Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	A	Common	4	1	Job Reference (optional)	I58430769

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:12 Page: 1
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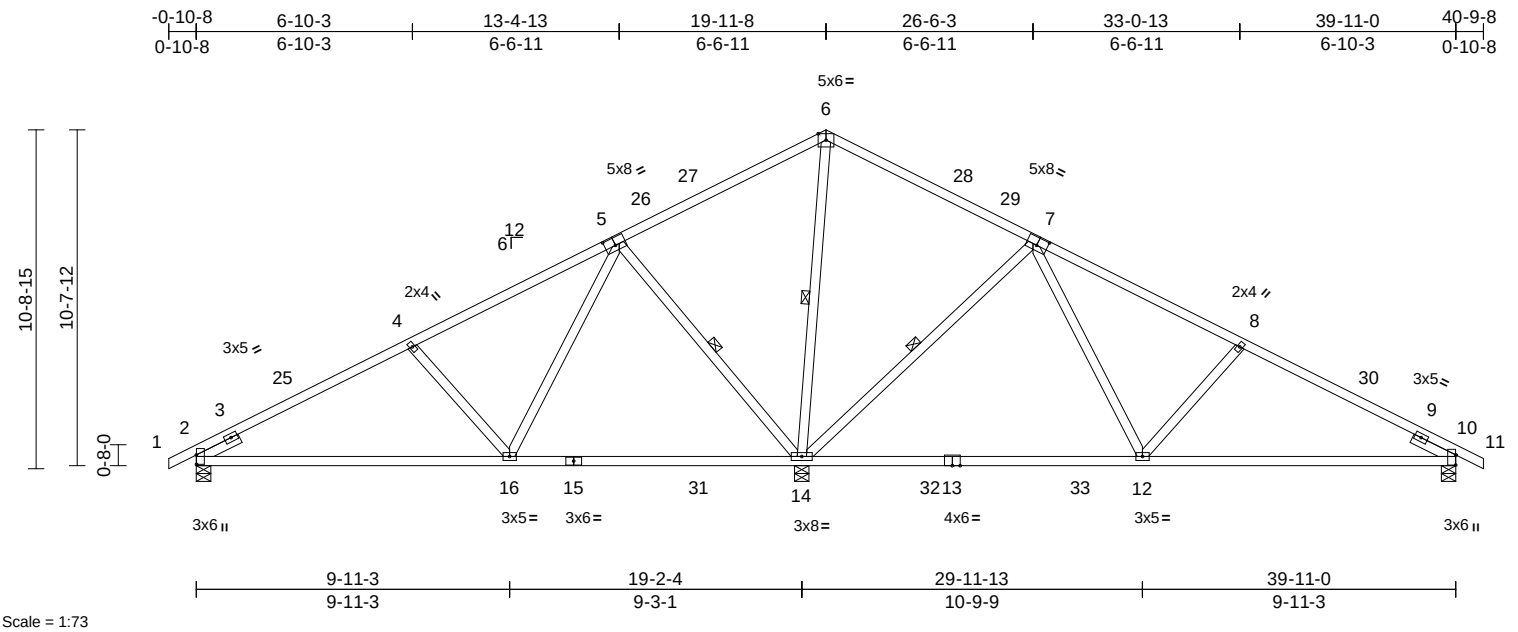

Scale = 1:73

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.35	12-14	>706	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.54	12-14	>461	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.03	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 213 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-16.
WEBS 1 Row at midpt 5-14, 6-14, 7-14

REACTIONS (size) 2=0-5-8, 10=0-5-8, 14=0-5-8
Max Horiz 2=-165 (LC 15)
Max Uplift 2=-88 (LC 14), 10=-120 (LC 15), 14=-158 (LC 14)
Max Grav 2=732 (LC 5), 10=819 (LC 6), 14=2149 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-873/126, 4-6=-674/453, 6-8=-870/389, 8-10=-1065/186, 10-11=0/23
BOT CHORD 2-16=-269/745, 14-16=-36/280, 12-14=0/420, 10-12=-145/908
WEBS 5-16=-47/685, 4-16=-375/195, 5-14=-817/254, 6-14=-662/83, 7-14=-885/251, 7-12=-28/734, 8-12=-362/195

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) -0-10-8 to 3-1-6, Interior (1) 3-1-6 to 15-11-10, Exterior(2R) 15-11-10 to 23-11-6, Interior (1) 23-11-6 to 36-9-10, Exterior(2E) 36-9-10 to 40-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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, 14, and 10. 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.

LOAD CASE(S) Standard

May 19,2023

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	AGE	Common Supported Gable	1	1	Job Reference (optional)	I58430770

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:14
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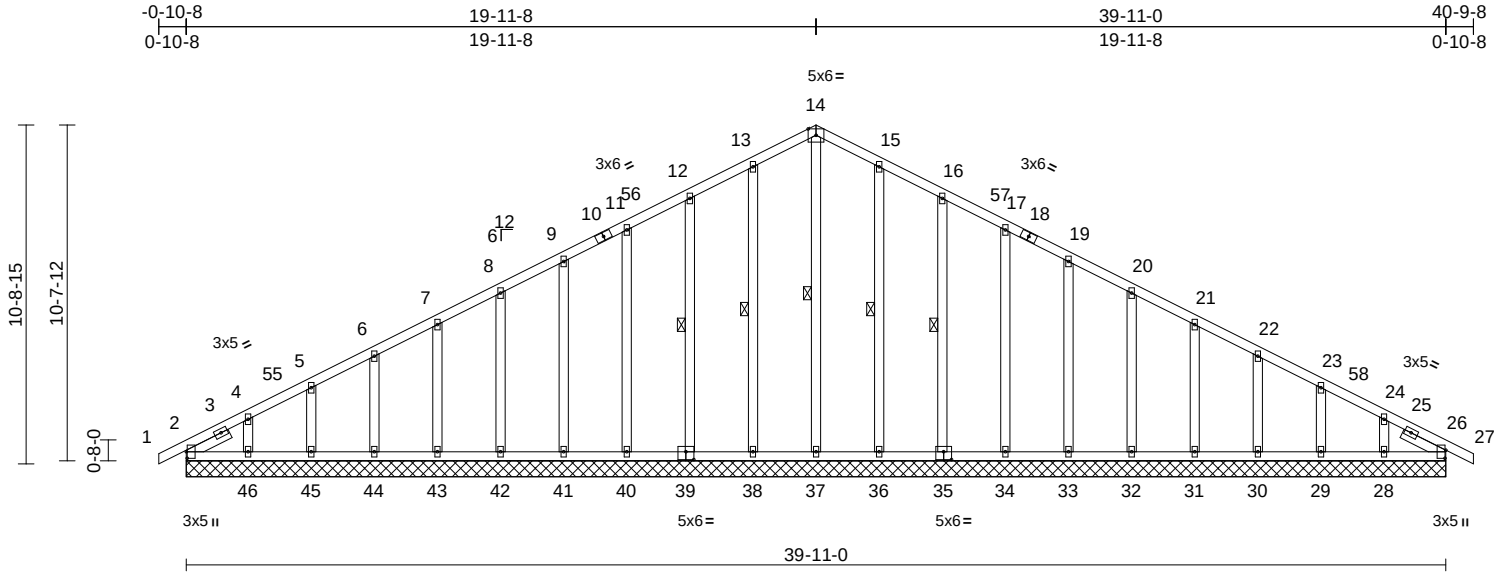
Page: 1



Scale = 1:73

Plate Offsets (X, Y): [2:0-2-8,0-0-5], [26:0-3-1,0-0-5], [35:0-3-0,0-3-0], [39:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	26	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 285 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 37-14:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 14-37, 13-38, 12-39, 15-36, 16-35

REACTIONS (size) 2=39-11-0, 26=39-11-0, 28=39-11-0, 29=39-11-0, 30=39-11-0, 31=39-11-0, 32=39-11-0, 33=39-11-0, 34=39-11-0, 35=39-11-0, 36=39-11-0, 37=39-11-0, 38=39-11-0, 39=39-11-0, 40=39-11-0, 41=39-11-0, 42=39-11-0, 43=39-11-0, 44=39-11-0, 45=39-11-0, 46=39-11-0, 47=39-11-0, 51=39-11-0

Max Horiz 2=-165 (LC 15), 47=-165 (LC 15)

Max Uplift 2=-21 (LC 10), 28=-80 (LC 15), 29=-37 (LC 15), 30=-46 (LC 15), 31=-43 (LC 15), 32=-44 (LC 15), 33=-44 (LC 15), 34=-43 (LC 15), 35=-48 (LC 15), 36=-36 (LC 15), 38=-38 (LC 14), 39=-47 (LC 14), 40=-45 (LC 14), 41=-43 (LC 14), 42=-44 (LC 14), 43=-43 (LC 14), 44=-46 (LC 14), 45=-34 (LC 14), 46=-96 (LC 14), 47=-21 (LC 10)

Max Grav 2=161 (LC 30), 26=138 (LC 22), 28=158 (LC 35), 29=160 (LC 1), 30=160 (LC 35), 31=160 (LC 1), 32=161 (LC 22), 33=160 (LC 35), 34=179 (LC 22), 35=233 (LC 22), 36=246 (LC 22), 37=200 (LC 27), 38=247 (LC 21), 39=234 (LC 21), 40=178 (LC 21), 41=160 (LC 1), 42=160 (LC 21), 43=160 (LC 1), 44=160 (LC 34), 45=160 (LC 1), 46=159 (LC 34), 47=161 (LC 30), 51=138 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-4=-217/79, 4-5=-168/82, 5-6=-130/94, 6-7=-97/107, 7-8=-73/130, 8-9=-61/153, 9-11=-65/177, 11-12=-84/220, 12-13=-104/269, 13-14=-121/310, 14-15=-121/310, 15-16=-104/269, 16-17=-84/221, 17-19=-66/176, 19-20=-49/131, 20-21=-41/86, 21-22=-45/40, 22-23=-67/27, 23-24=-100/35, 24-26=-144/59, 26-27=0/23

BOT CHORD 2-46=-45/167, 45-46=-45/167, 44-45=-45/167, 43-44=-45/167, 42-43=-45/167, 41-42=-45/167, 40-41=-45/167, 38-40=-45/167, 37-38=-44/166, 36-37=-44/166, 34-36=-44/166, 33-34=-44/166, 32-33=-44/166, 31-32=-44/166, 30-31=-44/166, 29-30=-44/166, 28-29=-44/166, 26-28=-44/166

WEBS 14-37=-205/45, 13-38=-205/66, 12-39=-194/83, 11-40=-140/76, 9-41=-120/77, 8-42=-121/77, 7-43=-120/77, 6-44=-120/77, 5-45=-121/81, 4-46=-114/135, 15-36=-205/66, 16-35=-193/83, 17-34=-140/76, 19-33=-120/77, 20-32=-121/77, 21-31=-120/77, 22-30=-120/77, 23-29=-121/81, 24-28=-114/135

NOTES

1) Unbalanced roof live loads have been considered for this design.

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Continued on page 2

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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 3-1-6, Exterior(2N) 3-1-6 to 15-11-8, Corner(3R) 15-11-8 to 23-11-8, Exterior(2N) 23-11-8 to 36-9-10, Corner(3E) 36-9-10 to 40-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 38 lb uplift at joint 38, 47 lb uplift at joint 39, 45 lb uplift at joint 40, 43 lb uplift at joint 41, 44 lb uplift at joint 42, 43 lb uplift at joint 43, 46 lb uplift at joint 44, 34 lb uplift at joint 45, 96 lb uplift at joint 46, 36 lb uplift at joint 36, 48 lb uplift at joint 35, 43 lb uplift at joint 34, 44 lb uplift at joint 33, 44 lb uplift at joint 32, 43 lb uplift at joint 31, 46 lb uplift at joint 30, 37 lb uplift at joint 29, 80 lb uplift at joint 28 and 21 lb uplift at joint 2.
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

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B	Attic	3	1	Job Reference (optional)	I58430771

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:15 Page: 1

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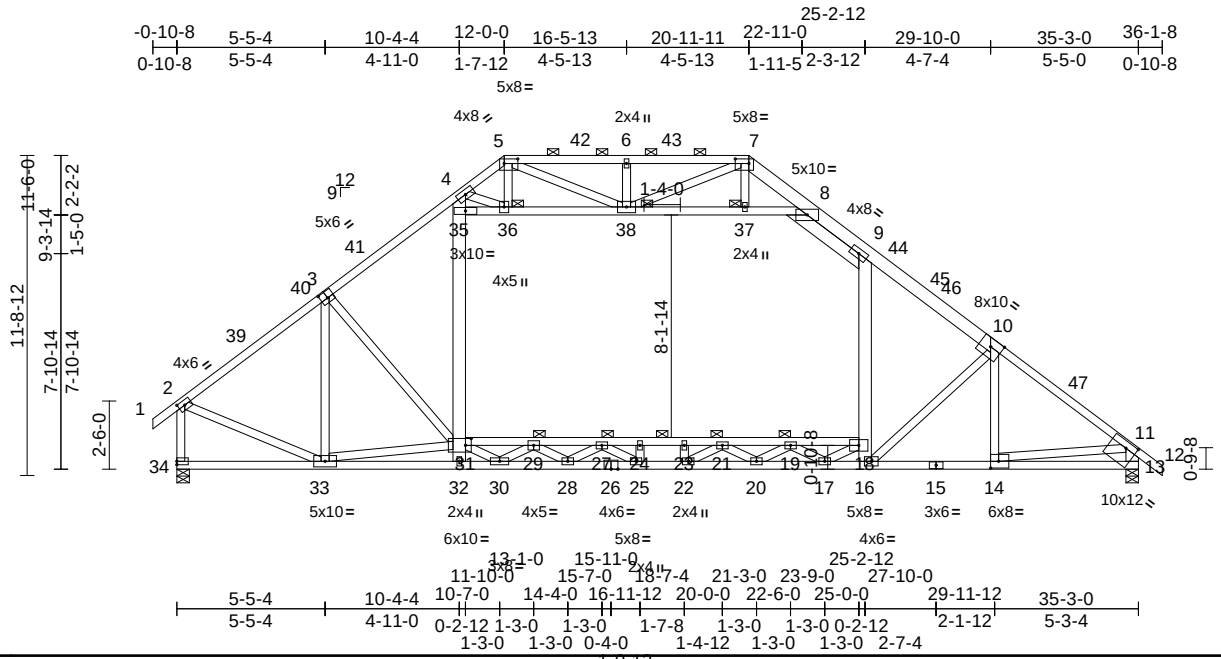

Scale = 1:84.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [3:0-3-0,0-3-0], [5:0-6-0,0-2-0], [7:0-6-0,0-2-0], [13:0-4-12,0-2-12], [14:0-3-8,0-3-0], [31:0-2-8,0-3-0]

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	0.50	Vert(LL)	-0.25	19-21	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.46	19-21	>919	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.07	13	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.17	18-31	>999	360		
BCDL	10.0										Weight: 322 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 7-10:2x6 SP 2400F 2.0E, 8-9:2x6 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 26-15:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 4-32,9-16,13-11:2x6 SP No.2, 35-8,31-33:2x4 SP No.2

BRACING

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

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
5-1-14 oc bracing: 32-33
4-2-9 oc bracing: 30-32
6-0-0 oc bracing: 28-30.
3-9-0 oc bracing: 21-27
4-0-0 oc bracing: 19-21
6-0-0 oc bracing: 27-29, 18-19
9-9-0 oc bracing: 29-31

JOINTS 1 Brace at Jt(s): 19, 29, 21, 27, 36, 37, 38

REACTIONS (size) 13=0-5-8, 34=0-5-8
Max Horiz 34=-309 (LC 12)
Max Grav 13=2179 (LC 46), 34=2164 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-4=-2641/0, 4-5=-1021/113, 5-6=-1253/236, 6-7=-1253/236, 7-8=-812/209, 8-9=-2092/0, 9-11=-2883/0, 11-12=0/40, 2-34=-2108/0, 11-13=-2115/0

BOT CHORD 33-34=-255/313, 32-33=-1171/498, 30-32=-1679/613, 28-30=-264/1882, 25-28=0/3198, 22-25=0/3889, 20-22=0/3965, 17-20=0/3333, 16-17=0/1971, 14-16=0/2251, 13-14=-56/289, 29-31=-364/2380, 27-29=-680/1020, 24-27=-2112/0, 23-24=-2112/0, 21-23=-2112/0, 19-21=-1893/0, 18-19=-742/122

WEBS 3-33=-1035/0, 31-32=0/292, 31-35=0/1192, 4-35=0/1185, 16-18=0/344, 9-18=0/1009, 10-16=-344/216, 10-14=-187/26, 35-36=-772/359, 36-38=-1617/55, 37-38=-2171/0, 8-37=-2179/0, 2-33=0/1739, 11-14=0/1985, 17-18=0/1050, 30-31=0/1587, 17-19=-1090/0, 29-30=-1611/0, 19-20=-13/524, 28-29=0/1018, 20-21=-361/165, 27-28=-1007/0, 21-22=-422/190, 25-27=-7/987, 24-25=-349/6, 22-23=-59/141, 5-36=0/513, 7-37=0/99, 6-38=-475/125, 4-36=-1417/0, 5-38=-323/481, 7-38=-109/816, 31-33=-64/2602, 3-31=-28/670

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 2-7-13, Interior (1) 2-7-13 to 7-0-3, Exterior(2R) 7-0-3 to 25-11-8, Interior (1) 25-11-8 to 32-7-3, Exterior(2E) 32-7-3 to 36-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 3x5 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Ceiling dead load (5.0 psf) on member(s). 8-9, 35-36, 36-38, 37-38, 8-37; Wall dead load (5.0psf) on member (s).31-35, 9-18

May 19,2023

Continued on page 2

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11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 29-31, 27-29, 24-27, 23-24, 21-23, 19-21, 18-19
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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B1	Attic	6	1	Job Reference (optional)	I58430772

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:17 Page: 1

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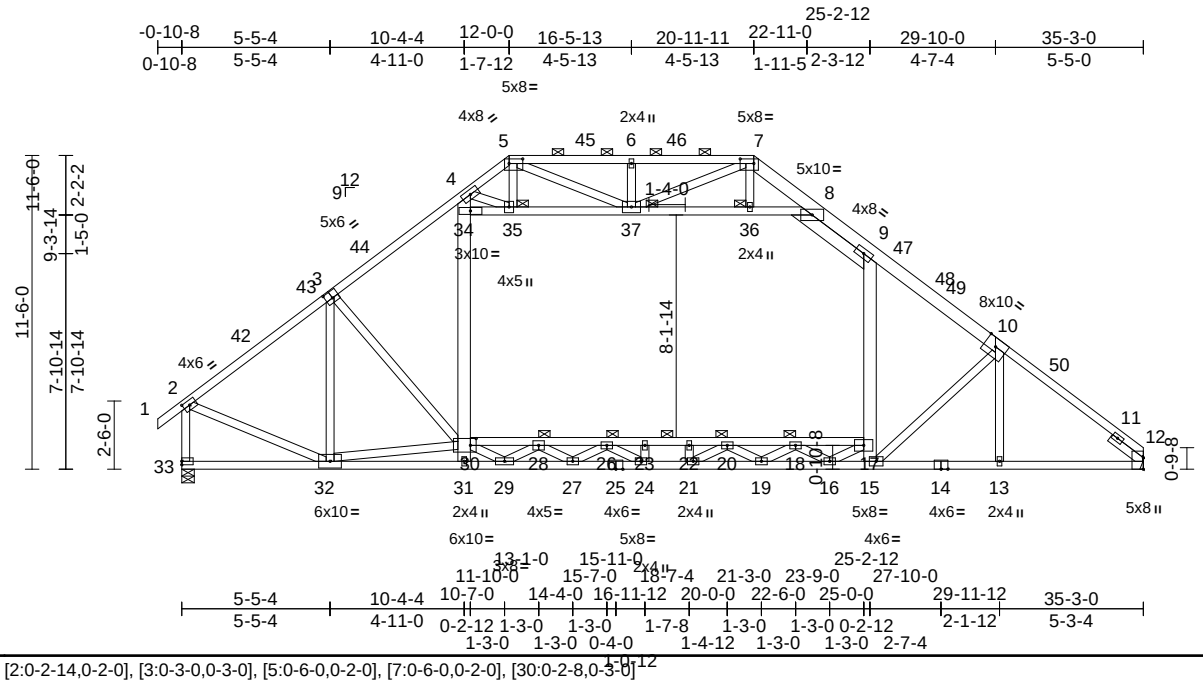

Scale = 1:84.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [3:0-3-0,0-3-0], [5:0-6-0,0-2-0], [7:0-6-0,0-2-0], [30:0-2-8,0-3-0]

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	0.95	Vert(LL)	-0.28	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.50	18-20	>845	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.10	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.18	17-30	>959	360		
BCDL	10.0										Weight: 315 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 10-12:2x4 SP No.1, 10-7:2x6 SP 2400F 2.0E, 8-9:2x6 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 14-12:2x4 SP 2400F 2.0E, 14-25:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 4-31,9-15:2x6 SP No.2, 34-8,30-32:2x4 SP No.2

SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-10-1 max.): 5-7.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:
3-9-0 oc bracing: 20-26
4-0-0 oc bracing: 18-20
6-0-0 oc bracing: 26-28, 17-18
9-11-0 oc bracing: 28-30

JOINTS 1 Brace at Jt(s): 35, 36, 37, 18, 28, 20, 26

REACTIONS (size) 12= Mechanical, 33=0-5-8
Max Horiz 33=-293 (LC 12)
Max Grav 12=2125 (LC 46), 33=2178 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-4=-2677/0, 4-5=-1005/116, 5-6=-1241/239, 6-7=-1241/239, 7-8=-803/211, 8-9=-2123/0, 9-12=-2965/0, 2-33=-2122/0

BOT CHORD 32-33=-249/296, 31-32=-1276/464, 29-31=-1824/571, 27-29=-287/1773, 24-27=0/3129, 21-24=0/3851, 19-21=0/3954, 16-19=0/3362, 15-16=0/2090, 13-15=0/2283, 12-13=-28/2281, 28-30=-353/2560, 26-28=-655/1133, 23-26=-2044/0, 22-23=-2044/0, 20-22=-2044/0, 18-20=-1869/0, 17-18=-747/130

WEBS 3-32=-1064/0, 30-31=0/306, 30-34=0/1207, 4-34=0/1200, 15-17=0/386, 9-17=0/1012, 10-15=-329/237, 10-13=-92/90, 34-35=-838/351, 35-37=-1673/50, 36-37=-2223/0, 8-36=-2232/0, 2-32=0/1750, 5-35=0/505, 4-35=-1391/0, 7-36=0/100, 6-37=-475/125, 5-37=-322/482, 7-37=-109/816, 16-17=0/984, 29-30=0/1604, 16-18=-1076/0, 28-29=-1631/0, 18-19=-29/510, 27-28=0/1039, 19-20=-339/189, 26-27=-1034/0, 20-21=-455/188, 24-26=-6/1028, 23-24=-362/6, 21-22=-59/151, 30-32=-58/2735, 3-30=-25/689

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 2-7-13, Interior (1) 2-7-13 to 7-0-3, Exterior(2R) 7-0-3 to 25-11-8, Interior (1) 25-11-8 to 31-8-11, Exterior(2E) 31-8-11 to 35-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 3x5 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Ceiling dead load (5.0 psf) on member(s). 8-9, 34-35, 35-37, 36-37, 8-36; Wall dead load (5.0psf) on member (s).30-34, 9-17

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Continued on page 2

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 28-30, 26-28, 23-26, 22-23, 20-22, 18-20, 17-18
12) Refer to girder(s) for truss to truss connections.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B1GE	Attic Supported Gable	1	1	Job Reference (optional)	I58430773

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:19 Page: 1

ID:_3oI99mK45tCLLManwRKV7zFa8c-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

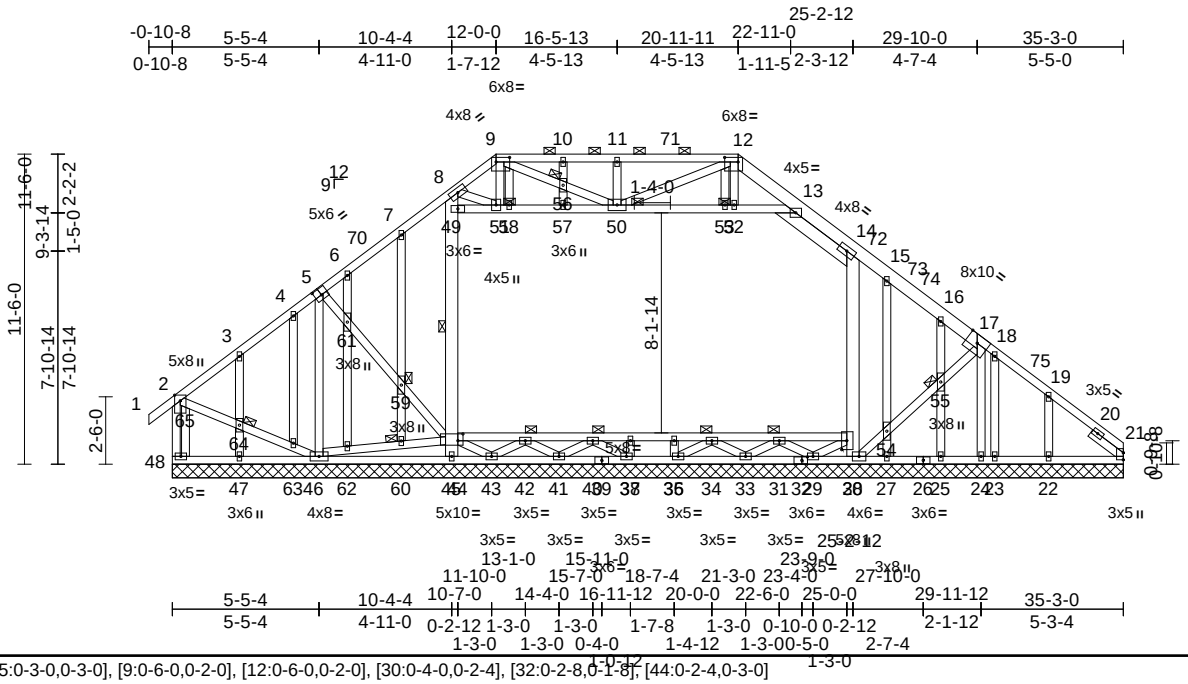


Plate Offsets (X, Y): [5:0-3-0,0-3-0], [9:0-6-0,0-2-0], [12:0-6-0,0-2-0], [30:0-4-0,0-2-4], [32:0-2-8,0-1-8], [44:0-2-4,0-3-0]

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	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.01	21	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 383 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 17-12,13-14:2x6 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-45,14-28:2x6 SP No.2, 49-13:2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

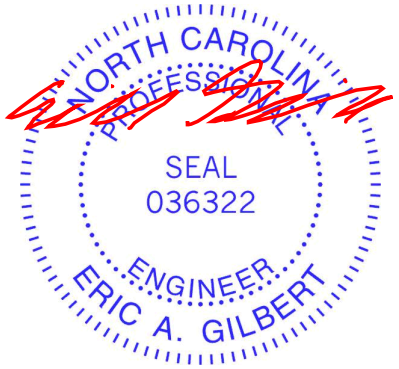
BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-14 max.): 9-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 44-49
JOINTS 1 Brace at Jt(s): 50, 51, 52, 31, 42, 34, 40, 55, 56, 59, 60, 64

REACTIONS (size) 21=35-3-0, 22=35-3-0, 23=35-3-0, 24=35-3-0, 25=35-3-0, 27=35-3-0, 28=35-3-0, 29=35-3-0, 33=35-3-0, 35=35-3-0, 37=35-3-0, 41=35-3-0, 43=35-3-0, 45=35-3-0, 46=35-3-0, 47=35-3-0, 48=35-3-0, 66=35-3-0
Max Horiz 48=-293 (LC 12)
Max Uplift 22=-123 (LC 15), 24=-23 (LC 11), 25=-51 (LC 15), 27=-132 (LC 39), 28=-105 (LC 15), 43=-16 (LC 14), 46=-162 (LC 14), 47=-78 (LC 14), 48=-103 (LC 10)
Max Grav 21=304 (LC 23), 22=214 (LC 26), 23=184 (LC 23), 24=285 (LC 23), 25=150 (LC 50), 27=45 (LC 13), 28=564 (LC 44), 29=168 (LC 7), 33=231 (LC 7), 35=169 (LC 7), 37=165 (LC 7), 41=233 (LC 7), 43=106 (LC 42), 45=418 (LC 42), 46=675 (LC 40), 47=202 (LC 25), 48=381 (LC 22), 66=304 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-48=-306/82, 1-2=0/37, 2-3=-309/142, 3-4=-310/136, 4-6=-533/180, 6-7=-514/207, 7-8=-500/230, 8-9=-739/174, 9-10=-1213/239, 10-11=-1213/239, 11-12=-1213/239, 12-13=-925/168, 13-14=-716/206, 14-15=-377/125, 15-16=-531/106, 16-18=-492/86, 18-19=-312/75, 19-21=-308/27
BOT CHORD 42-44=0/194, 40-42=-16/222, 38-40=-21/205, 36-38=-21/205, 34-36=-21/205, 31-34=-16/216, 30-31=-1/135, 47-48=-244/260, 46-47=-244/260, 45-46=-82/274, 43-45=-96/314, 41-43=-22/241, 37-41=-19/218, 35-37=-33/202, 33-35=-20/220, 29-33=-20/275, 28-29=-50/387, 27-28=-15/231, 25-27=-15/231, 24-25=-15/231, 23-24=-14/222, 22-23=-14/222, 21-22=-14/222



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Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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WEBS 2-65=-117/246, 64-65=-126/261, 63-64=-125/264, 46-63=-129/263, 5-46=-600/101, 17-24=-274/34, 44-45=-328/48, 44-49=-474/120, 8-49=-383/125, 28-30=-667/42, 14-30=-709/99, 49-51=-133/32, 51-58=-71/246, 57-58=-65/258, 50-57=-65/258, 50-53=-44/406, 52-53=-46/399, 13-52=-45/395, 11-50=-368/98, 9-51=-224/46, 12-52=-46/10, 29-30=-135/0, 43-44=-149/75, 8-51=-61/363, 9-56=-115/640, 50-56=-112/620, 12-50=-114/458, 29-31=-83/0, 42-43=-87/0, 31-33=-133/0, 41-42=-117/0, 33-34=-77/0, 40-41=-80/0, 34-35=-52/0, 37-40=-54/0, 37-38=-58/0, 35-36=-59/0, 28-54=-51/239, 54-55=-53/246, 17-55=-60/281, 46-62=-127/124, 60-62=-114/119, 44-60=-110/119, 5-61=-43/262, 59-61=-48/258, 44-59=-47/214, 12-53=-3/80, 15-54=-20/158, 27-54=-23/168, 16-55=-148/53, 25-55=-112/75, 18-23=-155/10, 19-22=-154/130, 10-56=-111/40, 56-57=-63/31, 9-58=-39/189, 7-59=-88/32, 59-60=-32/23, 6-61=-56/24, 61-62=-50/23, 4-63=-26/21, 3-64=-149/102, 47-64=-158/103, 48-65=-62/32

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 2-5-13, Interior (1) 2-5-13 to 7-3-15, Exterior(2R) 7-3-15 to 25-7-11, Interior (1) 25-7-11 to 31-8-11, Exterior(2E) 31-8-11 to 35-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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.
13) Ceiling dead load (5.0 psf) on member(s). 13-14, 49-51, 51-58, 57-58, 50-57, 50-53, 52-53, 13-52; Wall dead load (5.0psf) on member(s).44-49, 14-30
14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 48, 162 lb uplift at joint 46, 23 lb uplift at joint 24, 105 lb uplift at joint 28, 16 lb uplift at joint 43, 132 lb uplift at joint 27, 51 lb uplift at joint 25, 123 lb uplift at joint 22 and 78 lb uplift at joint 47.
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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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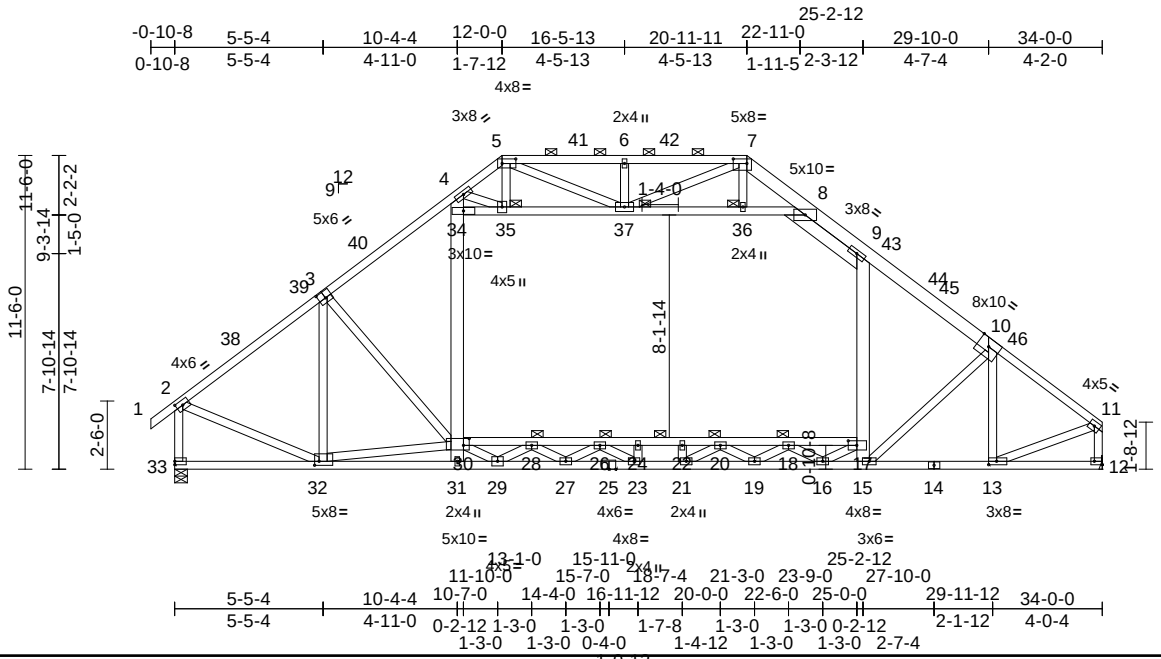
Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B2	Attic	3	1	Job Reference (optional)	I58430774

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:22 ID:V7rMa8UunQYegXKaGvRJRtzFa3p-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:84.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [3:0-3-0,0-3-0], [5:0-6-0,0-2-0], [7:0-6-0,0-2-0], [12:Edge,0-1-8], [13:0-3-8,0-1-8], [17:0-3-12,0-2-0], [30:0-2-8,0-3-0], [32:0-2-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.22	22-24	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.41	22-24	>997	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.07	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.16	17-30	>999	360		
BCDL	10.0										Weight: 316 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 10-7:2x6 SP 2400F 2.0E, 8-9:2x6 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 14-25:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 4-31,9-15:2x6 SP No.2, 34-8:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-5-4 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-6 max.): 5-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 31-32
5-3-11 oc bracing: 29-31
2-2-0 oc bracing: 23-27.
3-7-0 oc bracing: 20-26
4-0-0 oc bracing: 18-20
5-6-0 oc bracing: 26-28
6-0-0 oc bracing: 17-18
9-2-0 oc bracing: 28-30

JOINTS 1 Brace at Jt(s): 18, 28, 20, 26, 35, 36, 37

REACTIONS (size) 12= Mechanical, 33=0-5-8
Max Horiz 33=-295 (LC 12)
Max Grav 12=2114 (LC 46), 33=2092 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-4=-2485/0, 4-5=-1060/105, 5-6=-1275/234, 6-7=-1275/234, 7-8=-819/206, 8-9=-1965/9, 9-11=-2538/0, 2-33=-2038/0, 11-12=-2063/0

BOT CHORD 28-30=-418/1733, 26-28=-1078/614, 24-26=-2314/0, 22-24=-2314/0, 20-22=-2314/0, 18-20=-1901/0, 17-18=-577/132, 32-33=-270/297, 31-32=-729/732, 29-31=-1097/787, 27-29=-188/2220, 23-27=0/3390, 21-23=0/3960, 19-21=0/3920, 16-19=0/3093, 15-16=-7/1618, 13-15=0/1780, 12-13=-15/44

WEBS 3-32=-921/0, 10-13=-628/0, 2-32=0/1678, 30-31=0/245, 30-34=0/1119, 4-34=0/1122, 29-30=0/1503, 16-18=-1182/0, 28-29=-1521/0, 18-19=0/608, 27-28=0/939, 19-20=-455/71, 26-27=-892/0, 20-21=-282/201, 23-26=-19/810, 23-24=-292/10, 21-22=-82/95, 11-13=0/1846, 16-17=0/1083, 30-32=-113/2090, 3-30=-45/590, 15-17=-1/201, 9-17=0/851, 34-35=-544/390, 35-37=-1409/65, 36-37=-2008/0, 8-36=-2016/0, 10-15=-90/359, 5-35=0/535, 7-36=0/94, 6-37=-474/125, 4-35=-1490/0, 5-37=-330/466, 7-37=-105/837

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 2-6-5, Interior (1) 2-6-5 to 7-2-5, Exterior(2R) 7-2-5 to 25-9-6, Interior (1) 25-9-6 to 30-5-7, Exterior(2E) 30-5-7 to 33-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 3x5 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Ceiling dead load (5.0 psf) on member(s). 8-9, 34-35, 35-37, 36-37, 8-36; Wall dead load (5.0psf) on member (s).30-34, 9-17

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Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 28-30, 26-28, 24-26, 22-24, 20-22, 18-20, 17-18
12) Refer to girder(s) for truss to truss connections.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

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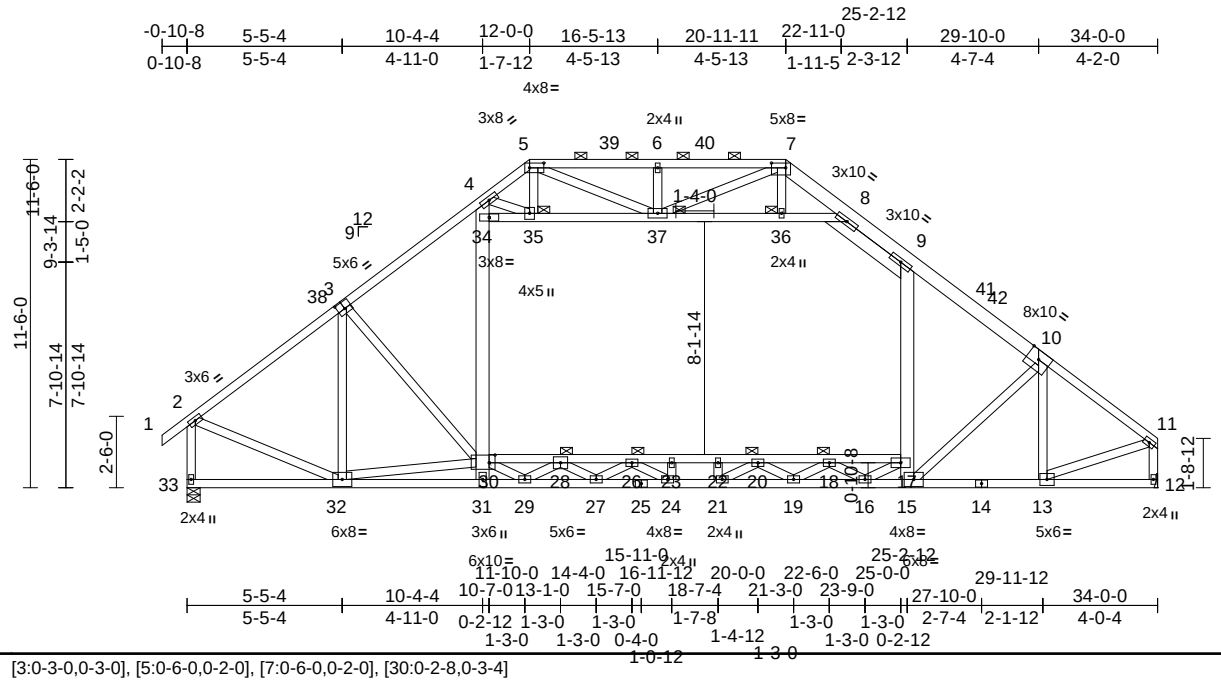
Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B2GR	Attic Girder	1	2	Job Reference (optional)	I58430775

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:23 Page: 1

ID:yxWyV23d1UH75oKqiGUr6GzFLKZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:80.7

Plate Offsets (X, Y): [3:0-3-0,0-3-0], [5:0-6-0,0-2-0], [7:0-6-0,0-2-0], [30:0-2-8,0-3-4]

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	0.50	Vert(LL)	-0.20	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.31	18	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.05	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH		Attic	-0.12	17-30	>999	360		
BCDL	10.0										Weight: 632 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 10-7:2x6 SP 2400F 2.0E, 8-9:2x6 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 30-17:2x4 SP No.3

WEBS 2x4 SP No.3 *Except* 4-31,9-15:2x6 SP No.2, 34-8:2x4 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.): 5-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 31-32,29-31.

JOINTS 1 Brace at Jt(s): 18, 28, 20, 26, 35, 36, 37

REACTIONS (size) 12= Mechanical, 33=0-5-8
Max Horiz 33=-295 (LC 10)
Max Grav 12=3464 (LC 46), 33=3107 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-4=-3921/5, 4-5=-1194/118, 5-6=-1238/220, 6-7=-1238/220, 7-8=-759/197, 8-9=-2985/59, 9-11=-4347/5, 2-33=-3049/8, 11-12=-3417/12

BOT CHORD 32-33=-271/302, 31-32=-1221/582, 29-31=-2176/774, 27-29=-149/1672, 24-27=0/3325, 21-24=0/4289, 19-21=0/4638, 16-19=0/4436, 15-16=-184/3366, 13-15=0/3025, 12-13=-15/38, 28-30=-588/3813, 26-28=-837/1535, 23-26=-1541/165, 22-23=-1541/165, 20-22=-1541/165, 18-20=-1726/0, 17-18=-915/173

WEBS 3-32=-1521/45, 10-13=-1077/5, 2-32=0/2527, 30-31=-84/1287, 30-34=0/2072, 4-34=0/2058, 15-17=-122/1428, 9-17=0/1984, 34-35=-1071/458, 35-37=-2587/172, 36-37=-3604/0, 8-36=-3615/0, 29-30=0/1783, 16-18=-889/0, 28-29=-1793/0, 18-19=-104/339, 27-28=0/1188, 19-20=-238/263, 26-27=-1230/0, 20-21=-666/245, 24-26=-66/1349, 23-24=-473/27, 21-22=-78/189, 10-15=-90/486, 11-13=0/3169, 16-17=0/954, 5-35=0/732, 7-36=0/135, 6-37=-476/125, 4-35=-2060/28, 5-37=-527/361, 7-37=-120/988, 30-32=-216/3437, 3-30=-87/1110

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: 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.
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 3x5 MT20 unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Ceiling dead load (5.0 psf) on member(s). 8-9, 34-35, 35-37, 36-37, 8-36; Wall dead load (5.0psf) on member (s).30-34, 9-17

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13) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 28-30, 26-28, 23-26, 22-23, 20-22, 18-20, 17-18
14) Refer to girder(s) for truss to truss connections.
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) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 932 lb down and 79 lb up at 10-7-0, and 1585 lb down and 135 lb up at 25-2-12 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
18) 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, 2-5=-60, 5-7=-60, 7-8=-60, 8-9=-70, 9-11=-60, 12-33=-20, 17-30=-30, 34-35=-10, 35-37=-10, 36-37=-10, 8-36=-10
   Drag: 30-34=-10, 9-17=-10
   Concentrated Loads (lb)
   Vert: 31=-500 (F), 15=-850 (F)

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B3	Piggyback Base	5	1	Job Reference (optional)	I58430776

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:25 Page: 1

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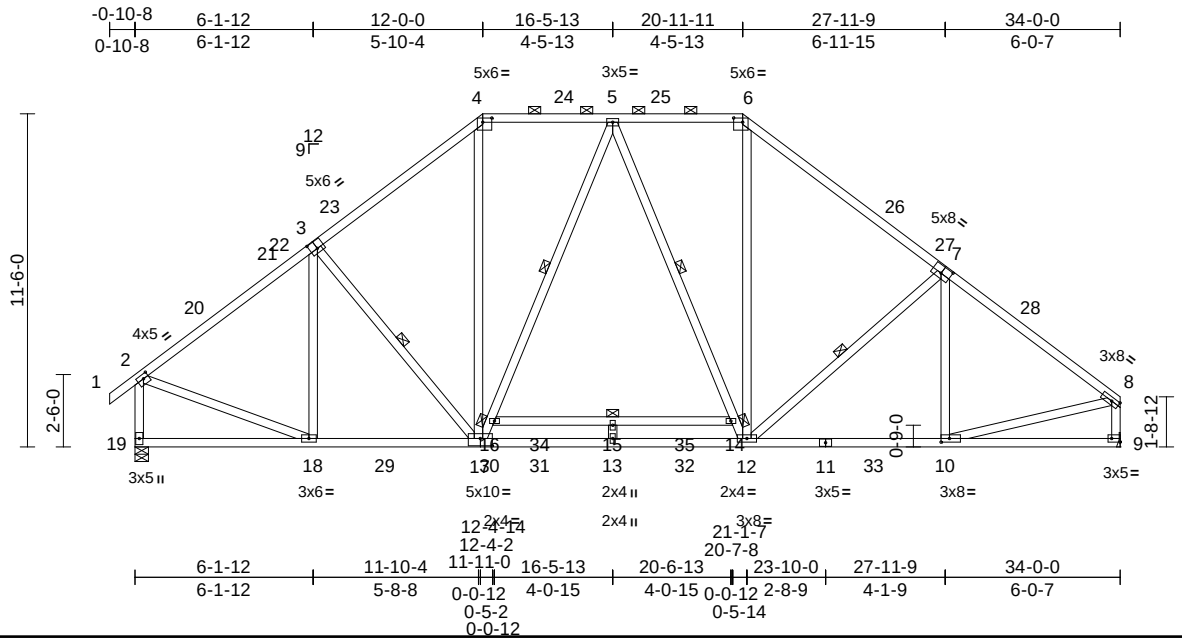

Scale = 1:79.5

Plate Offsets (X, Y): [2:0-2-4,0-1-12], [3:0-3-0,0-3-4], [4:0-3-12,0-1-12], [6:0-3-12,0-1-12], [7:0-4-0,0-3-0], [9:Edge,0-1-8], [10:0-3-8,0-1-8], [17:0-5-0,0-3-0]

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	0.96	Vert(LL)	-0.34	15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.66	15	>613	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.04	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 259 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 6-7:2x4 SP No.1

BOT CHORD 2x4 SP 2400F 2.0E *Except* 11-9,16-14:2x4 SP No.2

WEBS 2x4 SP No.3 *Except* 17-4,17-5,12-5,12-6:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-6-7 max.): 4-6.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 6-0-0 oc bracing: 14-16

WEBS 1 Row at midpt 3-17, 5-16, 5-14, 7-12

REACTIONS (size) 9= Mechanical, 19=0-5-8
Max Horiz 19=-295 (LC 12)
Max Grav 9=1866 (LC 45), 19=1944 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/37, 2-4=-1959/47, 4-5=-1440/91, 5-6=-1487/92, 6-8=-2141/36, 2-19=-1831/25, 8-9=-1760/14

BOT CHORD 18-19=-272/314, 13-18=-22/1588, 12-13=0/1558, 10-12=0/1663, 9-10=-26/90, 15-16=-67/0, 14-15=-67/0

WEBS 3-18=-400/0, 3-17=-170/253, 4-17=0/839, 16-17=-436/118, 5-16=-317/173, 5-14=-221/191, 12-14=-353/138, 6-12=0/844, 7-12=-335/257, 7-10=-268/27, 2-18=0/1510, 8-10=0/1633, 13-15=-108/2

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 2-6-5, Interior (1) 2-6-5 to 7-2-5, Exterior(2R) 7-2-5 to 25-9-6, Interior (1) 25-9-6 to 30-5-7, Exterior(2E) 30-5-7 to 33-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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, 16-5-13 from left end, supported at two points, 5-0-0 apart.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Refer to girder(s) for truss to truss connections.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	B3GE	Piggyback Base Supported Gable	1	1	Job Reference (optional)	I58430777

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:26 Page: 1
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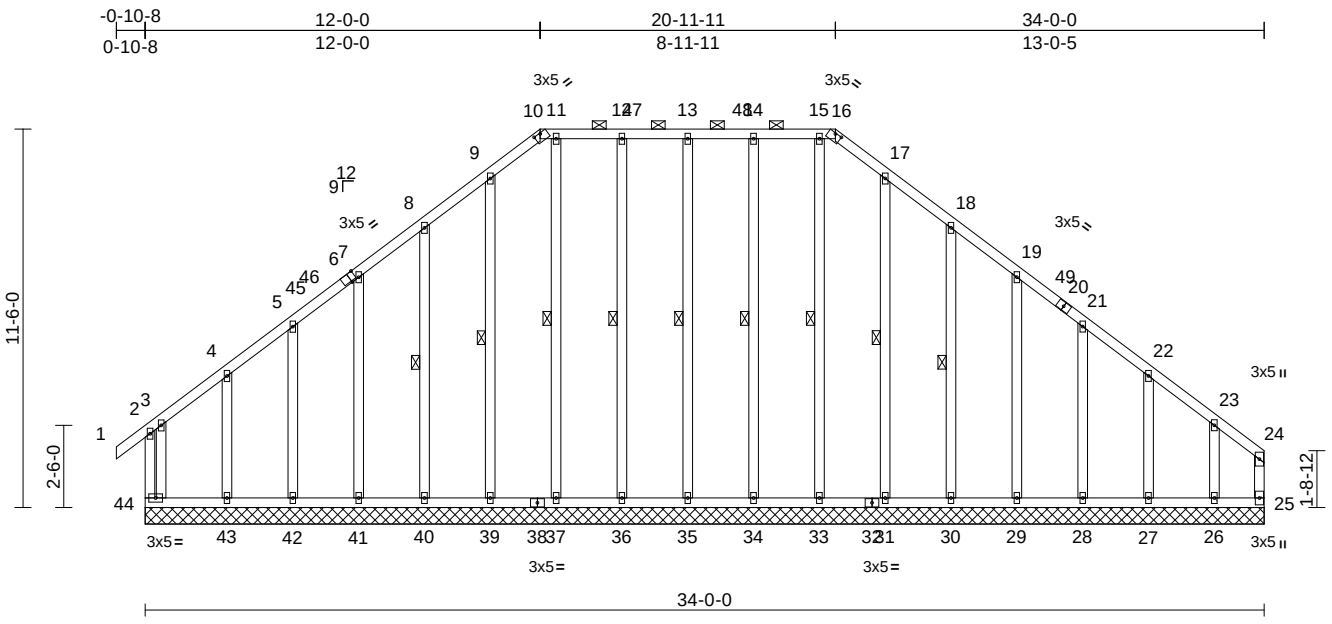

Scale = 1:70

Plate Offsets (X, Y): [6:0-2-1,Edge], [10:0-2-8,0-0-5], [16:0-2-8,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	-0.01	25	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 307 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 *Except* 35-13,34-14,33-15,36-12,37-11:2x4 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.): 10-16.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 13-35, 14-34, 15-33, 17-31, 18-30, 12-36, 11-37, 9-39, 8-40

REACTIONS (size) 25=34-0-0, 26=34-0-0, 27=34-0-0, 28=34-0-0, 29=34-0-0, 30=34-0-0, 31=34-0-0, 33=34-0-0, 34=34-0-0, 35=34-0-0, 36=34-0-0, 37=34-0-0, 39=34-0-0, 40=34-0-0, 41=34-0-0, 42=34-0-0, 43=34-0-0, 44=34-0-0
Max Horiz 44=-295 (LC 12)
Max Uplift 25=-290 (LC 11), 26=-258 (LC 10), 27=-45 (LC 15), 28=-72 (LC 15), 29=-63 (LC 15), 30=-81 (LC 15), 31=-20 (LC 15), 33=-2 (LC 12), 34=-38 (LC 11), 35=-25 (LC 10), 36=-34 (LC 10), 39=-17 (LC 14), 40=-81 (LC 14), 41=-71 (LC 14), 42=-37 (LC 14), 43=-191 (LC 11), 44=-145 (LC 10)
Max Grav 25=336 (LC 12), 26=350 (LC 13), 27=164 (LC 1), 28=190 (LC 49), 29=230 (LC 39), 30=231 (LC 39), 31=227 (LC 39), 33=232 (LC 50), 34=236 (LC 38), 35=228 (LC 38), 36=236 (LC 38), 37=220 (LC 50), 39=227 (LC 39), 40=231 (LC 39), 41=232 (LC 47), 42=176 (LC 39), 43=310 (LC 24), 44=256 (LC 49)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-44=-362/328, 1-2=0/37, 2-3=-192/187, 3-4=-158/157, 4-5=-103/168, 5-7=-138/228, 7-8=-175/292, 8-9=-219/366, 9-10=-233/391, 10-11=-200/347, 11-12=-200/347, 12-13=-200/347, 13-14=-200/347, 14-15=-200/347, 15-16=-200/347, 16-17=-233/391, 17-18=-219/367, 18-19=-175/292, 19-21=-140/229, 21-22=-161/183, 22-23=-171/168, 23-24=-249/233, 24-25=-213/187
BOT CHORD 43-44=-175/174, 42-43=-175/174, 41-42=-175/174, 40-41=-175/174, 39-40=-175/174, 37-39=-175/174, 36-37=-175/174, 35-36=-175/174, 34-35=-175/174, 33-34=-175/174, 31-33=-175/174, 30-31=-175/174, 29-30=-175/174, 28-29=-175/174, 27-28=-175/174, 26-27=-175/174, 25-26=-175/174
WEBS 13-35=-188/49, 14-34=-196/68, 15-33=-192/48, 17-31=-187/44, 18-30=-191/105, 19-29=-189/88, 21-28=-145/93, 22-27=-123/85, 23-26=-198/150, 12-36=-196/68, 11-37=-180/48, 9-39=-187/41, 8-40=-191/105, 7-41=-189/93, 5-42=-138/75, 4-43=-224/174, 3-44=-455/428

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 2-5-13, Exterior (2N) 2-5-13 to 8-5-13, Corner(3R) 8-5-13 to 15-4-13, Exterior(2N) 15-4-13 to 17-6-14, Corner(3R) 17-6-14 to 24-5-13, Exterior(2N) 24-5-13 to 30-5-7, Corner(3E) 30-5-7 to 33-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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

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Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
11) Gable studs spaced at 2-0-0 oc.
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) N/A
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.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	CGR	Common Girder	1	2	Job Reference (optional)	I58430778

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:27 Page: 1
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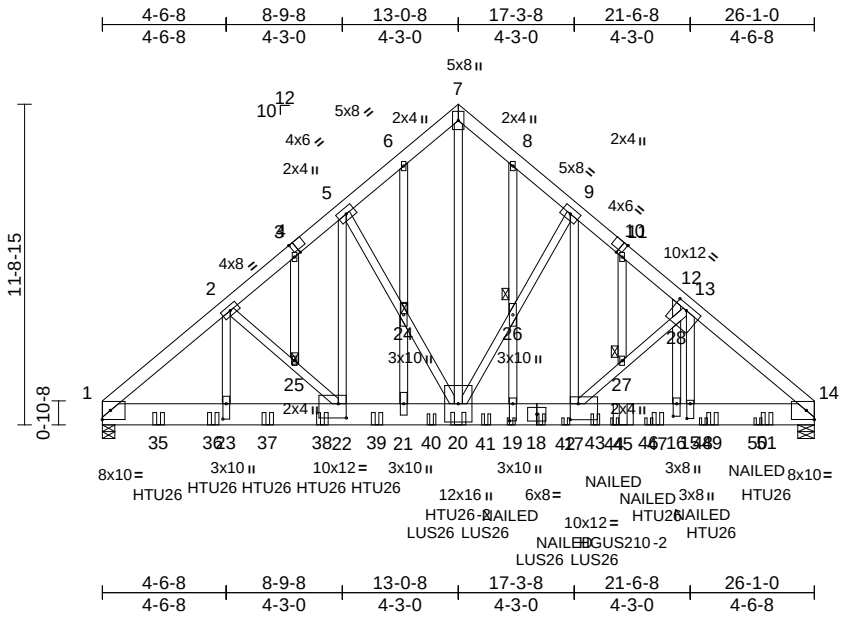

Scale = 1:84.4

Plate Offsets (X, Y): [4:0-2-0,Edge], [10:0-2-0,Edge], [13:0-5-8,0-2-4], [15:0-6-8,0-1-8], [16:0-5-8,0-1-8], [17:0-3-8,0-7-0], [19:0-7-8,0-1-8], [22:0-3-8,0-6-4], [23:0-6-12,0-1-8]

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	0.67	Vert(LL)	-0.15	16-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.28	16-17	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.05	14	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 626 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x10 SP 2400F 2.0E
WEBS	2x4 SP No.3 *Except* 22-5,20-7,17-9:2x4 SP No.2
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-9-9 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 24, 25, 26, 27

REACTIONS (size) 1=0-5-8, 14=0-7-4
Max Horiz 1=255 (LC 11)
Max Grav 1=10493 (LC 5), 14=11998 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-13463/0, 2-3=-10693/0, 3-5=-10730/0, 5-6=-8411/0, 6-7=-7434/0, 7-8=-7457/0, 8-9=-8434/0, 9-11=-10936/0, 11-12=-10873/0, 12-13=-12182/0, 13-14=-15123/0
BOT CHORD	1-23=0/10390, 22-23=0/10390, 21-22=0/8373, 20-21=0/8373, 19-20=0/8541, 17-19=0/8541, 16-17=0/11600, 15-16=0/11600, 14-15=0/11600
WEBS	2-23=0/3566, 2-25=-2708/0, 22-25=-2843/0, 5-22=0/4754, 5-24=-4245/0, 20-24=-4447/0, 7-20=0/8200, 20-26=-4899/0, 9-26=-4693/0, 9-17=0/5104, 17-27=-4428/0, 27-28=-4277/0, 13-28=-3987/0, 13-15=0/3152, 6-24=0/1415, 21-24=0/1635, 3-25=-196/0, 8-26=0/1414, 19-26=0/1641, 11-27=-215/0, 12-28=0/2029, 16-28=0/2460

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 - 3 rows staggered at 0-3-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Use Simpson Strong-Tie HTU26-2 (20-10d Girder, 14-10d Truss, Single Ply Girder) or equivalent at 13-0-8 from the left end to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 10-0-12 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 12-0-12 from the left end to 18-0-12 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie HGUS210-2 (46-10d Girder, 16-10d Truss) or equivalent at 19-1-0 from the left end to connect truss(es) to back face of bottom chord.

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Continued on page 2

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16) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 20-4-4 from the left end to 24-4-4 to connect truss(es) to back face of bottom chord.
17) Fill all nail holes where hanger is in contact with lumber.
18) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-7=-60, 7-14=-60, 29-32=-20
   Concentrated Loads (lb)
   Vert: 18=-360 (B), 20=-243 (F), 19=5 (F), 35=-1618 (B), 36=-1618 (B), 37=-1618 (B), 38=-1618 (B), 39=-1618 (B), 40=-360 (B), 41=-360 (B), 42=5 (F), 43=-360 (B), 44=5 (F), 45=-2611 (B), 46=-74 (F), 47=-1827 (B), 48=-74 (F), 49=-1827 (B), 50=-74 (F), 51=-1827 (B)

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	D	Piggyback Base	3	1	Job Reference (optional)	I58430779

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:29 Page: 1

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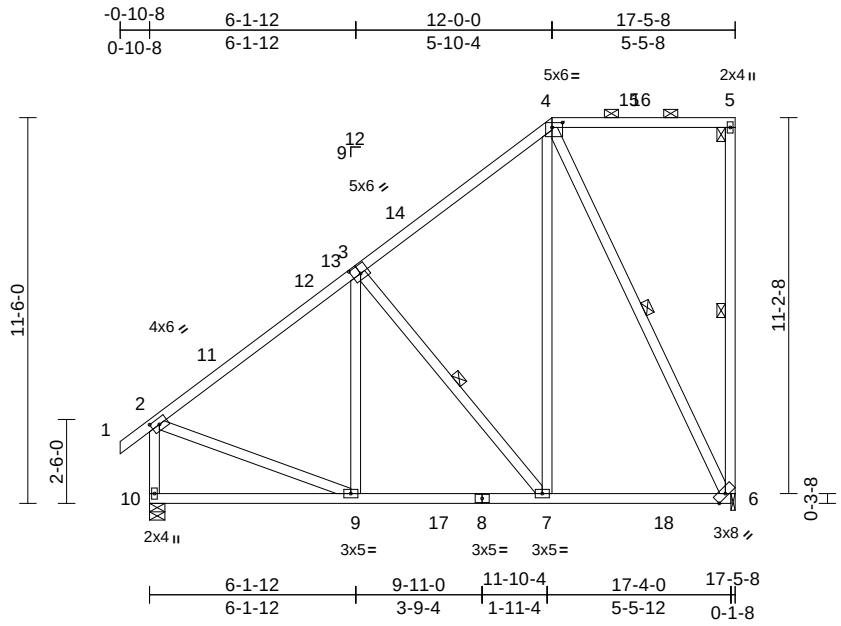

Scale = 1:68.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.05	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.08	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	-0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 143 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-6,7-4,6-4:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 9-8-14 oc bracing.
WEBS 1 Row at midpt 5-6, 3-7, 4-6

REACTIONS (size) 6=0-1-8, 10=0-5-8
Max Horiz 10=323 (LC 14)
Max Uplift 6=-199 (LC 14)
Max Grav 6=816 (LC 37), 10=919 (LC 40)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-4=-799/53, 4-5=-7/1, 5-6=-243/67, 2-10=-825/27
BOT CHORD 9-10=-361/200, 7-9=-236/644, 6-7=-95/318
WEBS 3-9=-60/161, 3-7=-497/220, 4-7=-97/643, 4-6=-738/221, 2-9=0/554

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 7-9-1, Exterior(2R) 7-9-1 to 14-3-12, Exterior (2E) 14-3-12 to 17-3-12 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Bearings are assumed to be: , Joint 6 SP No.2 crushing capacity of 565 psi.
9) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 19,2023

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	E	Common	4	1	Job Reference (optional)	I58430780

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

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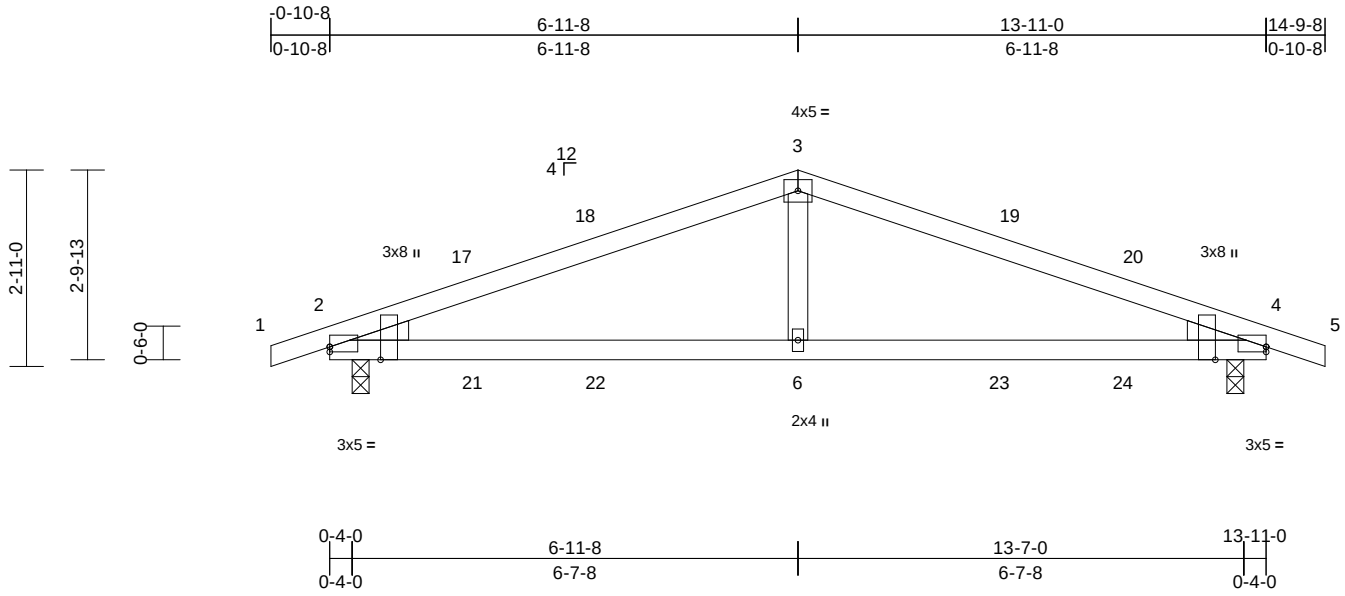
Page: 1



Scale = 1:34.2

Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-2-5,Edge], [4:Edge,0-0-14], [4:0-2-5,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	0.72	Vert(LL)	-0.09	6-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.13	6-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.02	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 51 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-1-1 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 5-9-4 oc bracing.

REACTIONS (size) 2=0-3-0, 4=0-3-0
Max Horiz 2=41 (LC 14)
Max Uplift 2=-221 (LC 10), 4=-221 (LC 11)
Max Grav 2=708 (LC 21), 4=708 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/17, 2-3=-901/1104, 3-4=-901/1104, 4-5=0/17
BOT CHORD	2-6=-943/775, 4-6=-943/775
WEBS	3-6=-425/268

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 3-11-8, Exterior(2R) 3-11-8 to 9-11-8, Interior (1) 9-11-8 to 11-9-8, Exterior(2E) 11-9-8 to 14-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. 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.

LOAD CASE(S) Standard

May 19,2023

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Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	EGE	Common Supported Gable	1	1	Job Reference (optional)	I58430781

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:30 Page: 1
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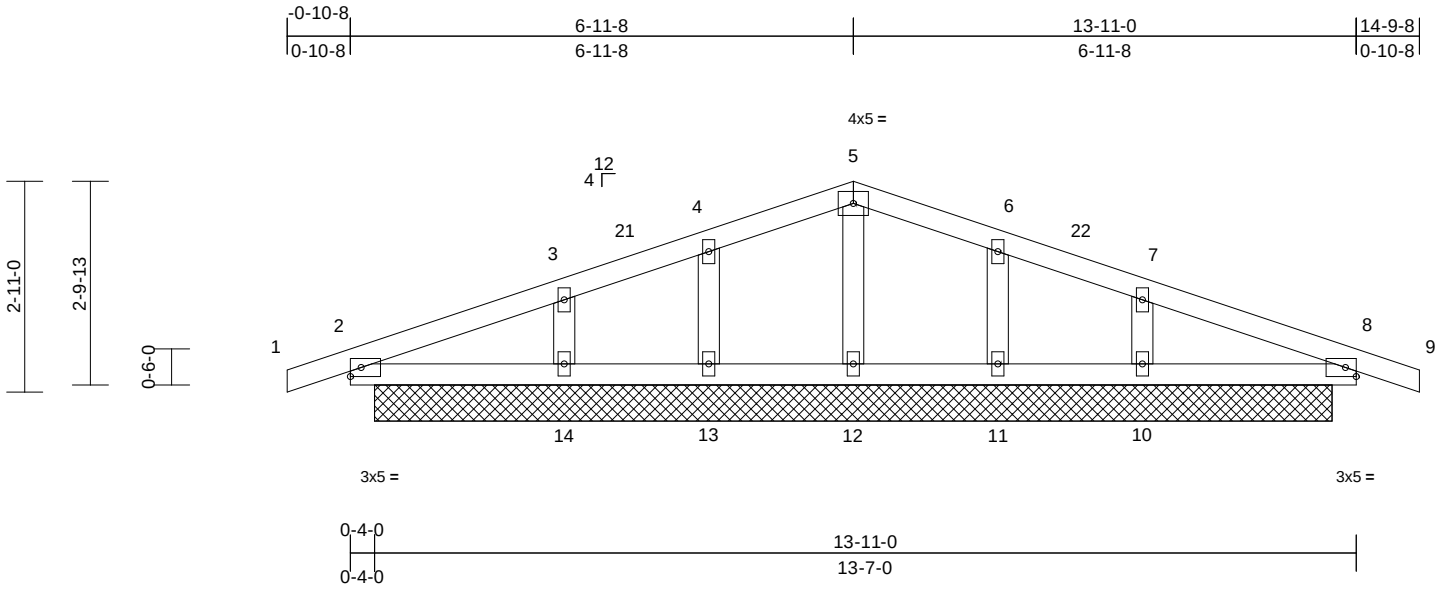

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 56 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP 2400F 2.0E
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=13-3-0, 8=13-3-0, 10=13-3-0, 11=13-3-0, 12=13-3-0, 13=13-3-0, 14=13-3-0, 17=13-3-0, 20=13-3-0
Max Horiz 2=61 (LC 10), 8=-61 (LC 11), 17=61 (LC 10), 20=-61 (LC 11)
Max Uplift 2=-45 (LC 10), 8=-45 (LC 11), 10=-40 (LC 15), 11=-36 (LC 15), 13=-36 (LC 14), 14=-40 (LC 14), 17=-45 (LC 10), 20=-45 (LC 11)
Max Grav 2=232 (LC 21), 8=232 (LC 22), 10=255 (LC 22), 11=220 (LC 22), 12=144 (LC 21), 13=220 (LC 21), 14=255 (LC 21), 17=232 (LC 21), 20=232 (LC 22)
Max Mom 2=260 (LC 7), 8=172 (LC 20), 17=260 (LC 7), 20=172 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-92/95, 3-4=-44/22, 4-5=-46/70, 5-6=-46/70, 6-7=-44/22, 7-8=-92/95, 8-9=0/17
BOT CHORD 2-14=-43/46, 13-14=0/0, 12-13=0/0, 11-12=0/0, 10-11=0/0, 8-10=-43/46
WEBS 5-12=-103/63, 4-13=-182/126, 3-14=-208/128, 6-11=-182/126, 7-10=-208/128

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 3-11-8, Corner(3R) 3-11-8 to 9-11-8, Exterior (2N) 9-11-8 to 11-9-8, Corner(3E) 11-9-8 to 14-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Solid blocking is required on both sides of the truss at joint(s), 2.
12) N/A
13) N/A
14) Non Standard bearing condition. Review required.
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.

LOAD CASE(S) Standard

May 19,2023

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	F	Common	3	1	Job Reference (optional)	I58430782

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:30 Page: 1

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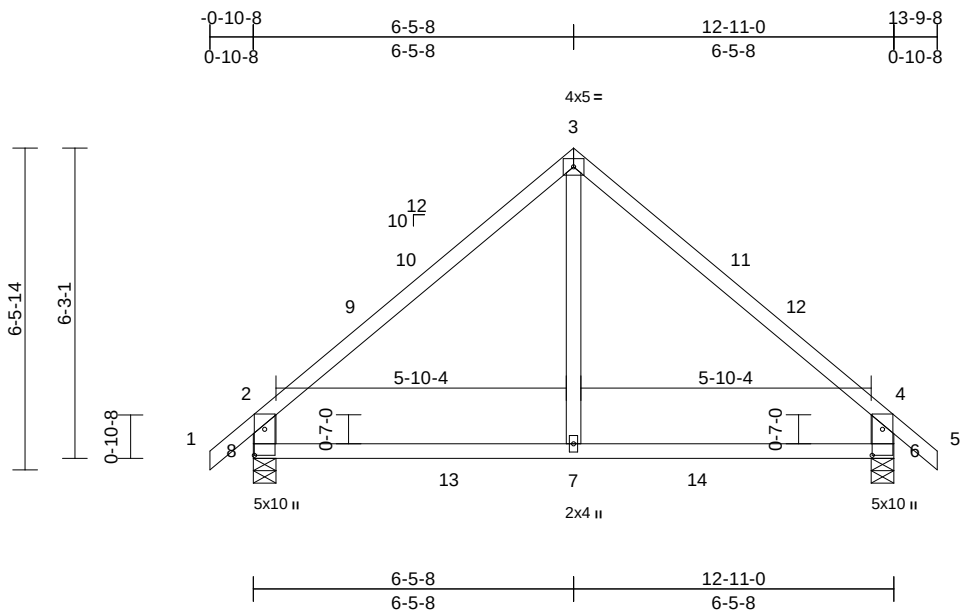

Scale = 1:46.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.06	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.09	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 59 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2 *Except* 7-3:2x4 SP No.3

BRACING

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

REACTIONS (size) 6=0-5-8, 8=0-5-8
Max Horiz 8=-169 (LC 12)
Max Uplift 6=-55 (LC 15), 8=-55 (LC 14)
Max Grav 6=685 (LC 6), 8=685 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/42, 2-3=-619/136, 3-4=-619/136, 4-5=0/42, 2-8=-603/195, 4-6=-603/195
BOT CHORD 7-8=0/408, 6-7=0/408
WEBS 3-7=0/355

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 3-5-8, Exterior(2R) 3-5-8 to 9-5-8, Interior (1) 9-5-8 to 10-9-8, Exterior(2E) 10-9-8 to 13-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) 8 and 6. 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.

LOAD CASE(S) Standard

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	F1	Common	1	1	Job Reference (optional)	I58430783

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:30 Page: 1
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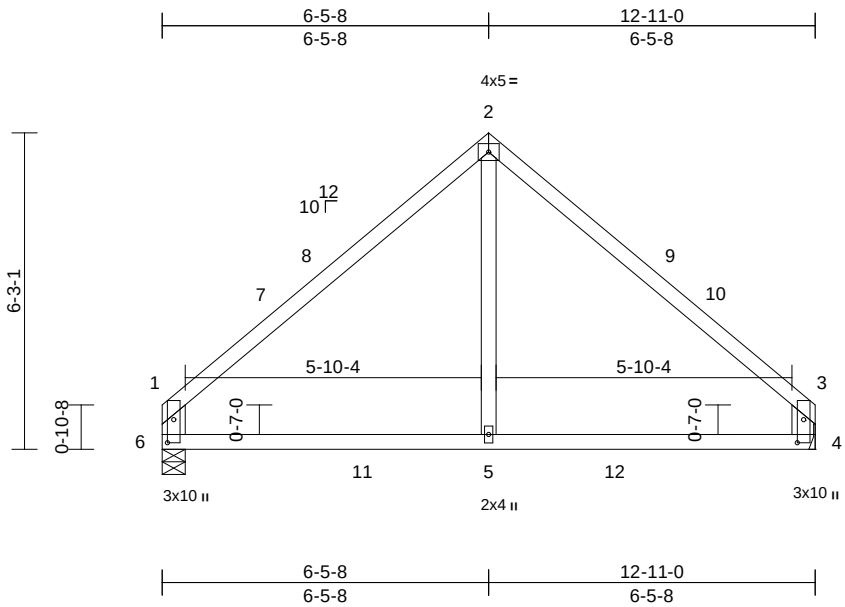

Scale = 1:45.6

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

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	0.92	Vert(LL)	-0.05	5-6	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.09	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 56 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2 *Except* 5-2:2x4 SP No.3

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

REACTIONS (size) 4= Mechanical, 6=0-5-8
Max Horiz 6=147 (LC 11)
Max Uplift 4=-33 (LC 15), 6=-33 (LC 14)
Max Grav 4=629 (LC 6), 6=629 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-611/134, 2-3=-611/134, 1-6=-522/144, 3-4=-522/144
BOT CHORD 5-6=0/401, 4-5=0/401
WEBS 2-5=0/342

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) 0-2-12 to 3-2-12, Exterior (2R) 3-2-12 to 9-8-4, Exterior(2E) 9-8-4 to 12-8-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for 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 33 lb uplift at joint 4.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6. 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

May 19,2023

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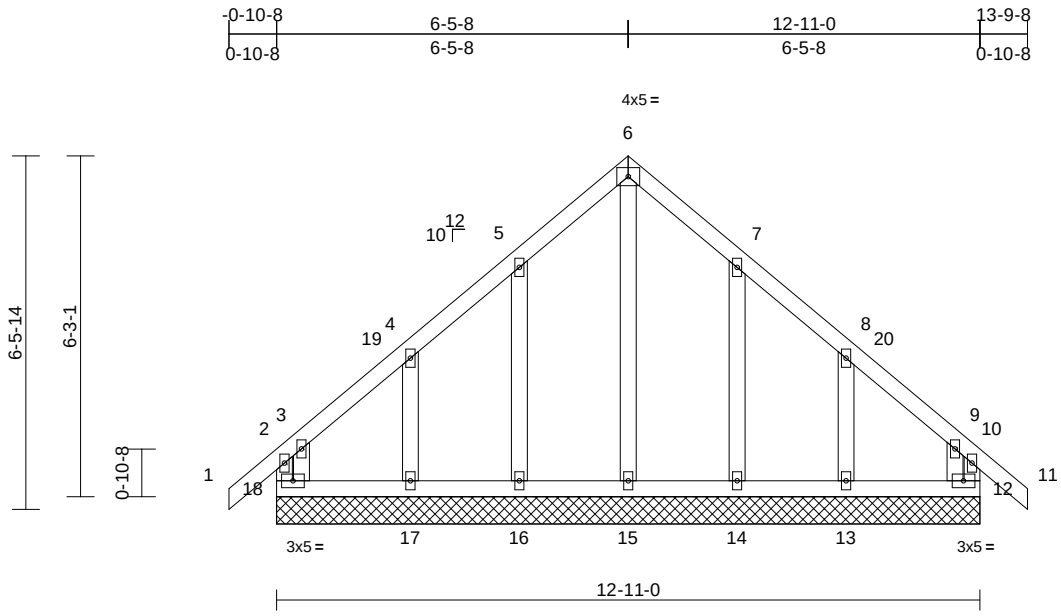
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	FGE	Common Supported Gable	1	1	Job Reference (optional)	I58430784

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:31 ID:WvJLc0ujCyCaeqGFlVRNNQzFZxY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f Page: 1



Scale = 1:42.3

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 79 lb	FT = 20%

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

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

REACTIONS (size) 12=12-11-0, 13=12-11-0, 14=12-11-0, 15=12-11-0, 16=12-11-0, 17=12-11-0, 18=12-11-0
Max Horiz 18=-166 (LC 12)
Max Uplift 12=-37 (LC 14), 13=-117 (LC 15), 14=-65 (LC 15), 16=-65 (LC 14), 17=-121 (LC 14), 18=-47 (LC 15)
Max Grav 12=172 (LC 1), 13=211 (LC 22), 14=270 (LC 22), 15=178 (LC 15), 16=270 (LC 21), 17=216 (LC 24), 18=187 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-18=-117/185, 1-2=0/39, 2-3=-17/79, 3-4=-119/96, 4-5=-112/182, 5-6=-158/275, 6-7=-158/275, 7-8=-112/182, 8-9=-100/74, 9-10=-19/79, 10-11=0/39, 10-12=-112/185
BOT CHORD 17-18=-67/106, 16-17=-67/106, 15-16=-67/106, 14-15=-67/106, 13-14=-67/106, 12-13=-67/106
WEBS 6-15=-268/100, 5-16=-233/122, 4-17=-165/177, 3-18=-145/89, 7-14=-233/122, 8-13=-165/177, 9-12=-126/62

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 3-5-8, Corner(3R) 3-5-8 to 9-5-8, Exterior(2N) 9-5-8 to 10-9-8, Corner(3E) 10-9-8 to 13-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 47 lb uplift at joint 18, 37 lb uplift at joint 12, 65 lb uplift at joint 16, 121 lb uplift at joint 17, 65 lb uplift at joint 14 and 117 lb uplift at joint 13.
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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	GGE	Common Supported Gable	1	1	Job Reference (optional)	I58430785

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:31 Page: 1
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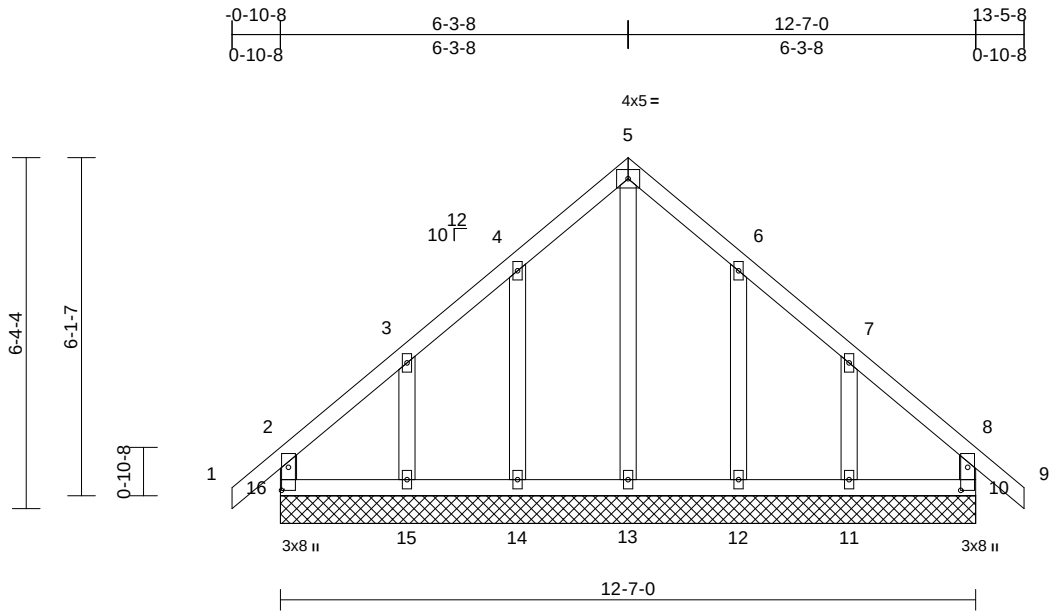

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Plate Offsets (X, Y): [10:0-5-0,0-1-8], [16:0-5-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
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
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) 10=12-7-0, 11=12-7-0, 12=12-7-0, 13=12-7-0, 14=12-7-0, 15=12-7-0, 16=12-7-0
Max Horiz 16=-163 (LC 12)
Max Uplift 10=-37 (LC 14), 11=-113 (LC 15), 12=-67 (LC 15), 14=-67 (LC 14), 15=-116 (LC 14), 16=-47 (LC 10)
Max Grav 10=158 (LC 24), 11=204 (LC 22), 12=273 (LC 22), 13=183 (LC 31), 14=273 (LC 21), 15=208 (LC 24), 16=172 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-16=-141/137, 1-2=0/39, 2-3=-109/94, 3-4=-96/177, 4-5=-144/274, 5-6=-144/274, 6-7=-96/177, 7-8=-94/75, 8-9=0/39, 8-10=-136/137
BOT CHORD 15-16=-71/105, 14-15=-71/105, 13-14=-71/105, 12-13=-71/105, 11-12=-71/105, 10-11=-71/105
WEBS 5-13=-266/83, 4-14=-234/127, 3-15=-161/172, 6-12=-234/127, 7-11=-161/172

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-3-8, Exterior(2N) 2-3-8 to 3-3-8, Corner(3R) 3-3-8 to 9-3-8, Exterior(2N) 9-3-8 to 10-3-8, Corner(3E) 10-3-8 to 13-5-8 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
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 47 lb uplift at joint 16, 37 lb uplift at joint 10, 67 lb uplift at joint 14, 116 lb uplift at joint 15, 67 lb uplift at joint 12 and 113 lb uplift at joint 11.
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

May 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	GGR	Common Girder	1	2	Job Reference (optional)	I58430786

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

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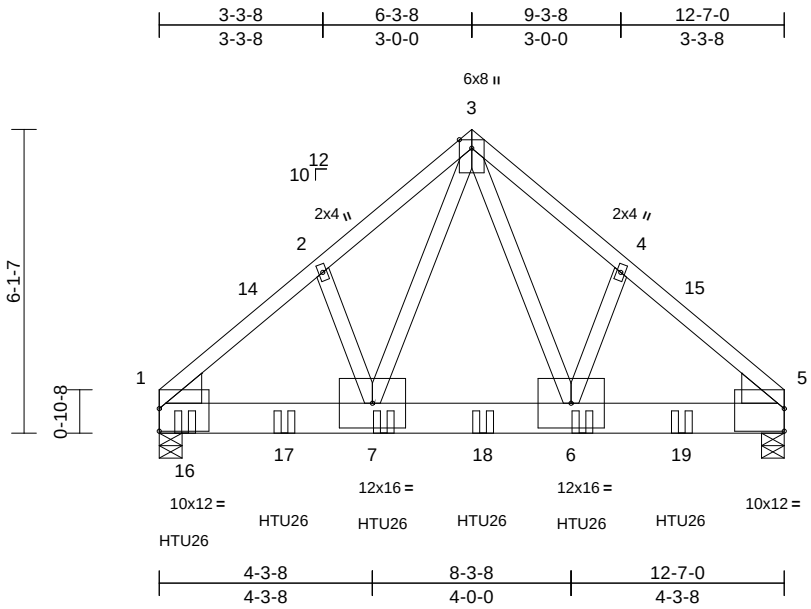

Scale = 1:46.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.06	6-7	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.12	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 186 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x8 SP 2400F 2.0E
WEBS	2x4 SP No.3
WEDGE	Left: 2x8 SP No.2 Right: 2x8 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-4-12 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=-123 (LC 36)
Max Grav 1=7673 (LC 5), 5=5967 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-6993/0, 2-3=-6875/0, 3-4=-6690/0, 4-5=-6813/0
BOT CHORD	1-7=-125/5282, 6-7=0/3703, 5-6=-14/5136
WEBS	3-6=0/4250, 4-6=-116/220, 3-7=0/4670, 2-7=-128/213

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for 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 HTU26 (20-10d Girder, 11-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-6-4 from the left end to 10-6-4 to connect truss(es) to back face of bottom chord.
11) 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: 1-3=-60, 3-5=-60, 8-11=-20
Concentrated Loads (lb)
Vert: 6=-1863 (B), 7=-1863 (B), 16=-1868 (B), 17=-1863 (B), 18=-1863 (B), 19=-1863 (B)

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	H	Monopitch	6	1	Job Reference (optional)	I58430787

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:32 Page: 1
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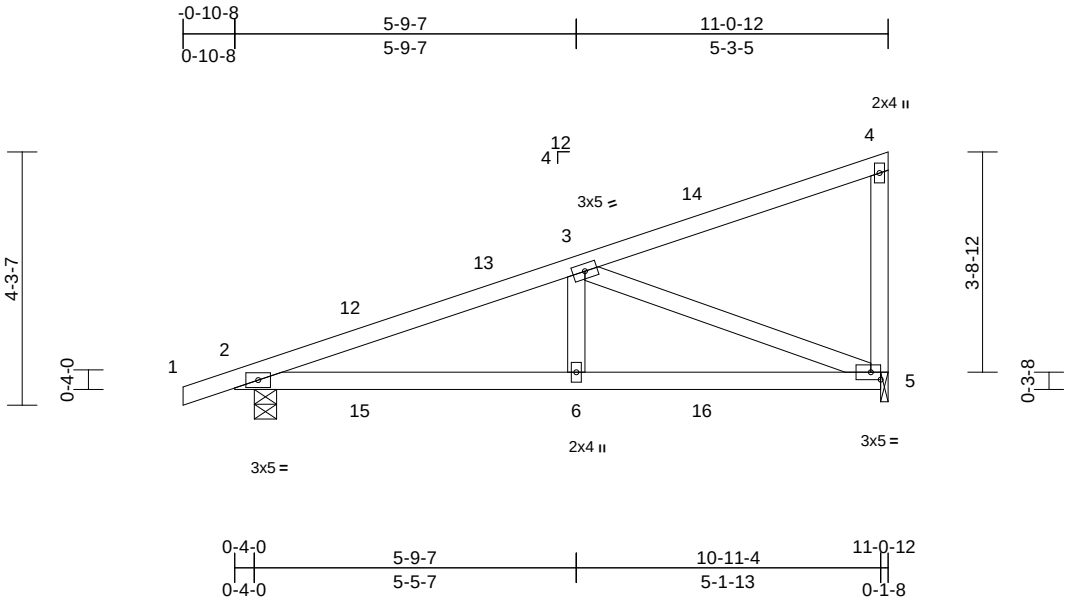

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	0.06	5-6	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	0.05	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.01	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
WEBS 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 6-3-7 oc bracing.

REACTIONS (size) 2=0-4-8, 5=0-1-8
Max Horiz 2=152 (LC 13)
Max Uplift 2=-193 (LC 10), 5=-168 (LC 10)
Max Grav 2=565 (LC 21), 5=550 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-914/819, 3-4=-107/52, 4-5=-194/104
BOT CHORD 2-6=-788/829, 5-6=-788/829
WEBS 3-6=-328/232, 3-5=-860/883

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 7-11-0, Exterior(2E) 7-11-0 to 10-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: Joint 5 SP No.3 crushing capacity of 565 psi.
8) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 2. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	HSE	Monopitch	1	1	Job Reference (optional)	I58430788

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 E Oct 7 2022 Print: 8.530 E Oct 7 2022 MiTek Industries, Inc. Thu May 18 14:29:25 Page: 1
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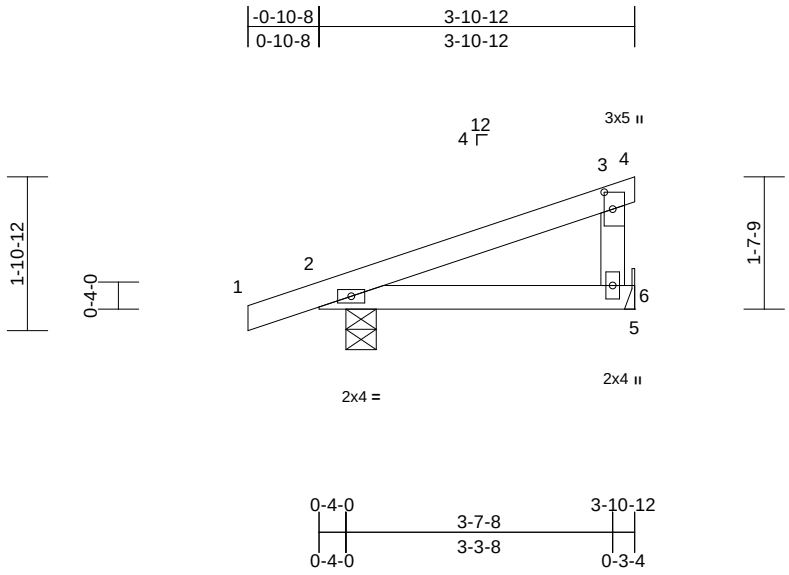

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Plate Offsets (X, Y): [3:0-2-8,0-1-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	0.01	6-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	6-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

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

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

REACTIONS (size) 2=0-4-8, 6= Mechanical
Max Horiz 2=57 (LC 13)
Max Uplift 2=-60 (LC 10), 6=-24 (LC 14)
Max Grav 2=311 (LC 21), 6=189 (LC 21)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 6.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
12) 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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	I	Monopitch	1	1	Job Reference (optional)	I58430789

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

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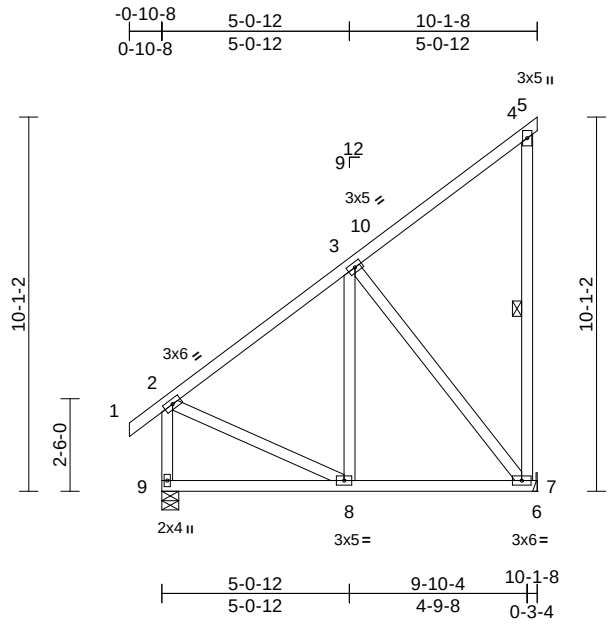

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	0.06	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	0.05	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 80 lb	FT = 20%

LUMBER
TOP CHORD 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 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 4-7

REACTIONS (size) 7= Mechanical, 9=0-5-8
Max Horiz 9=354 (LC 13)
Max Uplift 7=-241 (LC 11), 9=-60 (LC 10)
Max Grav 7=559 (LC 21), 9=490 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-365/294, 3-4=-206/126, 4-5=-17/0, 4-7=-238/80, 2-9=-446/302
BOT CHORD 8-9=-340/233, 7-8=-182/227, 6-7=0/0
WEBS 3-8=-313/170, 3-7=-350/449, 2-8=-87/264

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 7-1-8, Exterior(2E) 7-1-8 to 10-1-8 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
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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 241 lb uplift at joint 7.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. 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

May 19,2023

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	J	Monopitch	3	1	Job Reference (optional)	I58430790

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:33 Page: 1
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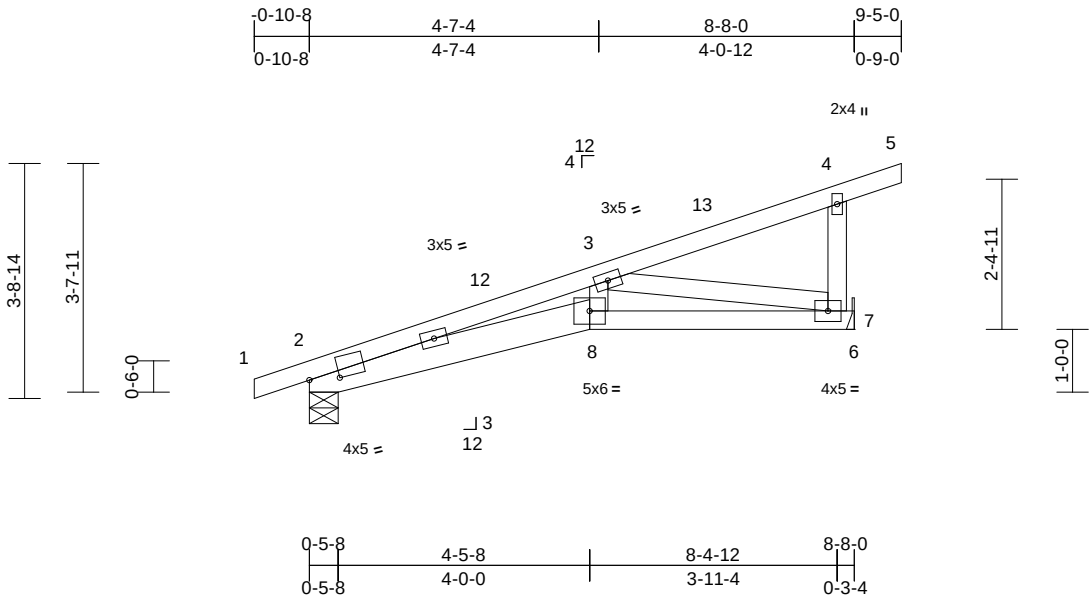

Scale = 1:36.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.05	8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.08	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 42 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-4-1 oc bracing.

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=118 (LC 11)
Max Uplift 2=-71 (LC 10), 7=-85 (LC 14)
Max Grav 2=438 (LC 21), 7=542 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1394/477, 3-4=-62/54, 4-5=-29/0, 4-7=-260/192
BOT CHORD 2-8=-537/1338, 7-8=-497/1222, 6-7=0/0
WEBS 3-8=-101/385, 3-7=-1245/543

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 1-11-13, Interior (1) 1-11-13 to 6-5-0, Exterior(2E) 6-5-0 to 9-5-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 7.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	J1	Monopitch	6	1	Job Reference (optional)	I58430791

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:33 Page: 1
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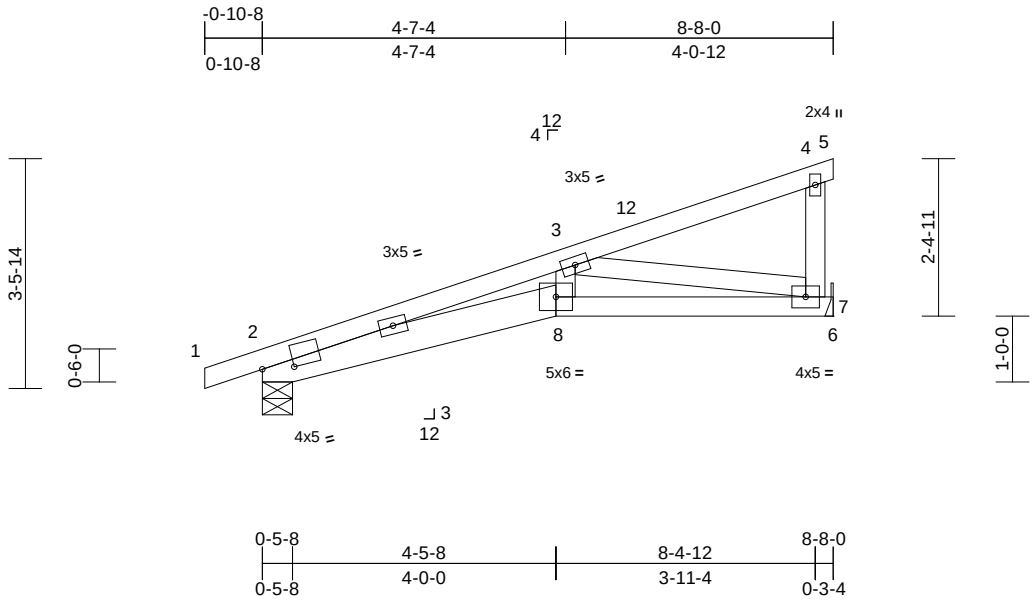

Scale = 1:35

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.06	8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.09	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 41 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-10-3 oc bracing.

REACTIONS (size) 2=0-5-8, 7= Mechanical
Max Horiz 2=108 (LC 11)
Max Uplift 2=-75 (LC 10), 7=-67 (LC 14)
Max Grav 2=462 (LC 21), 7=478 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1495/572, 3-4=-60/38, 4-5=-8/0, 4-7=-179/95
BOT CHORD 2-8=-604/1432, 7-8=-562/1308, 6-7=0/0
WEBS 3-8=-109/410, 3-7=-1332/608

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 1-11-13, Interior (1) 1-11-13 to 5-8-0, Exterior(2E) 5-8-0 to 8-8-0 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
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) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 7.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	JSE	Monopitch	1	1	Job Reference (optional)	I58430792

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:34 Page: 1
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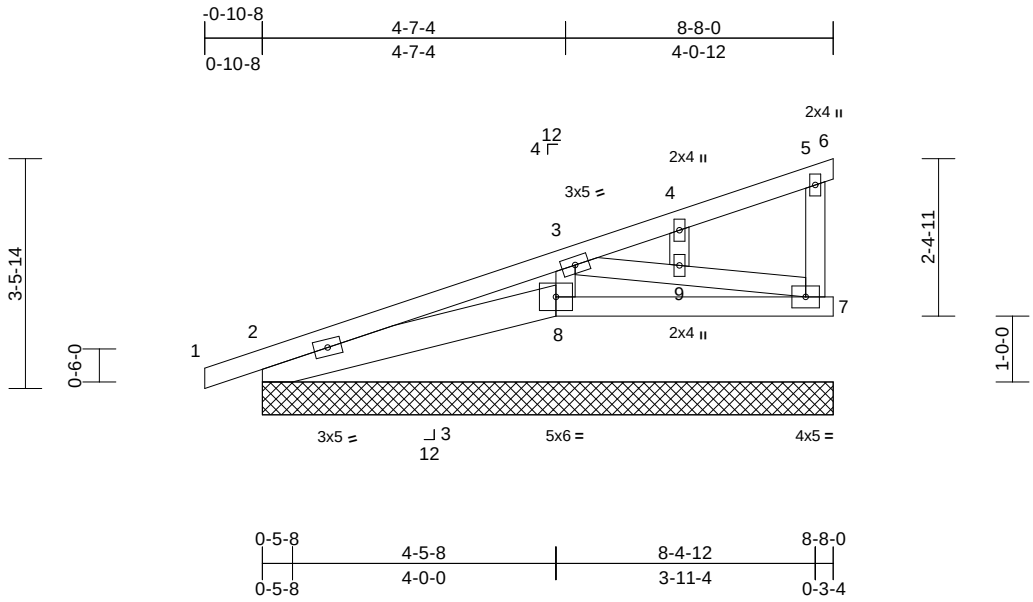

Scale = 1:35

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 42 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 8-7:2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS (size) 2=8-8-0, 6=8-8-0, 7=8-8-0, 8=8-8-0, 10=8-8-0
Max Horiz 2=108 (LC 11), 10=108 (LC 11)
Max Uplift 2=-44 (LC 10), 6=-198 (LC 21), 7=-107 (LC 10), 8=-65 (LC 14), 10=-44 (LC 10)
Max Grav 2=242 (LC 21), 6=68 (LC 10), 7=435 (LC 21), 8=455 (LC 21), 10=242 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-159/63, 3-4=-58/2, 4-5=-38/43, 5-6=-70/53, 5-7=-358/285
BOT CHORD 2-8=-138/154, 7-8=-71/91
WEBS 3-9=-89/112, 7-9=-97/120, 4-9=-45/41, 3-8=-326/234

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 Corner(3E) -0-10-8 to 1-11-13, Exterior (2N) 1-11-13 to 8-8-0 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
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 2, 65 lb uplift at joint 8, 198 lb uplift at joint 6, 107 lb uplift at joint 7 and 44 lb uplift at joint 2.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 8, 6, 7, 10.
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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	K	Jack-Closed	4	1	Job Reference (optional)	I58430793

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:34 Page: 1

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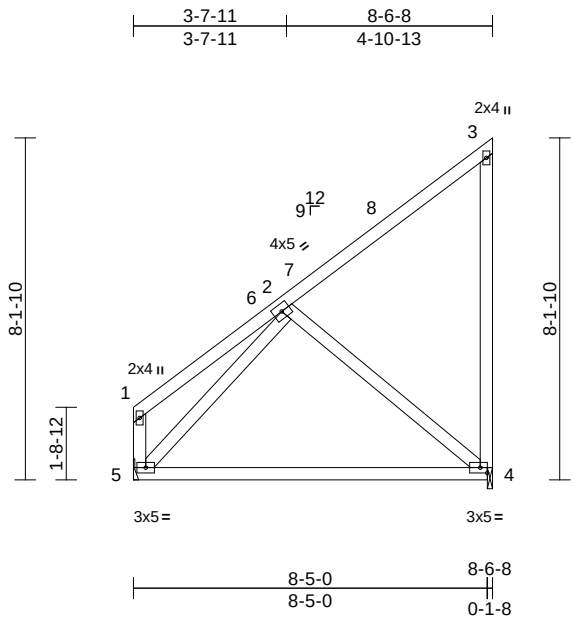

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.24	4-5	>407	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.49	4-5	>204	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 58 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 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) 4=0-1-8, 5= Mechanical
Max Horiz 5=207 (LC 14)
Max Uplift 4=-140 (LC 14)
Max Grav 4=469 (LC 21), 5=380 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-65/53, 1-2=-29/98, 2-3=-164/95, 3-4=-208/127
BOT CHORD 4-5=-218/216
WEBS 2-5=-337/0, 2-4=-281/283

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) 1-4-12 to 4-4-12, Interior (1) 4-4-12 to 5-4-13, Exterior(2R) 5-4-13 to 9-7-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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.
6) Bearings are assumed to be: , Joint 4 SP No.3 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	L	Roof Special	4	1	Job Reference (optional)	I58430794

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

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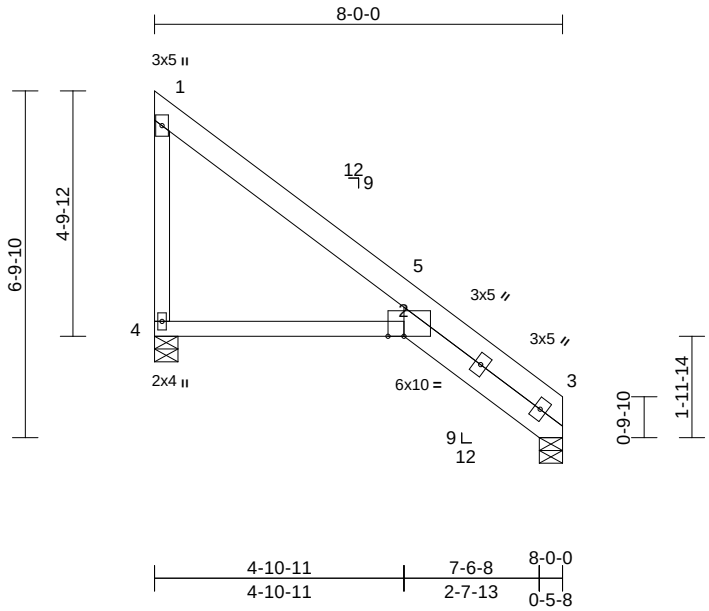

Scale = 1:45.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.13	2-4	>717	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.21	2-4	>440	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.11	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 47 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-3:2x6 SP No.2
WEBS 2x4 SP No.3

BRACING

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

REACTIONS (size) 3=0-5-8, 4=0-5-8
Max Horiz 4=-188 (LC 10)
Max Uplift 3=-27 (LC 15), 4=-63 (LC 15)
Max Grav 3=364 (LC 21), 4=438 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-331/110, 1-2=-122/195, 2-3=-175/75
BOT CHORD 2-4=-81/199

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) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 4-8-5, Exterior(2E) 4-8-5 to 7-8-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for 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.
6) Bearing at joint(s) 3 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4 and 3. 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

May 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	M	Monopitch	3	1	Job Reference (optional)	I58430795

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:35
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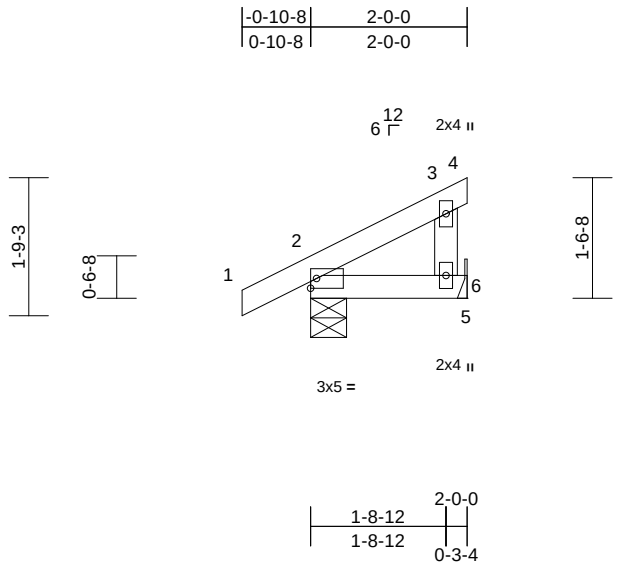

Scale = 1:29.4

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	0.08	Vert(LL)	0.00	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 5= Mechanical
Max Horiz 2=48 (LC 13)
Max Uplift 2=-25 (LC 14), 5=-16 (LC 14)
Max Grav 2=199 (LC 21), 5=91 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-57/56, 3-4=-11/0, 3-6=-86/31
BOT CHORD 2-6=-36/21, 5-6=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 5.
9) H10A 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.
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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	M1	Monopitch	3	1	Job Reference (optional)	I58430796

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:35 Page: 1
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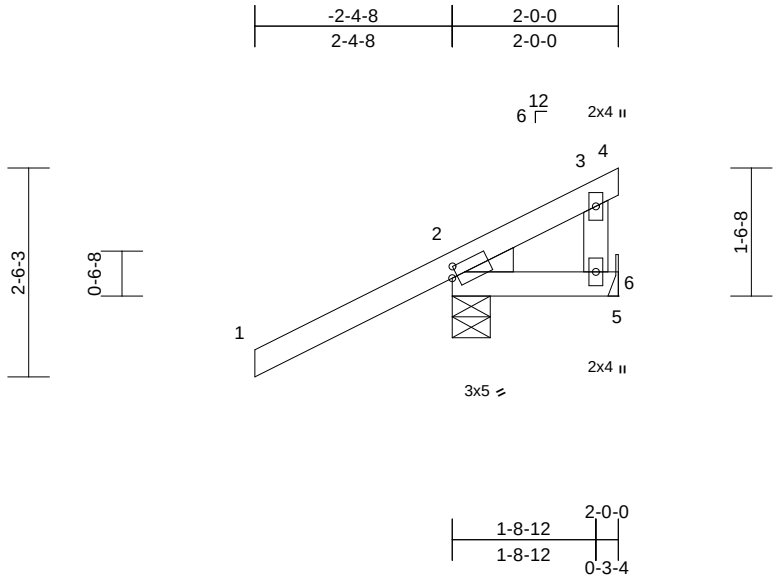

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Plate Offsets (X, Y): [2:0-0-13,0-1-8]

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	0.64	Vert(LL)	0.00	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	0.01	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 13 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 5= Mechanical
Max Horiz 2=61 (LC 13)
Max Uplift 2=-85 (LC 14), 5=-45 (LC 20)
Max Grav 2=467 (LC 21), 5=37 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/99, 2-3=-361/448, 3-4=-11/0, 3-6=-42/26
BOT CHORD 2-6=-264/156, 5-6=0/0

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 5.
9) H10A 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.
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

May 19,2023

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	M1GR	Monopitch Girder	1	2	Job Reference (optional)	I58430797

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:36 Page: 1
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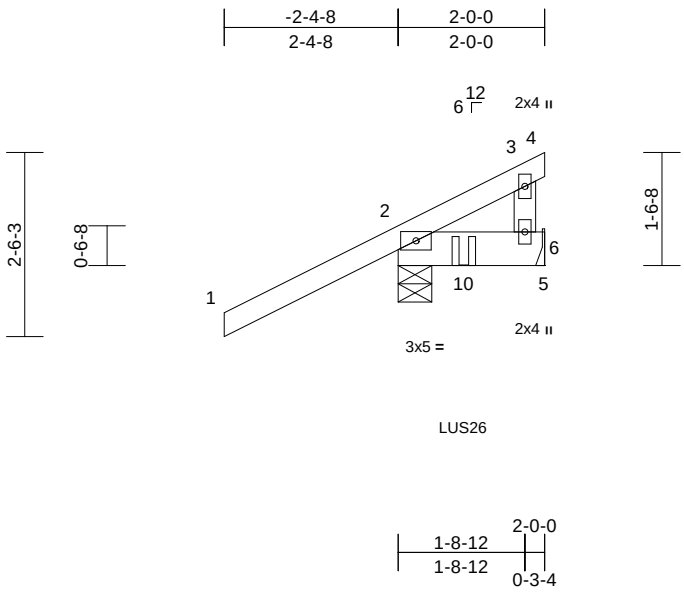

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	0.00	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	0.00	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 5= Mechanical
Max Horiz 2=59 (LC 11)
Max Uplift 2=-112 (LC 12), 5=-16 (LC 15)
Max Grav 2=776 (LC 19), 5=292 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/99, 2-3=-122/185, 3-4=-11/0, 3-6=-94/18
BOT CHORD 2-6=-283/112, 5-6=0/0

NOTES
1) 2-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: 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) 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
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 5.
11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent at 0-10-12 from the left end to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-4=-60, 5-7=-20
Concentrated Loads (lb)
Vert: 10=-562 (B)

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	PB1	Piggyback	17	1	Job Reference (optional)	I58430798

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:36 Page: 1
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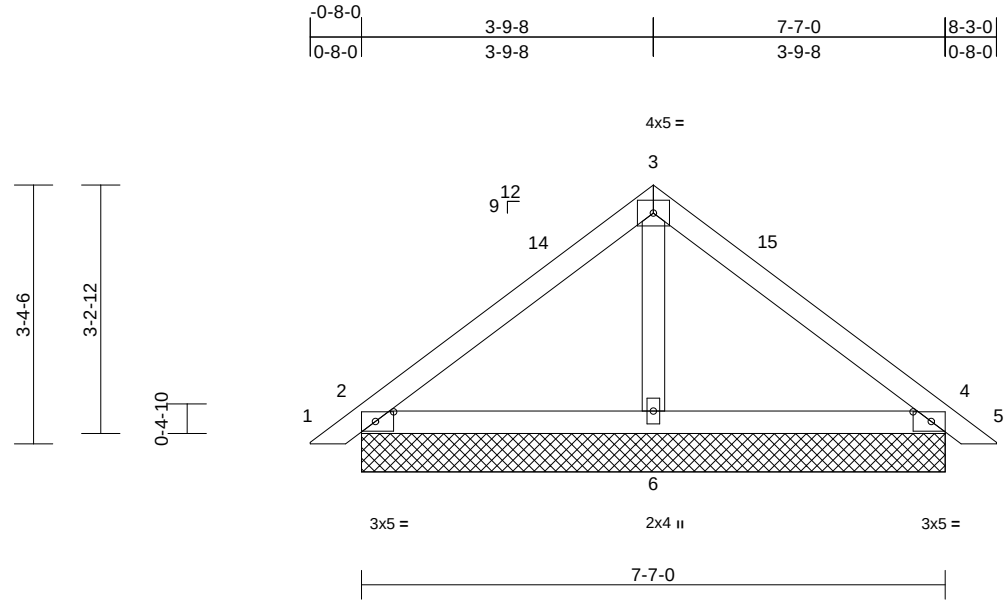

Scale = 1:29.9

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

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	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 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=7-7-0, 4=7-7-0, 6=7-7-0, 7=7-7-0, 11=7-7-0
Max Horiz 2=74 (LC 13), 7=74 (LC 13)
Max Uplift 2=-39 (LC 14), 4=-49 (LC 15), 7=-39 (LC 14), 11=-49 (LC 15)
Max Grav 2=310 (LC 21), 4=310 (LC 22), 6=251 (LC 21), 7=310 (LC 21), 11=310 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-204/106, 3-4=-204/106, 4-5=0/26
BOT CHORD 2-6=-30/82, 4-6=-19/82
WEBS 3-6=-96/2

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) 0-3-1 to 3-3-1, Exterior(2R) 3-3-1 to 5-8-9, Exterior(2E) 5-8-9 to 8-8-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) N/A
12) 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

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	PB1GE	Piggyback	2	1	Job Reference (optional)	I58430799

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

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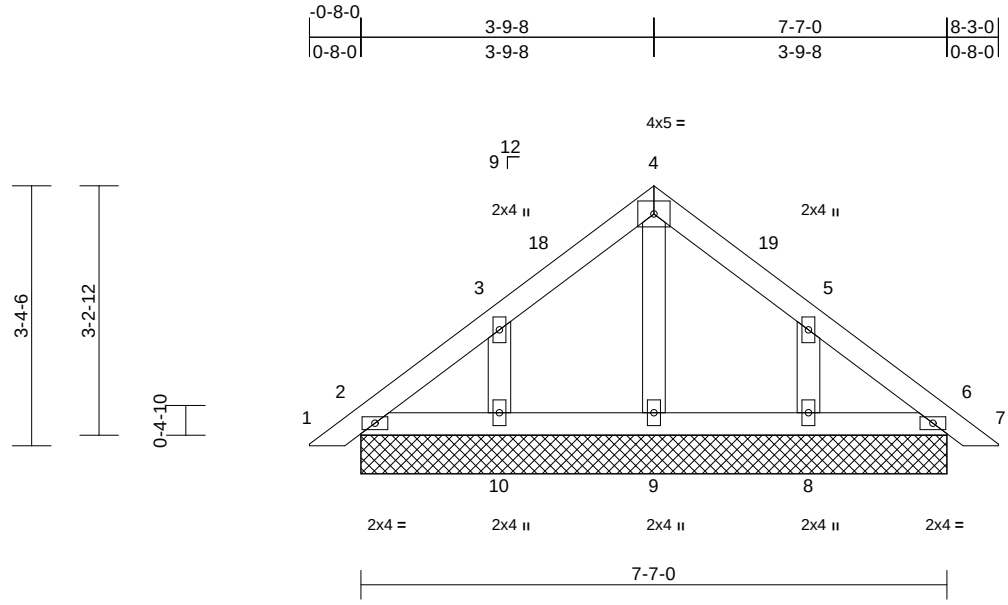

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 35 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=7-7-0, 6=7-7-0, 8=7-7-0, 9=7-7-0, 10=7-7-0, 11=7-7-0, 15=7-7-0
Max Horiz 2=-74 (LC 12), 11=-74 (LC 12)
Max Uplift 2=-6 (LC 15), 8=-81 (LC 15), 10=-82 (LC 14), 11=-6 (LC 15)
Max Grav 2=144 (LC 21), 6=144 (LC 22), 8=271 (LC 22), 9=114 (LC 21), 10=271 (LC 21), 11=144 (LC 21), 15=144 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-59/52, 3-4=-96/84, 4-5=-96/84, 5-6=-42/36, 6-7=0/26
BOT CHORD 2-10=-22/71, 9-10=-22/71, 8-9=-22/71, 6-8=-22/71
WEBS 4-9=-77/0, 3-10=-221/142, 5-8=-221/142

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) 0-3-1 to 3-3-1, Exterior(2R) 3-3-1 to 5-8-9, Exterior(2E) 5-8-9 to 8-8-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) N/A
12) 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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	PB1GR	Piggyback	1	2	Job Reference (optional)	I58430800

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

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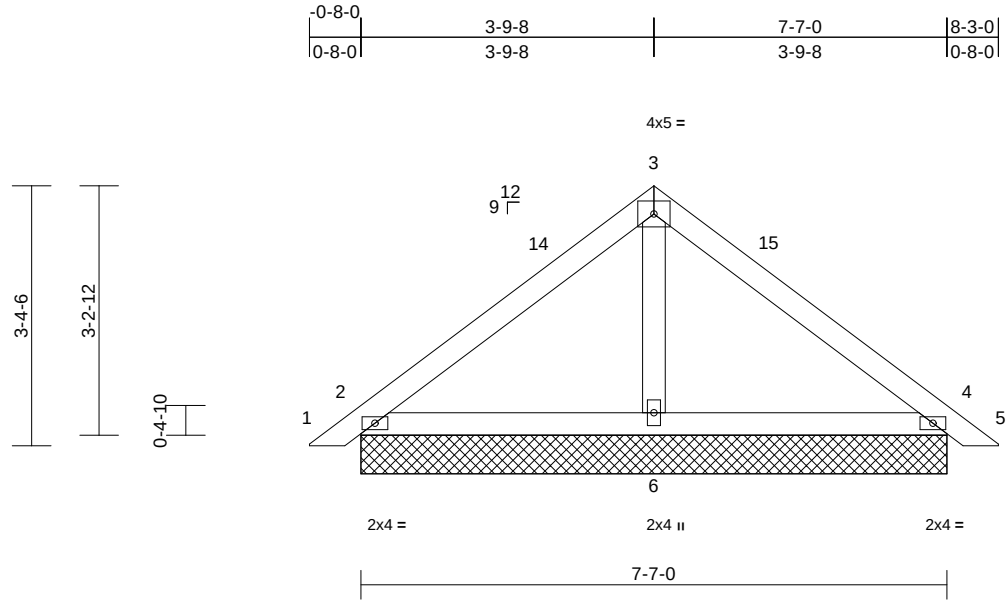

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
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 10-0-0 oc bracing.

REACTIONS (size) 2=7-7-0, 4=7-7-0, 6=7-7-0, 7=7-7-0, 11=7-7-0
Max Horiz 2=74 (LC 13), 7=74 (LC 13)
Max Uplift 2=-40 (LC 14), 4=-49 (LC 15), 7=-40 (LC 14), 11=-49 (LC 15)
Max Grav 2=310 (LC 21), 4=310 (LC 22), 6=252 (LC 21), 7=310 (LC 21), 11=310 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-202/106, 3-4=-202/106, 4-5=0/26
BOT CHORD 2-6=-37/101, 4-6=-22/101
WEBS 3-6=-98/2

NOTES
1) 2-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) 0-3-1 to 3-3-1, Exterior(2R) 3-3-1 to 5-8-9, Exterior(2E) 5-8-9 to 8-8-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) N/A
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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	PB2	Piggyback	3	1	Job Reference (optional)	I58430801

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:37 Page: 1
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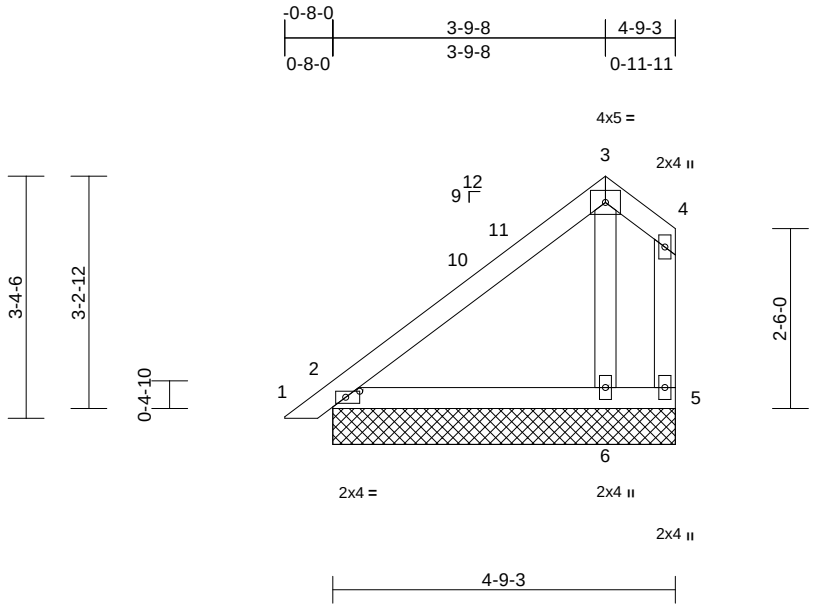

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Plate Offsets (X, Y): [2:0-2-5,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 24 lb	FT = 20%

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

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

REACTIONS (size) 2=4-9-3, 5=4-9-3, 6=4-9-3, 7=4-9-3
Max Horiz 2=101 (LC 13), 7=101 (LC 13)
Max Uplift 2=-15 (LC 14), 5=-55 (LC 24), 6=-33 (LC 14), 7=-15 (LC 14)
Max Grav 2=171 (LC 21), 5=22 (LC 11), 6=293 (LC 24), 7=171 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-101/67, 3-4=-66/78, 4-5=-58/65
BOT CHORD 2-6=-39/51, 5-6=-39/43
WEBS 3-6=-137/51

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) 0-3-1 to 3-3-1, Exterior(2R) 3-3-1 to 4-5-13, Exterior(2E) 4-5-13 to 5-3-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) N/A
12) 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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V1	Valley	1	1	Job Reference (optional)	I58430802

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:37 Page: 1
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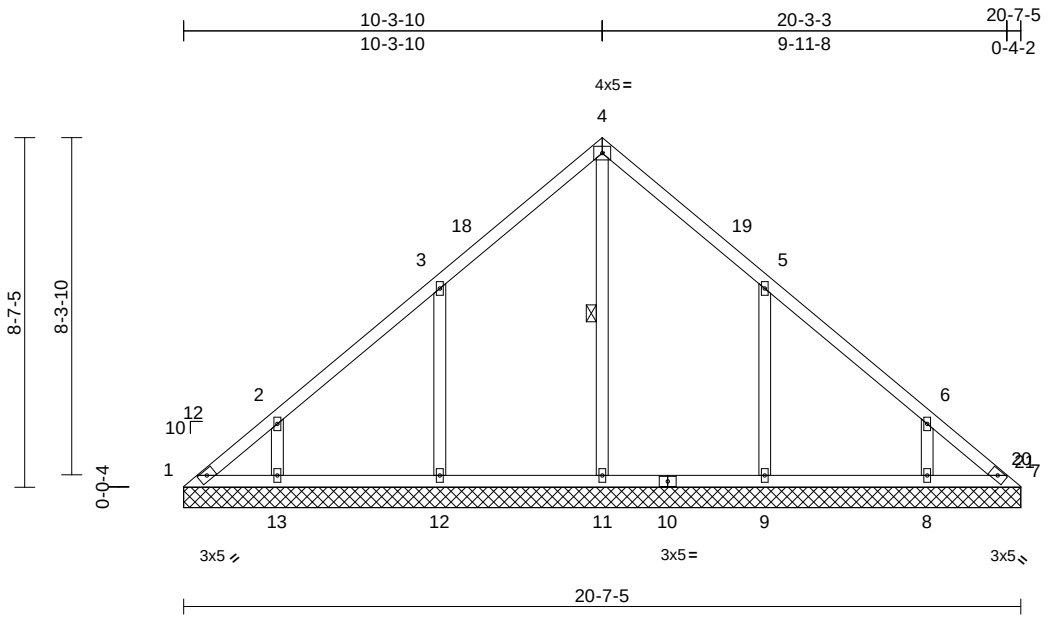

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 99 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=20-7-5, 7=20-7-5, 8=20-7-5, 9=20-7-5, 11=20-7-5, 12=20-7-5, 13=20-7-5
Max Horiz 1=197 (LC 11)
Max Uplift 1=-52 (LC 10), 7=-16 (LC 13), 8=-102 (LC 15), 9=-175 (LC 15), 12=-174 (LC 14), 13=-108 (LC 14)
Max Grav 1=131 (LC 24), 7=94 (LC 26), 8=337 (LC 28), 9=478 (LC 6), 11=393 (LC 26), 12=477 (LC 5), 13=345 (LC 23)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-212/162, 2-3=-176/124, 3-4=-199/173, 4-5=-199/148, 5-6=-130/71, 6-7=-169/99
BOT CHORD 1-13=-70/145, 12-13=-67/145, 11-12=-67/145, 9-11=-67/145, 8-9=-67/145, 7-8=-67/145
WEBS 4-11=-193/6, 3-12=-378/223, 2-13=-225/159, 5-9=-378/223, 6-8=-222/157

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 7-3-15, Exterior(2R) 7-3-15 to 13-3-15, Interior (1) 13-3-15 to 17-3-1, Exterior(2E) 17-3-1 to 20-3-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 52 lb uplift at joint 1, 16 lb uplift at joint 7, 174 lb uplift at joint 12, 108 lb uplift at joint 13, 175 lb uplift at joint 9 and 102 lb uplift at joint 8.
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

May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V2	Valley	1	1	Job Reference (optional)	I58430803

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:38 Page: 1

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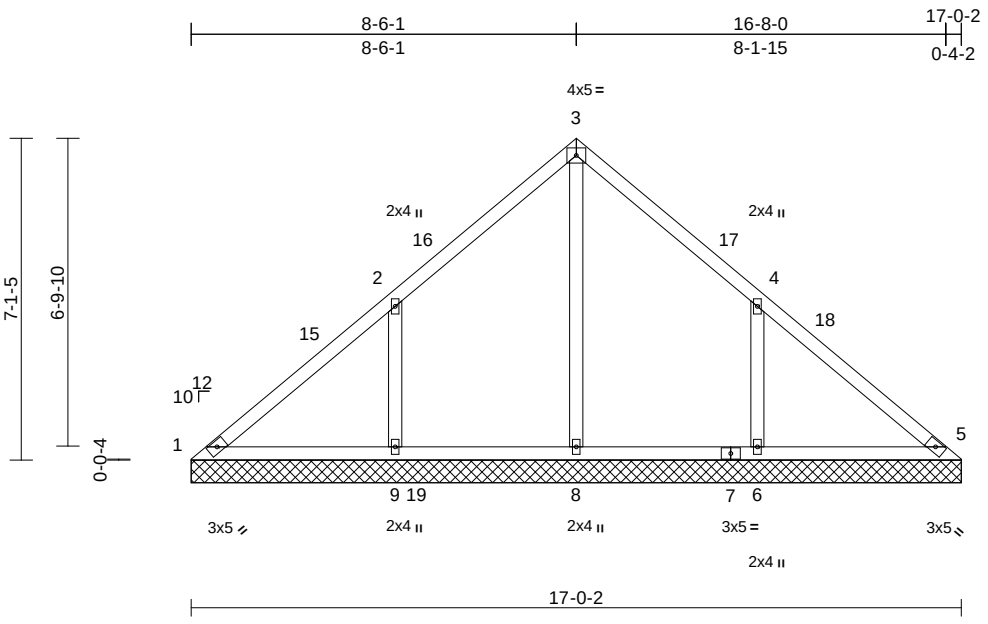

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	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 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=17-0-2, 5=17-0-2, 6=17-0-2, 8=17-0-2, 9=17-0-2, 14=17-0-2
Max Horiz 1=162 (LC 11)
Max Uplift 1=-58 (LC 10), 6=-185 (LC 15), 9=-191 (LC 14)
Max Grav 1=84 (LC 33), 5=1 (LC 24), 6=515 (LC 24), 8=659 (LC 23), 9=518 (LC 23), 14=1 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-105/378, 2-3=-22/325, 3-4=0/304, 4-5=-146/299
BOT CHORD 1-9=-186/78, 8-9=-186/76, 6-8=-186/76, 5-6=-186/76
WEBS 3-8=-478/0, 2-9=-395/223, 4-6=-395/221

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) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-6-6, Exterior(2R) 5-6-6 to 11-6-6, Interior (1) 11-6-6 to 13-7-14, Exterior(2E) 13-7-14 to 16-7-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; 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 58 lb uplift at joint 1, 191 lb uplift at joint 9 and 185 lb uplift at joint 6.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V3	Valley	1	1	Job Reference (optional)	I58430804

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:38
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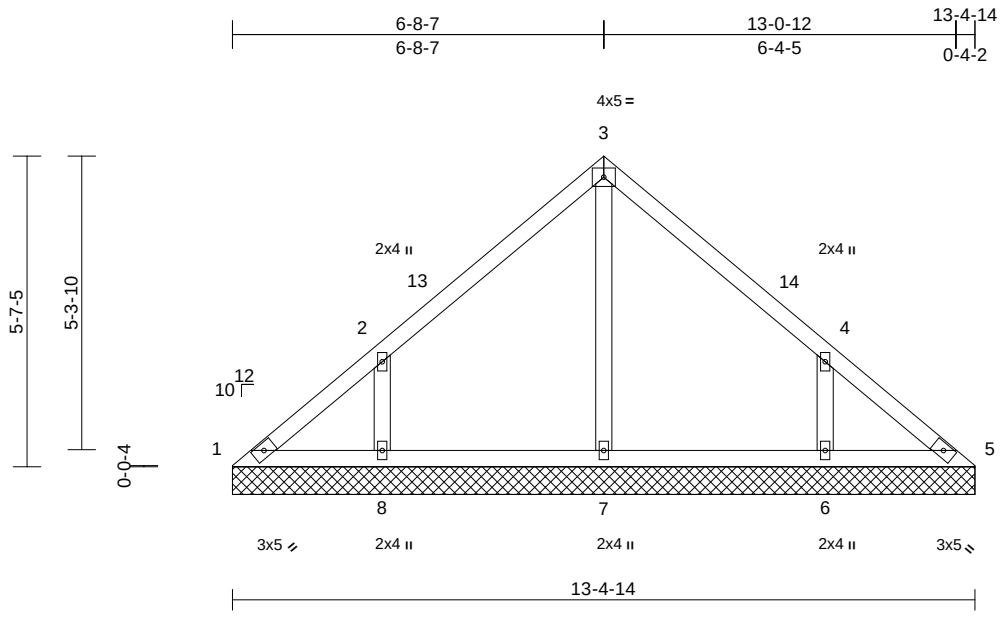

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 57 lb	FT = 20%

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

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

REACTIONS (size) 1=13-4-14, 5=13-4-14, 6=13-4-14, 7=13-4-14, 8=13-4-14
Max Horiz 1=127 (LC 13)
Max Uplift 1=-27 (LC 10), 6=-145 (LC 15), 8=-148 (LC 14)
Max Grav 1=112 (LC 28), 5=89 (LC 23), 6=440 (LC 21), 7=282 (LC 20), 8=440 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-139/115, 2-3=-197/115, 3-4=-197/115, 4-5=-110/75
BOT CHORD 1-8=-45/108, 7-8=-45/87, 6-7=-45/87, 5-6=-45/87
WEBS 3-7=-198/0, 2-8=-376/193, 4-6=-376/193

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) 0-0-5 to 2-8-12, Interior (1) 2-8-12 to 3-8-12, Exterior(2R) 3-8-12 to 9-8-12, Interior (1) 9-8-12 to 10-5-3, Exterior(2E) 10-5-3 to 13-5-3 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 27 lb uplift at joint 1, 148 lb uplift at joint 8 and 145 lb uplift at joint 6.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V4	Valley	1	1	Job Reference (optional)	I58430805

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

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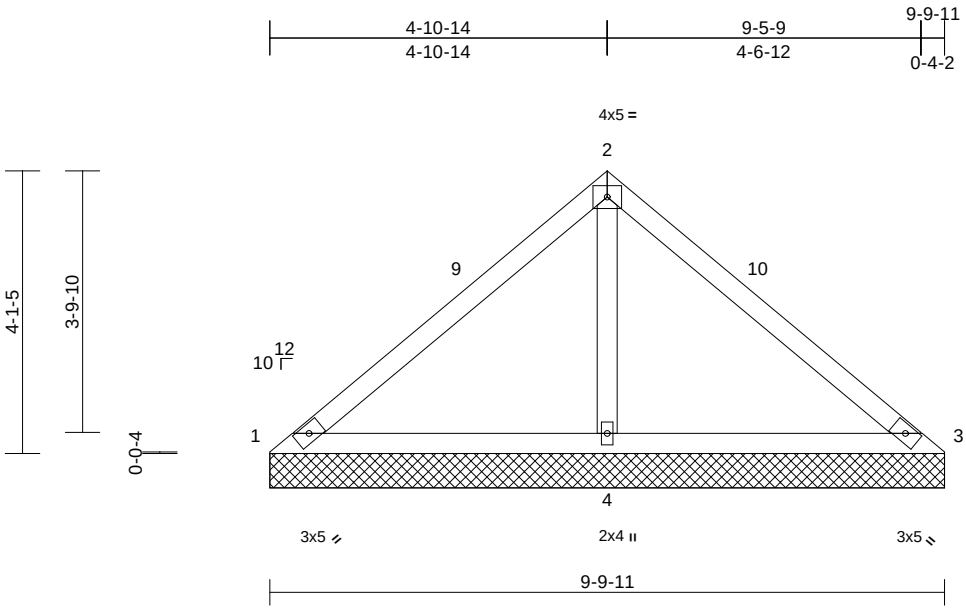


Scale = 1:33.5

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	0.47	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.44	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	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

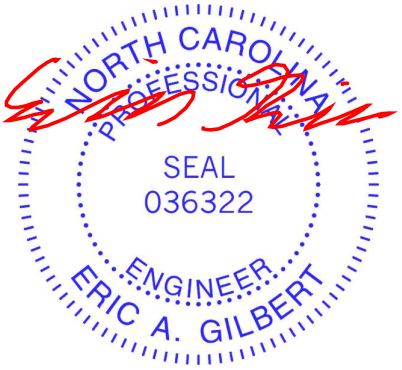
BRACING
TOP CHORD Structural wood sheathing directly applied or 9-9-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-9-11, 3=9-9-11, 4=9-9-11
Max Horiz 1=-92 (LC 10)
Max Uplift 1=-54 (LC 21), 3=-54 (LC 20), 4=-112 (LC 14)
Max Grav 1=94 (LC 20), 3=94 (LC 21), 4=796 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-119/387, 2-3=-119/387
BOT CHORD 1-4=-221/176, 3-4=-221/176
WEBS 2-4=-616/277

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) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 6-10-0, Exterior(2E) 6-10-0 to 9-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); 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 54 lb uplift at joint 1, 54 lb uplift at joint 3 and 112 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



May 19,2023

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V5	Valley	1	1	Job Reference (optional)	I58430806

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

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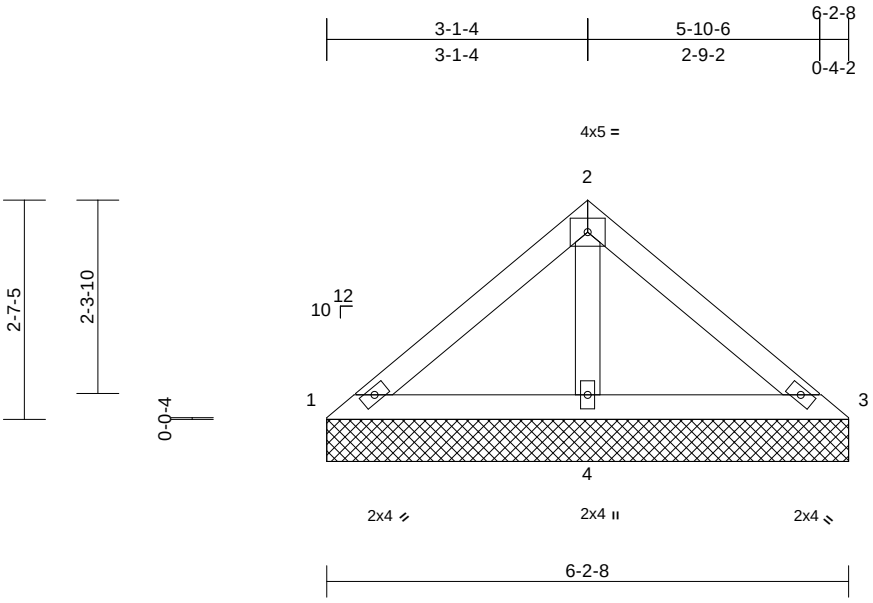

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 23 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 6-2-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=6-2-8, 3=6-2-8, 4=6-2-8
Max Horiz 1=-57 (LC 10)
Max Uplift 3=-3 (LC 10), 4=-54 (LC 14)
Max Grav 1=100 (LC 20), 3=100 (LC 21), 4=422 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/169, 2-3=-88/169
BOT CHORD 1-4=-124/126, 3-4=-124/126
WEBS 2-4=-286/155

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 3 and 54 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V6	Valley	1	1	Job Reference (optional)	I58430807

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

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Page: 1

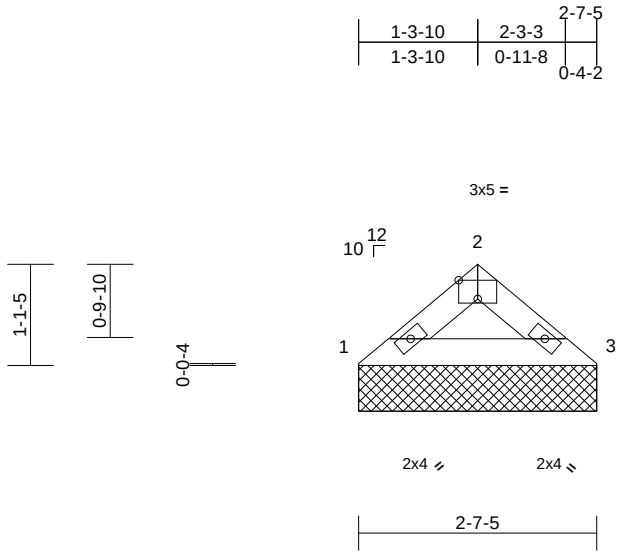

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Plate Offsets (X, Y): [2:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	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: 8 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-7-5, 3=2-7-5
Max Horiz 1=22 (LC 11)
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=-144/64, 2-3=-144/64
BOT CHORD 1-3=-35/104

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) 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

May 19,2023

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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V11	Valley	1	1	Job Reference (optional)	I58430808

Carter Components (Sanford), Sanford, NC - 27332, Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:40 Page: 1
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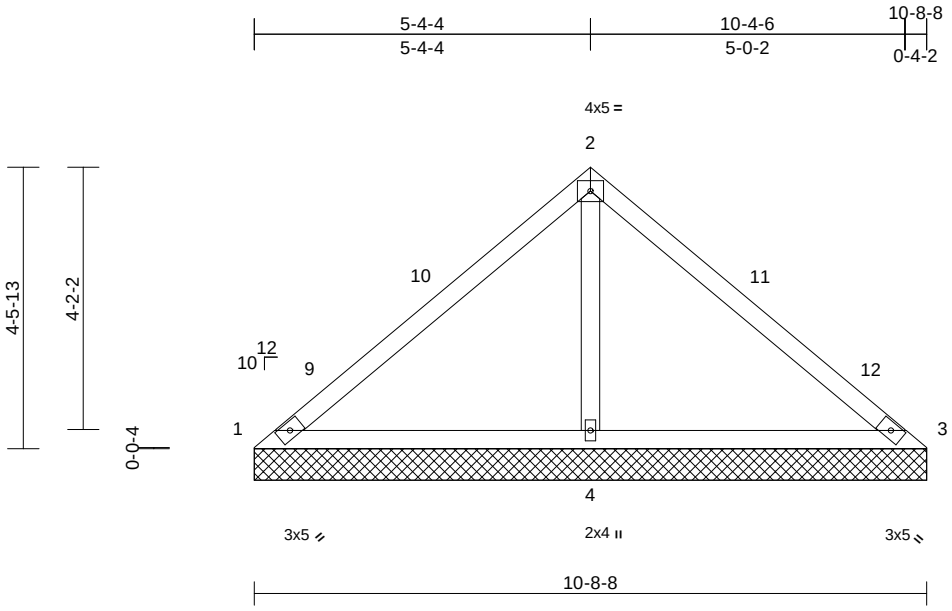

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.50	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 41 lb	FT = 20%

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

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

REACTIONS (size) 1=10-8-8, 3=10-8-8, 4=10-8-8
Max Horiz 1=101 (LC 11)
Max Uplift 1=-71 (LC 21), 3=-71 (LC 20), 4=-134 (LC 14)
Max Grav 1=77 (LC 20), 3=77 (LC 21), 4=890 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-140/443, 2-3=-140/443
BOT CHORD 1-4=-257/195, 3-4=-257/195
WEBS 2-4=-699/308

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) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 7-8-13, Exterior(2E) 7-8-13 to 10-8-13 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 71 lb uplift at joint 1, 71 lb uplift at joint 3 and 134 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

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ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V13	Valley	1	1	Job Reference (optional)	I58430809

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

Run: 8.53 S Mar 9 2023 Print: 8.530 S Mar 9 2023 MiTek Industries, Inc. Thu May 18 10:08:40
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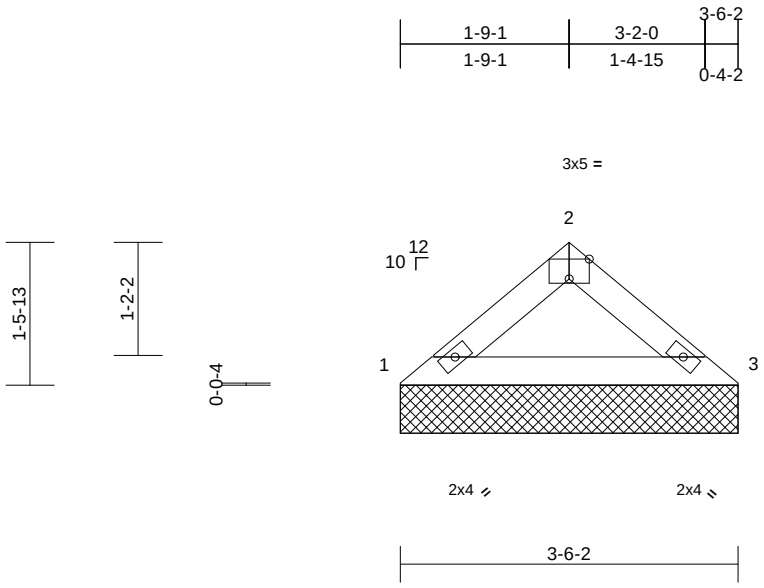

Scale = 1:23.9

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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.08	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: 11 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 3-6-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-6-2, 3=3-6-2
Max Horiz 1=-30 (LC 10)
Max Uplift 1=-12 (LC 14), 3=-12 (LC 15)
Max Grav 1=164 (LC 20), 3=164 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-211/81, 2-3=-211/81
BOT CHORD 1-3=-49/153

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 12 lb uplift at joint 1 and 12 lb uplift at joint 3.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Job	Truss	Truss Type	Qty	Ply	12 Serenity-Roof-B330-E	
23050027-01	V21	Valley	1	1	Job Reference (optional)	I58430810

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

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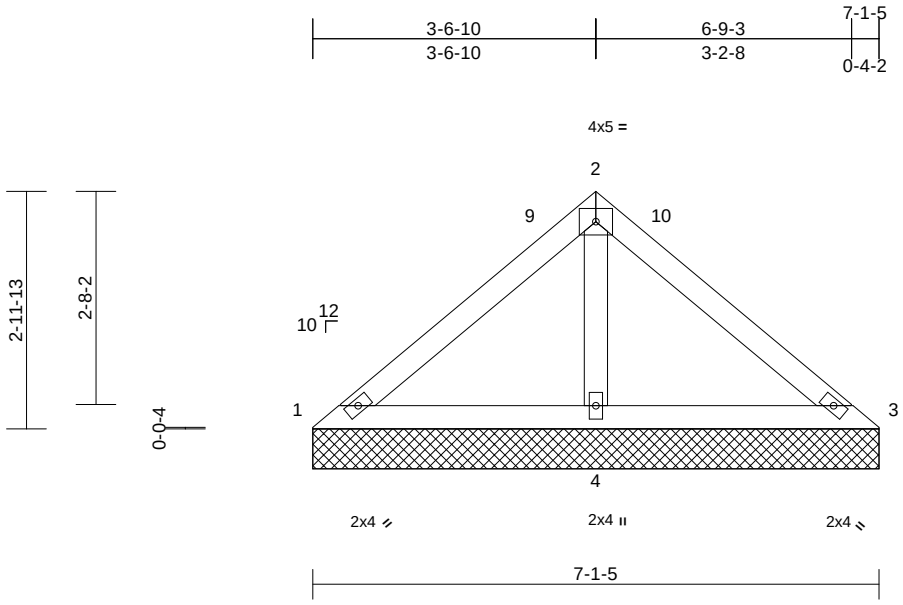

Scale = 1:28.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 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 7-1-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-1-5, 3=7-1-5, 4=7-1-5
Max Horiz 1=66 (LC 13)
Max Uplift 1=-15 (LC 21), 3=-15 (LC 20), 4=-71 (LC 14)
Max Grav 1=104 (LC 20), 3=104 (LC 21), 4=518 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-85/221, 2-3=-85/221
BOT CHORD 1-4=-156/148, 3-4=-156/148
WEBS 2-4=-367/194

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) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 4-1-10, Exterior(2E) 4-1-10 to 7-1-10 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 15 lb uplift at joint 1, 15 lb uplift at joint 3 and 71 lb uplift at joint 4.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
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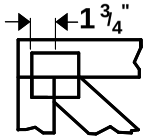
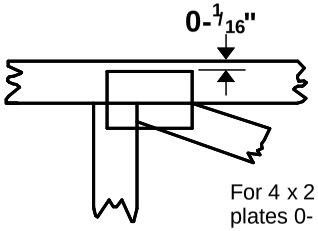
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

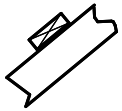
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

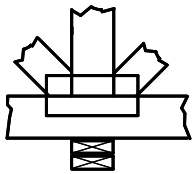
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

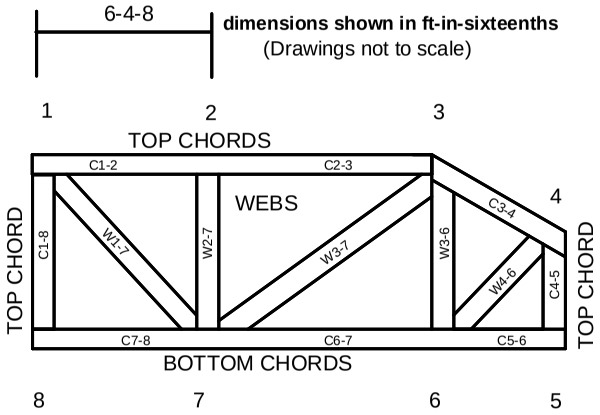


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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.

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MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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.