 12)
Max Uplift 1=-32 (LC 10), 5=-4 (LC 11), 6=-136 (LC 15), 8=-139 (LC 14)
Max Grav 1=94 (LC 25), 5=73 (LC 24), 6=435 (LC 21), 7=261 (LC 21), 8=435 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-119/102, 2-3=-216/117, 3-4=-216/117, 4-5=-92/63
BOT CHORD 1-8=-32/79, 7-8=-32/73, 6-7=-32/73, 5-6=-32/73
WEBS 3-7=-174/0, 2-8=-397/217, 4-6=-397/217

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, Exterior(2R) 3-0-0 to 9-2-6, Exterior(2E) 9-2-6 to 12-2-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 32 lb uplift at joint 1, 4 lb uplift at joint 5, 139 lb uplift at joint 8 and 136 lb uplift at joint 6.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

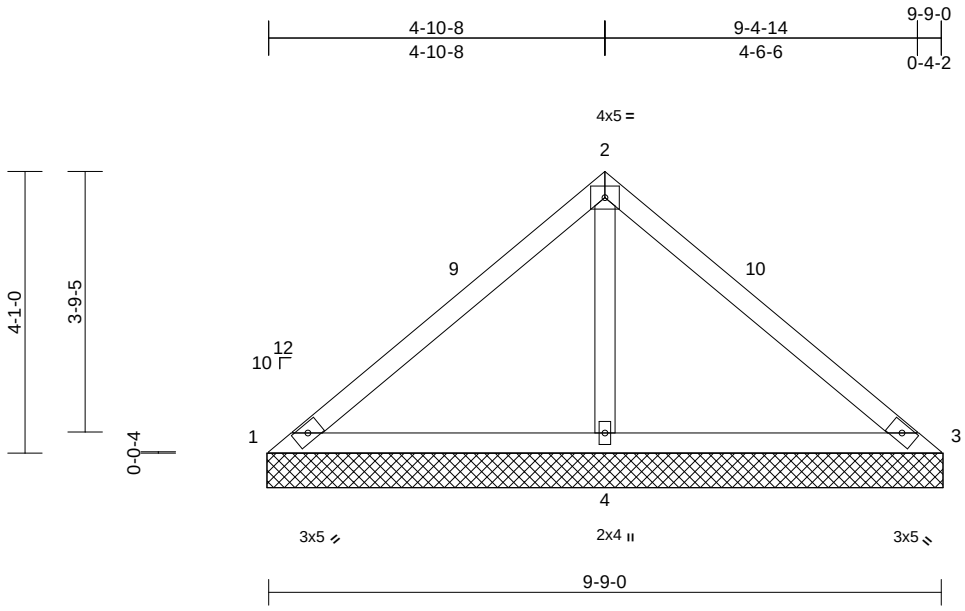
July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD4	Valley	1	1	I66625070 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:05 ID:kUxM45s?bF21LX?KCRTFVAzRQqU-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:33.4

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	0.47	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.43	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 37 lb	FT = 20%

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

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

REACTIONS (size) 1=9-9-10, 3=9-9-10, 4=9-9-10
Max Horiz 1=-91 (LC 10)
Max Uplift 1=-59 (LC 21), 3=-59 (LC 20), 4=-114 (LC 14)
Max Grav 1=88 (LC 20), 3=88 (LC 21), 4=804 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-124/396, 2-3=-124/396
BOT CHORD 1-4=-261/180, 3-4=-261/180
WEBS 2-4=-669/283

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) 0-0-0 to 3-0-0, Exterior(2R) 3-0-0 to 6-9-10, Exterior(2E) 6-9-10 to 9-9-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 59 lb uplift at joint 1, 59 lb uplift at joint 3 and 114 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

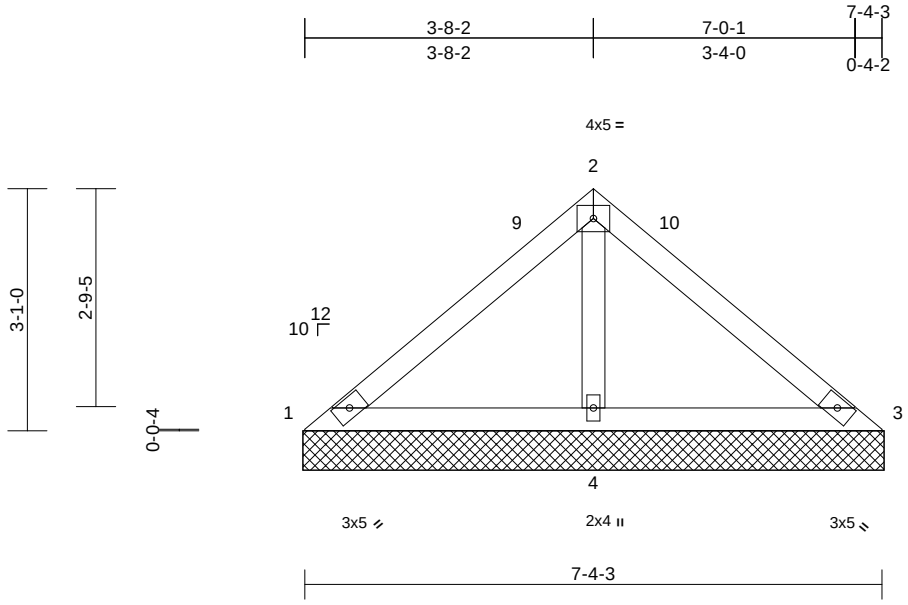
LOAD CASE(S) Standard

July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD5	Valley	1	1	I66625071 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:05 Page: 1
ID:CgVkHRtdMZAuzhaXm9_U1OzRQqT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.3

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	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 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 7-4-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-4-13, 3=7-4-13, 4=7-4-13
Max Horiz 1=68 (LC 11)
Max Uplift 1=-23 (LC 21), 3=-23 (LC 20), 4=-77 (LC 14)
Max Grav 1=102 (LC 20), 3=102 (LC 21), 4=557 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-96/246, 2-3=-96/246
BOT CHORD 1-4=-193/158, 3-4=-193/158
WEBS 2-4=-445/211

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, Exterior(2R) 3-0-0 to 4-4-13, Exterior(2E) 4-4-13 to 7-4-13 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 23 lb uplift at joint 1, 23 lb uplift at joint 3 and 77 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

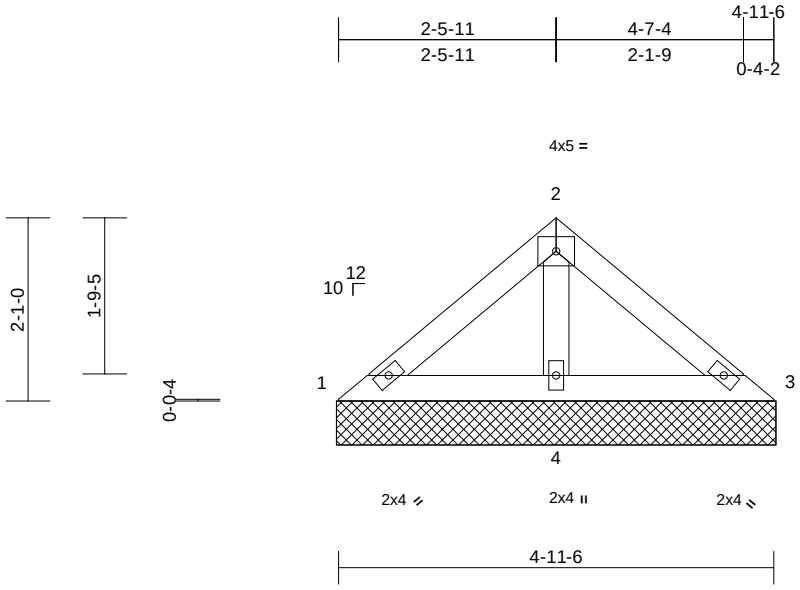
July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD6	Valley	1	1	I66625072 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:06 Page: 1
ID:CgVkHRtdMZAuzhaXm9_U1OzRQqT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	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	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

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

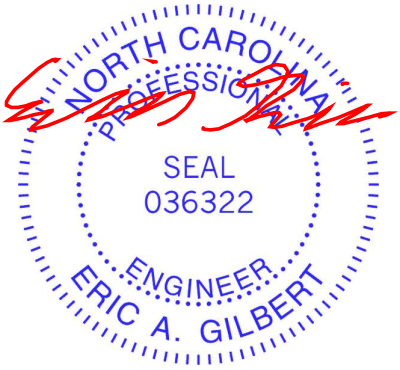
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=5-0-0, 3=5-0-0, 4=5-0-0
Max Horiz 1=-44 (LC 10)
Max Uplift 3=-6 (LC 15), 4=-35 (LC 14)
Max Grav 1=89 (LC 20), 3=89 (LC 21), 4=310 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-82/112, 2-3=-82/112
BOT CHORD 1-4=-91/93, 3-4=-91/93
WEBS 2-4=-224/105

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 6 lb uplift at joint 3 and 35 lb uplift at joint 4.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 2,2024

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

Job	Truss	Truss Type	Qty	Ply	175 Serenity-Roof-B326 B CP TMB BNS GLH
24060145-01	VLD7	Valley	1	1	I66625073 Job Reference (optional)

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

Run: 8.73 S Jun 13 2024 Print: 8.730 S Jun 13 2024 MiTek Industries, Inc. Tue Jul 02 10:00:06 Page: 1
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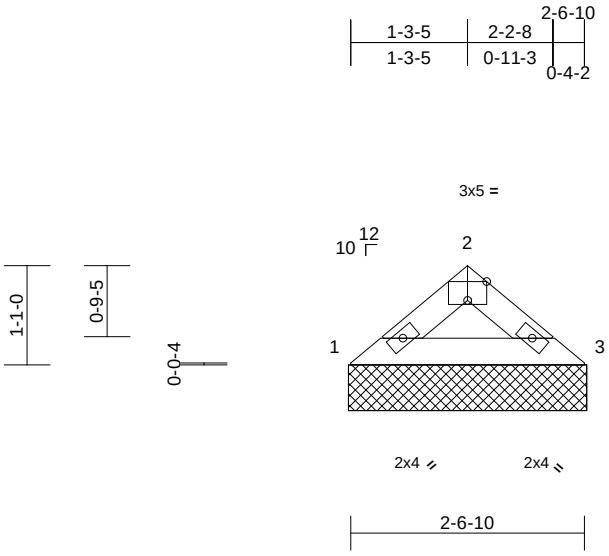


Scale = 1:25.1

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	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	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 7 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 2-6-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-7-3, 3=2-7-3
Max Horiz 1=-21 (LC 10)
Max Uplift 1=-9 (LC 14), 3=-9 (LC 15)
Max Grav 1=118 (LC 20), 3=118 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-152/65, 2-3=-152/65
BOT CHORD 1-3=-37/110

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 9 lb uplift at joint 1 and 9 lb uplift at joint 3.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 3.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

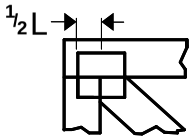
LOAD CASE(S) Standard

July 2,2024

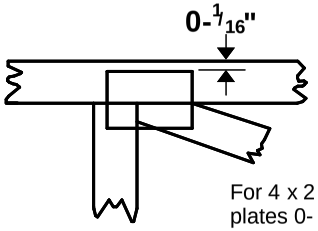
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

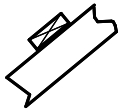
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

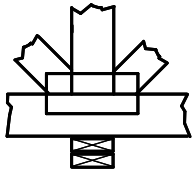
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

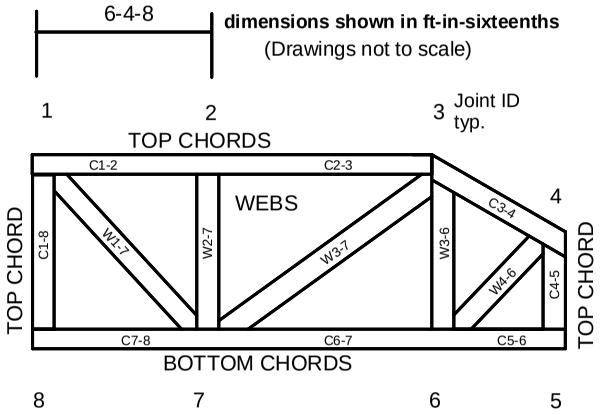


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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.