

Trenco

818 Soundside Rd
Edenton, NC 27932

Re: P02235-24938
999 Serenity

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

Pages or sheets covered by this seal: I73085216 thru I73085234

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

North Carolina COA: C-0844



April 30, 2025

Galinski, John

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

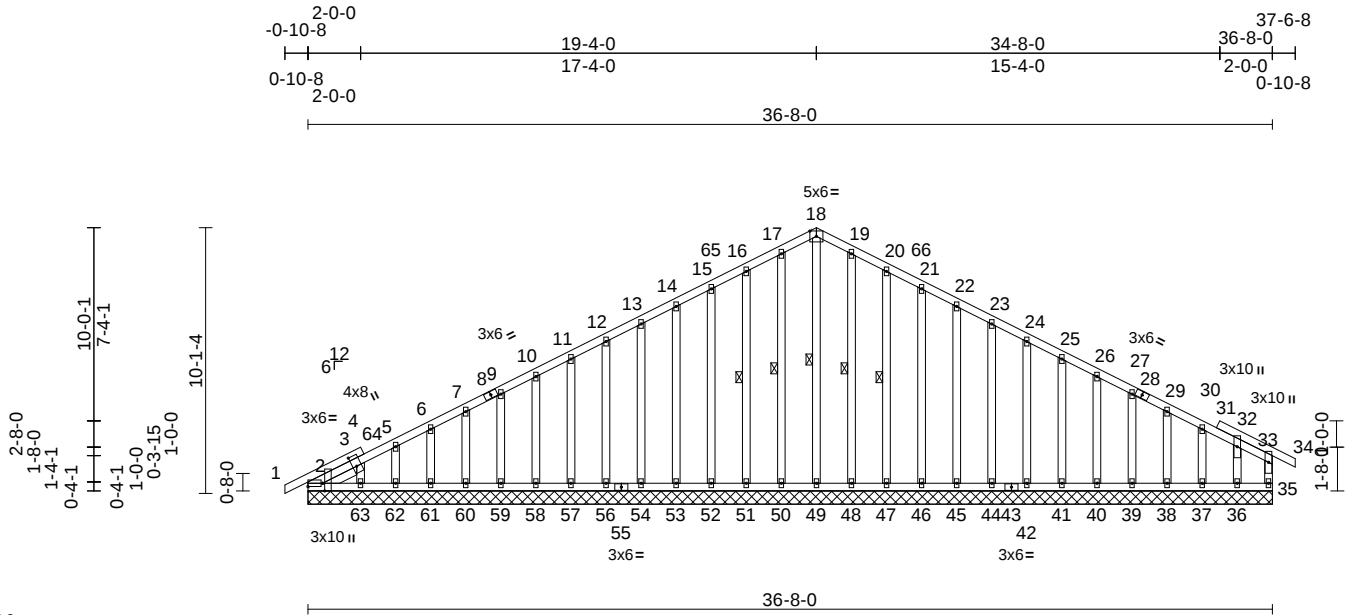
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085216
P02235-24938	A01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Feb 1 2025 Print: 8.830 S Feb 1 2025 MiTek Industries, Inc. Tue Apr 29 16:39:26

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Scale = 1:87.6

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.12	Ver(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.06	Ver(CT)	n/a	-	n/a	999	
TCDL	7.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	35	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 327 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 1-5-7

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, Except:
10-0-0 oc bracing: 2-63.
WEBS 1 Row at midpt 18-49, 17-50, 16-51, 19-48, 20-47

REACTIONS (lb/size) 2=112/36-8-0, 35=84/36-8-0, 36=60/36-8-0, 37=76/36-8-0, 38=77/36-8-0, 39=76/36-8-0, 40=76/36-8-0, 41=76/36-8-0, 42=76/36-8-0, 44=76/36-8-0, 45=76/36-8-0, 46=76/36-8-0, 47=76/36-8-0, 48=78/36-8-0, 49=71/36-8-0, 50=78/36-8-0, 51=76/36-8-0, 52=76/36-8-0, 53=76/36-8-0, 54=76/36-8-0, 56=76/36-8-0, 57=76/36-8-0, 58=76/36-8-0, 59=76/36-8-0, 60=76/36-8-0, 61=76/36-8-0, 62=77/36-8-0, 63=64/36-8-0

Max Horiz 2=156 (LC 20)

FORCES

Max Uplift 2=-53 (LC 12), 35=-5 (LC 13), 36=-113 (LC 17), 37=-27 (LC 17), 38=-45 (LC 17), 39=-41 (LC 17), 40=-42 (LC 17), 41=-42 (LC 17), 42=-42 (LC 17), 44=-42 (LC 17), 45=-42 (LC 17), 46=-42 (LC 17), 47=-52 (LC 17), 48=-13 (LC 17), 50=-23 (LC 16), 51=-49 (LC 16), 52=-42 (LC 16), 53=-42 (LC 16), 54=-42 (LC 16), 56=-42 (LC 16), 57=-42 (LC 16), 58=-42 (LC 16), 59=-42 (LC 16), 60=-42 (LC 16), 61=-42 (LC 16), 62=-41 (LC 16), 63=-40 (LC 16)

Max Grav 2=157 (LC 2), 35=118 (LC 2), 36=76 (LC 37), 37=99 (LC 2), 38=100 (LC 37), 39=99 (LC 2), 40=99 (LC 37), 41=99 (LC 2), 42=99 (LC 37), 44=99 (LC 37), 45=99 (LC 2), 46=99 (LC 2), 47=111 (LC 24), 48=113 (LC 24), 49=183 (LC 17), 50=113 (LC 23), 51=111 (LC 23), 52=99 (LC 2), 53=99 (LC 2), 54=99 (LC 36), 56=99 (LC 36), 57=99 (LC 2), 58=99 (LC 36), 59=99 (LC 2), 60=99 (LC 2), 61=98 (LC 36), 62=100 (LC 2), 63=79 (LC 36)

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/18, 2-3=-172/94, 3-4=-153/89, 4-64=-150/90, 5-64=-149/97, 5-6=-128/105, 6-7=-108/120, 7-8=-94/133, 8-9=-88/135, 9-10=-85/151, 10-11=-76/167, 11-12=-70/182, 12-13=-80/198, 13-14=-91/213, 14-15=-101/229, 15-65=-112/240, 16-65=-104/244, 16-17=-124/263, 17-18=-128/266, 18-19=-128/261, 19-20=-124/246, 20-66=-104/215, 21-66=-112/210, 21-22=-101/187, 22-23=-91/161, 23-24=-80/140, 24-25=-70/118, 25-26=-59/97, 26-27=-49/75, 27-28=-31/54, 28-29=-38/51, 29-30=-28/32, 30-31=-30/26, 31-32=-35/21, 32-33=-70/37, 33-34=0/18, 33-35=-107/44



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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. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity
P02235-24938	A01E	Common Supported Gable	1	1	173085216
					Job Reference (optional)

BOT CHORD

2-63=-38/69, 62-63=-40/70, 61-62=-40/70, 60-61=-40/70, 59-60=-40/70, 58-59=-40/70, 57-58=-40/70, 56-57=-40/70, 55-56=-40/70, 54-55=-40/70, 53-54=-40/70, 52-53=-40/70, 51-52=-40/70, 50-51=-40/70, 49-50=-40/70, 48-49=-40/70, 47-48=-40/70, 46-47=-40/70, 45-46=-40/70, 44-45=-40/70, 43-44=-40/70, 42-43=-40/70, 41-42=-40/70, 40-41=-40/70, 39-40=-40/70, 38-39=-40/70, 37-38=-40/70, 36-37=-40/70, 35-36=-40/70

WEBS

12-56=-72/50, 11-57=-72/50, 10-58=-72/50, 9-59=-72/50, 7-60=-72/50, 6-61=-72/50, 5-62=-73/49, 3-63=-54/45, 24-42=-72/50, 25-41=-72/50, 26-40=-72/50, 27-39=-72/50, 29-38=-73/50, 30-37=-72/44, 32-36=-50/82, 18-49=-175/60, 17-50=-86/33, 16-51=-85/64, 15-52=-72/50, 14-53=-72/50, 13-54=-72/50, 19-48=-86/28, 20-47=-85/65, 21-46=-72/50, 22-45=-72/50, 23-44=-72/50

- 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=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-9-8, Interior (1) 2-9-8 to 19-4-0, Exterior(2R) 19-4-0 to 23-0-0, Interior (1) 23-0-0 to 37-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 11.5 psf on overhangs non-concurrent with other live loads.

7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.

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

9) Gable requires continuous bottom chord bearing.

10) Gable studs spaced at 1-4-0 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 35, 53 lb uplift at joint 2, 42 lb uplift at joint 56, 42 lb uplift at joint 57, 42 lb uplift at joint 58, 42 lb uplift at joint 59, 42 lb uplift at joint 60, 42 lb uplift at joint 61, 41 lb uplift at joint 62, 40 lb uplift at joint 63, 42 lb uplift at joint 42, 42 lb uplift at joint 41, 42 lb uplift at joint 40, 41 lb uplift at joint 39, 45 lb uplift at joint 38, 27 lb uplift at joint 37, 113 lb uplift at joint 36, 23 lb uplift at joint 50, 49 lb uplift at joint 51, 42 lb uplift at joint 52, 42 lb uplift at joint 53, 42 lb uplift at joint 54, 13 lb uplift at joint 48, 52 lb uplift at joint 47, 42 lb uplift at joint 46, 42 lb uplift at joint 45 and 42 lb uplift at joint 44.

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.

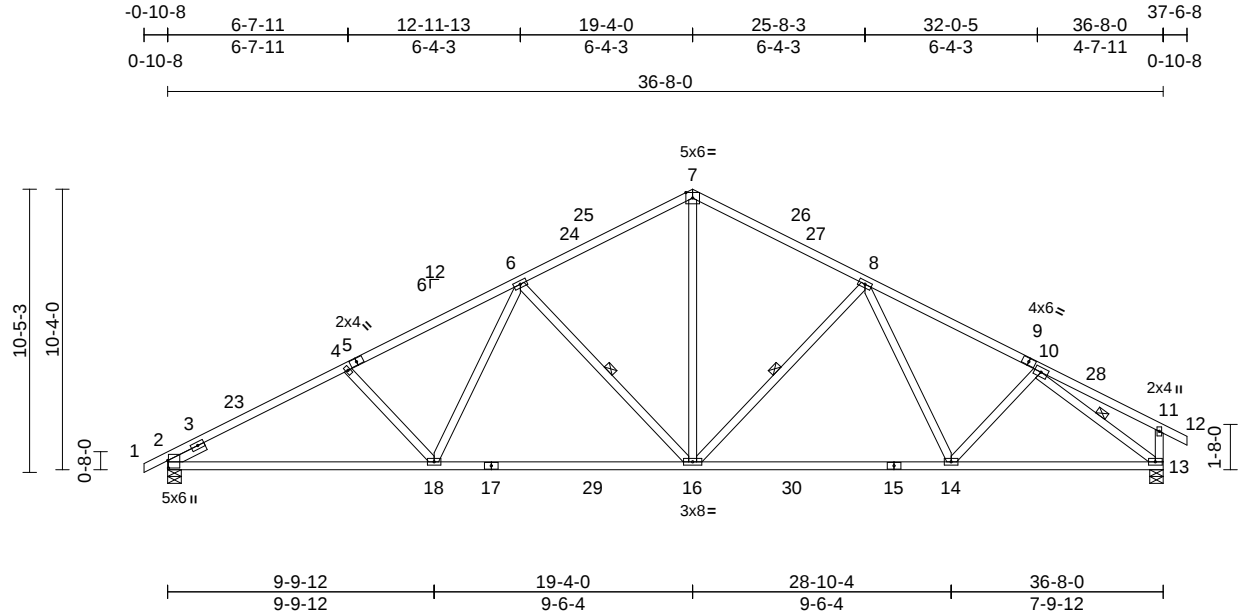
LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085217
P02235-24938	A02	Common	4	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:47
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Page: 1



Scale = 1:84.9

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

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	0.84	Vert(LL)	-0.30	16-18	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.49	16-18	>891	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.10	13	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 208 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 15-13:2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
14-10,18-4,13-11,13-10:2x4 SP No.3
SLIDER Left 2x4 SP No.3 ~ 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc
bracing.
WEBS 1 Row at midpt 8-16, 6-16, 10-13

REACTIONS

(size) 2=0-6-0, 13=0-6-0
Max Horiz 2=160 (LC 20)
Max Uplift 2=-341 (LC 16), 13=-329 (LC 17)
Max Grav 2=1534 (LC 3), 13=1547 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/21, 2-4=-2551/561, 4-6=-2391/531,
6-7=-1659/445, 7-8=-1659/442,
8-10=-2040/451, 10-11=-159/92, 11-12=0/25,
11-13=-203/125
BOT CHORD 2-18=-567/2224, 16-18=-387/1861,
14-16=-289/1697, 13-14=-318/1607
WEBS 7-16=-235/1173, 8-16=-447/261,
8-14=-21/237, 10-14=0/287, 6-16=-658/311,
6-18=-102/557, 4-18=-271/204,
10-13=-1963/390

NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat.
II; Exp B; Enclosed; MWFRS (envelope) exterior zone
and C-C Exterior(2E) -0-10-8 to 2-9-8, Interior (1) 2-9-8
to 19-4-0, Exterior(2R) 19-4-0 to 23-0-0, Interior (1)
23-0-0 to 37-6-8 zone; cantilever left and right exposed ;
end vertical left and right exposed;C-C for members and
forces & MWFRS for reactions shown; Lumber
DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15
Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL =
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially
Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this
design.
- This truss has been designed for greater of min roof live
load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on
overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for
verifying Rain Load = 5.0 (psf) covers rain loading
requirements specific to the use of this truss component.
- All plates are 3x6 (=) MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 341 lb uplift at joint
2 and 329 lb uplift at joint 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



April 30,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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A MiTek Affiliate

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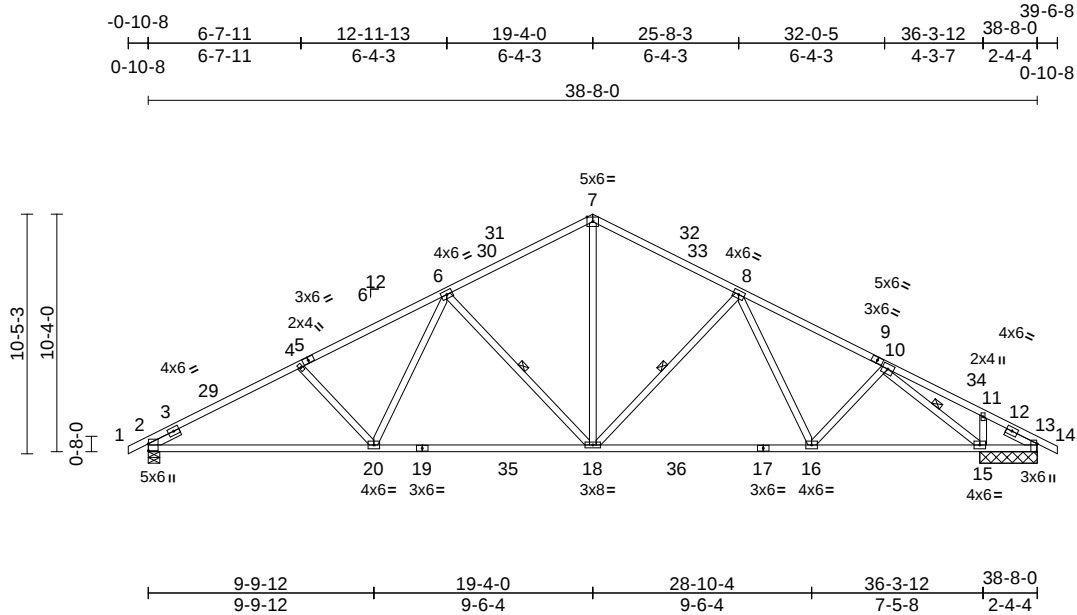
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085218
P02235-24938	A03	Common	1	1	Job Reference (optional)	

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

Run: 8.83 E Feb 1 2025 Print: 8.830 E Feb 1 2025 MiTek Industries, Inc. Tue Apr 29 16:39:39

Page: 1

ID: fmm_7iZn4J7lwacwArTG4zMC7?-7mAjSOCXr4t3Sfljb7bqA3lufOEWDieXti6vHzLobY



Scale = 1:100.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.29	18-20	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.47	18-20	>918	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.09	15	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 216 lb FT = 20%											

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-18, 8-18, 10-15
REACTIONS (lb/size) 2=1051/0-6-0, 13=186/2-6-0, 15=1408/2-6-0
Max Horiz 2=160 (LC 20)
Max Uplift 2=335 (LC 16), 13=293 (LC 38), 15=409 (LC 17)
Max Grav 2=1498 (LC 3), 13=63 (LC 16), 15=2036 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-3=-1317/53, 3-29=-2479/528, 4-29=-2415/548, 4-5=-2318/493, 5-6=-2310/518, 6-30=-1582/410, 30-31=-1533/417, 7-31=-1513/431, 7-32=-1513/430, 32-33=-1533/416, 8-33=-1582/409, 8-9=-1809/412, 9-10=-1817/387, 10-34=-75/599, 11-34=-89/525, 11-12=-133/618, 12-13=-36/280, 13-14=0/21
BOT CHORD 2-20=-560/2164, 19-20=-379/1794, 19-35=-379/1794, 18-35=-379/1794, 18-36=-221/1562, 17-36=-221/1562, 16-17=-221/1562, 15-16=-209/1298, 13-15=-500/151

WEBS 7-18=-221/1105, 6-18=-660/312, 6-20=-103/560, 4-20=-274/205, 8-18=-383/246, 8-16=-61/123, 10-16=-13/429, 10-15=-2380/462, 11-15=-245/138

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-11-14, Interior (1) 2-11-14 to 19-4-0, Exterior(2R) 19-4-0 to 23-2-6, Interior (1) 23-2-6 to 39-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 335 lb uplift at joint 2, 293 lb uplift at joint 13, 409 lb uplift at joint 15 and 293 lb uplift at joint 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



April 30, 2025

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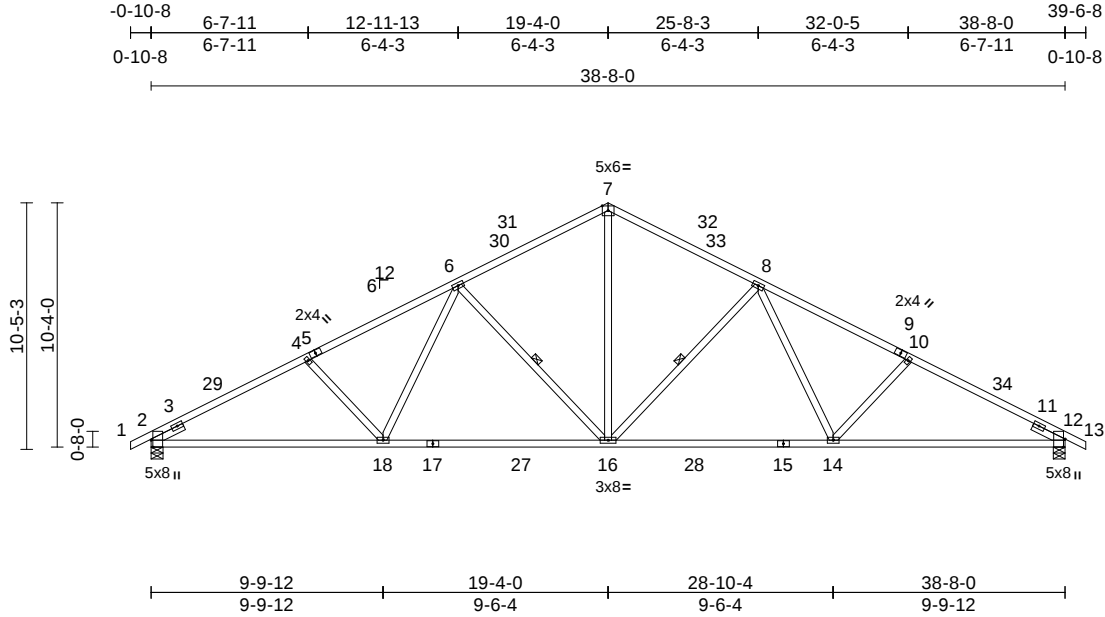
Job	Truss	Truss Type	Qty	Ply	999 Serenity	
P02235-24938	A04	Common	2	1	Job Reference (optional)	I73085219

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:48

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Scale = 1:97.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.35	14-16	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.57	14-16	>814	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.13	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 206 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.2 *Except* 14-10,18-4:2x4 SP No.3
 SLIDER Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied or 8-1-14 oc bracing.

WEBS 1 Row at midpt 6-16, 8-16

REACTIONS

(size) 2=0-6-0, 12=0-6-0
 Max Horiz 2=160 (LC 20)
 Max Uplift 2=-354 (LC 16), 12=-354 (LC 17)
 Max Grav 2=1622 (LC 3), 12=1622 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/21, 2-4=-2729/586, 4-6=-2571/558, 6-7=-1850/483, 7-8=-1850/483, 8-10=-2571/558, 10-12=-2729/586, 12-13=0/21
 BOT CHORD 2-18=-593/2380, 16-18=-415/2028, 14-16=-309/2028, 12-14=-433/2380
 WEBS 10-14=-267/203, 4-18=-267/203, 7-16=-268/1346, 6-16=-655/310, 8-16=-655/310, 6-18=-100/549, 8-14=-100/549

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=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-11-14, Interior (1) 2-11-14 to 19-4-0, Exterior(2R) 19-4-0 to 23-2-6, Interior (1) 23-2-6 to 39-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 11.5 psf on overhangs non-concurrent with other live loads.
- 6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 7) All plates are 3x6 (=) 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, with BCDL = 10.0psf.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 354 lb uplift at joint 2 and 354 lb uplift at joint 12.
- 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) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



April 30,2025

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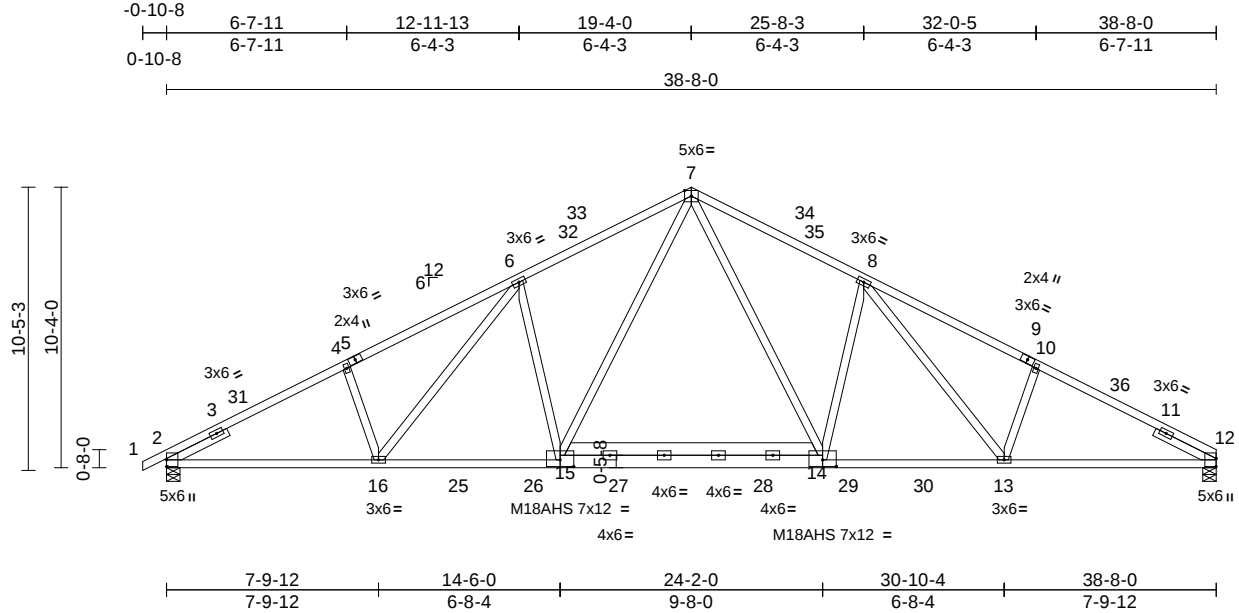
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085220
P02235-24938	A05	Common	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:48
ID:Zxgb3qlZkcGstAZxgzq9pzMBRS-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:84.9

Plate Offsets (X, Y): [2:0-3-0,0-0-1], [12:0-3-9,0-0-1], [14:0-6-0,0-3-0], [15:0-6-0,0-3-0]

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	0.86	Vert(LL)	-0.23	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.39	13-14	>999	180	M18AHS	186/179
TCDL	7.0	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.12	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 248 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 15-14,15-14:2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 16-4,13-10:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-6-0, Right 2x4 SP No.3 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-11-2 oc bracing.

REACTIONS (size) 2=0-6-0, 12=0-6-0
Max Horiz 2=167 (LC 20)
Max Uplift 2=378 (LC 16), 12=364 (LC 17)
Max Grav 2=1716 (LC 3), 12=1696 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-2921/628, 4-6=-2854/679, 6-7=-2520/654, 7-8=-2562/674, 8-10=-2895/694, 10-12=-2962/647
BOT CHORD 2-16=-636/2558, 13-16=-483/2351, 12-13=-504/2595
WEBS 4-16=-242/197, 8-13=-162/375, 7-15=-301/1007, 6-15=-510/308, 7-14=-347/1152, 8-14=-510/312, 6-16=-153/376, 10-13=-242/197

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-11-14, Interior (1) 2-11-14 to 19-4-0, Exterior(2R) 19-4-0 to 23-2-6, Interior (1) 23-2-6 to 38-8-0 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 378 lb uplift at joint 2 and 364 lb uplift at joint 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.
- Attic room checked for L/360 deflection.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 17-21=-20, 1-7=-37, 7-12=-37, 7-14=-30 (F)



April 30,2025

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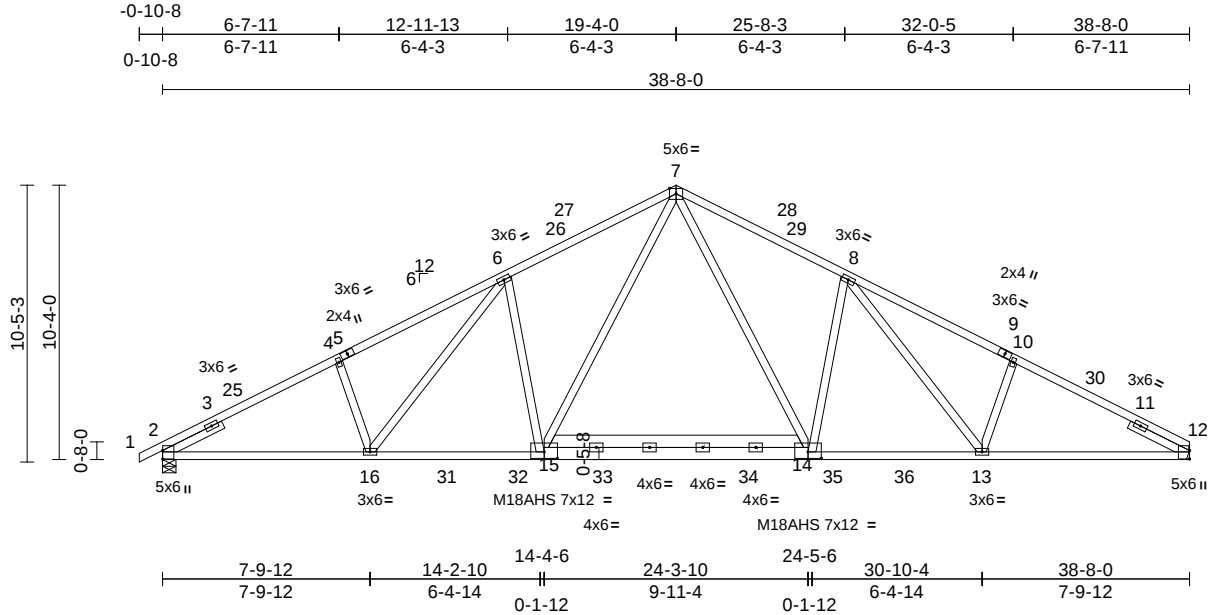
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085221
P02235-24938	A06	Common	6	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:48
ID:WU0I00z7E0fHK5j40eSBlvzMBPI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 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	0.75	Vert(LL)	-0.22	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.38	13-14	>999	180	M18AHS	186/179
TCDL	7.0	Rep Stress Incr	NO	WB	0.66	Horz(CT)	0.12	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 249 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-12:2x4 SP No.1
BOT CHORD 2x4 SP No.1 *Except* 15-14,15-14:2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 16-4,13-10:2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-6-0, Right 2x4 SP No.3 -- 2-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-11-2 oc bracing.

REACTIONS (size) 2=0-6-0, 12= Mechanical
Max Horiz 2=167 (LC 20)
Max Uplift 2=378 (LC 16), 12=365 (LC 17)
Max Grav 2=1718 (LC 3), 12=1698 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-4=-2924/629, 4-6=-2857/681, 6-7=-2536/659, 7-8=-2580/680, 8-10=-2901/696, 10-12=-2968/650
BOT CHORD 2-16=-637/2561, 13-16=-485/2361, 12-13=-506/2600
WEBS 4-16=-241/197, 6-16=-152/369, 6-15=-510/309, 7-15=-305/1017, 7-14=-352/1167, 8-14=-509/313, 8-13=-161/367, 10-13=-242/197

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-11-14, Interior (1) 2-11-14 to 19-4-0, Exterior(2R) 19-4-0 to 23-2-6, Interior (1) 23-2-6 to 38-8-0 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 378 lb uplift at joint 2 and 365 lb uplift at joint 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.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-37, 7-12=-37, 17-21=-20, 7-14=-30



April 30, 2025

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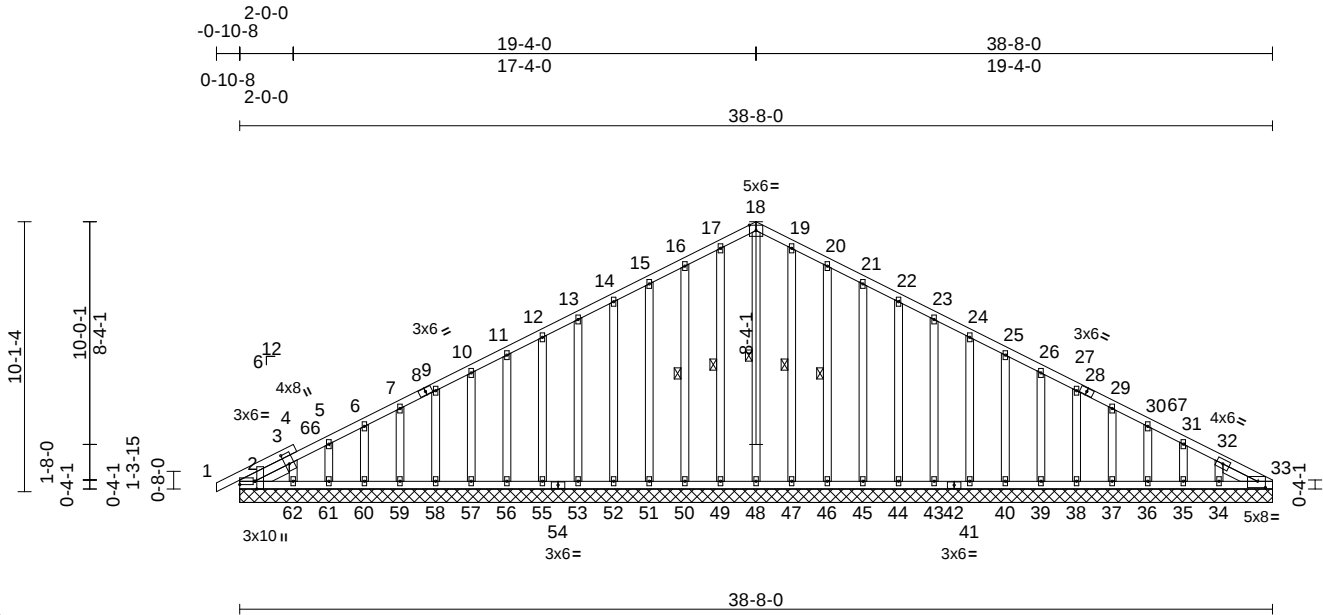
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085222
P02235-24938	A07E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:49
ID:KcHGFLsbSwmGaBEiRFkLbnzMAm6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:86.3

Plate Offsets (X, Y): [2:0-3-8,Edge], [2:Edge,0-1-8], [3:0-5-0,0-1-13], [33:0-3-8,0-2-13]

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	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	
TCDL	7.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	33	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 330 lb FT = 20%											

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except*
48-18,49-17,50-16,51-15,52-14,53-13,47-19,
46-20,45-21,44-22,43-23:2x4 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-5-7, Right 2x4 SP No.3
-- 1-5-7

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 18-48, 17-49, 16-50,
19-47, 20-46

REACTIONS (size) 2=38-8-0, 33=38-8-0, 34=38-8-0,
35=38-8-0, 36=38-8-0, 37=38-8-0,
38=38-8-0, 39=38-8-0, 40=38-8-0,
41=38-8-0, 43=38-8-0, 44=38-8-0,
45=38-8-0, 46=38-8-0, 47=38-8-0,
48=38-8-0, 49=38-8-0, 50=38-8-0,
51=38-8-0, 52=38-8-0, 53=38-8-0,
55=38-8-0, 56=38-8-0, 57=38-8-0,
58=38-8-0, 59=38-8-0, 60=38-8-0,
61=38-8-0, 62=38-8-0
Max Horiz 2=158 (LC 20)

Max Uplift 2=-26 (LC 12), 34=-55 (LC 17),
35=-43 (LC 17), 36=-42 (LC 17),
37=-42 (LC 17), 38=-42 (LC 17),
39=-42 (LC 17), 40=-42 (LC 17),
41=-42 (LC 17), 43=-42 (LC 17),
44=-42 (LC 17), 45=-42 (LC 17),
46=-50 (LC 17), 47=-19 (LC 17),
49=-26 (LC 16), 50=-48 (LC 16),
51=-42 (LC 16), 52=-42 (LC 16),
53=-42 (LC 16), 55=-42 (LC 16),
56=-42 (LC 16), 57=-42 (LC 16),
58=-42 (LC 16), 59=-42 (LC 16),
60=-42 (LC 16), 61=-41 (LC 16),
62=-43 (LC 16)
Max Grav 2=159 (LC 2), 33=76 (LC 33),
34=143 (LC 2), 35=87 (LC 37),
36=101 (LC 2), 37=98 (LC 37),
38=99 (LC 2), 39=99 (LC 37),
40=99 (LC 2), 41=98 (LC 2), 43=99
(LC 37), 44=99 (LC 2), 45=99 (LC
2), 46=112 (LC 24), 47=113 (LC
24), 48=152 (LC 17), 49=113 (LC
23), 50=111 (LC 23), 51=99 (LC 2),
52=99 (LC 2), 53=99 (LC 36),
55=98 (LC 2), 56=99 (LC 2), 57=99
(LC 36), 58=99 (LC 36), 59=99 (LC
2), 60=98 (LC 36), 61=100 (LC 2),
62=78 (LC 36)

TOP CHORD 1-2=0/18, 2-3=-196/65, 3-5=-176/71,
5-6=-149/79, 6-7=-121/86, 7-9=-96/94,
9-10=-77/108, 10-11=-57/124, 11-12=-48/139,
12-13=-52/155, 13-14=-64/170,
14-15=-76/199, 15-16=-89/229,
16-17=-103/263, 17-18=-109/281,
18-19=-109/281, 19-20=-103/263,
20-21=-89/229, 21-22=-76/199,
22-23=-64/169, 23-24=-52/138,
24-25=-40/108, 25-26=-28/78, 26-27=-23/48,
27-29=-34/24, 29-30=-52/20, 30-31=-79/26,
31-32=-107/38, 32-33=-99/20

FORCES (lb) - Maximum Compression/Maximum
Tension



April 30,2025

Continued on page 2

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity
P02235-24938	A07E	Common Supported Gable	1	1	173085222
					Job Reference (optional)

BOT CHORD

2-62=-49/153, 61-62=-54/157,
60-61=-54/157, 59-60=-54/157,
58-59=-54/157, 57-58=-54/157,
56-57=-54/157, 55-56=-54/157,
53-55=-54/157, 52-53=-54/157,
51-52=-54/157, 50-51=-54/157,
49-50=-54/157, 48-49=-54/157,
47-48=-54/157, 46-47=-54/157,
45-46=-54/157, 44-45=-54/157,
43-44=-54/157, 41-43=-54/157,
40-41=-54/157, 39-40=-54/157,
38-39=-54/157, 37-38=-54/157,
36-37=-54/157, 35-36=-54/157,
34-35=-54/157, 33-34=-54/157

WEBS

18-48=-174/52, 17-49=-86/34, 16-50=-85/66,
15-51=-72/56, 14-52=-72/56, 13-53=-72/57,
12-55=-72/56, 11-56=-72/56, 10-57=-72/56,
9-58=-72/56, 7-59=-72/56, 6-60=-72/57,
5-61=-73/63, 3-62=-54/65, 19-47=-86/29,
20-46=-85/66, 21-45=-72/56, 22-44=-72/56,
23-43=-72/57, 24-41=-72/56, 25-40=-72/56,
26-39=-72/56, 27-38=-72/56, 29-37=-72/56,
30-36=-73/57, 31-35=-69/82, 32-34=-93/104

- 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=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-11-14, Exterior(2N) 2-11-14 to 19-4-0, Corner(3R) 19-4-0 to 23-4-0, Exterior (2N) 23-4-0 to 38-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 11.5 psf on overhangs non-concurrent with other live loads.

7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.

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

9) Gable requires continuous bottom chord bearing.

10) Gable studs spaced at 1-4-0 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 26 lb uplift at joint 2, 26 lb uplift at joint 49, 48 lb uplift at joint 50, 42 lb uplift at joint 51, 42 lb uplift at joint 52, 42 lb uplift at joint 53, 42 lb uplift at joint 55, 42 lb uplift at joint 56, 42 lb uplift at joint 57, 42 lb uplift at joint 58, 42 lb uplift at joint 59, 42 lb uplift at joint 60, 41 lb uplift at joint 61, 43 lb uplift at joint 62, 19 lb uplift at joint 47, 50 lb uplift at joint 46, 42 lb uplift at joint 45, 42 lb uplift at joint 44, 42 lb uplift at joint 43, 42 lb uplift at joint 41, 42 lb uplift at joint 40, 42 lb uplift at joint 39, 42 lb uplift at joint 38, 42 lb uplift at joint 37, 42 lb uplift at joint 36, 43 lb uplift at joint 35 and 55 lb uplift at joint 34.

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.

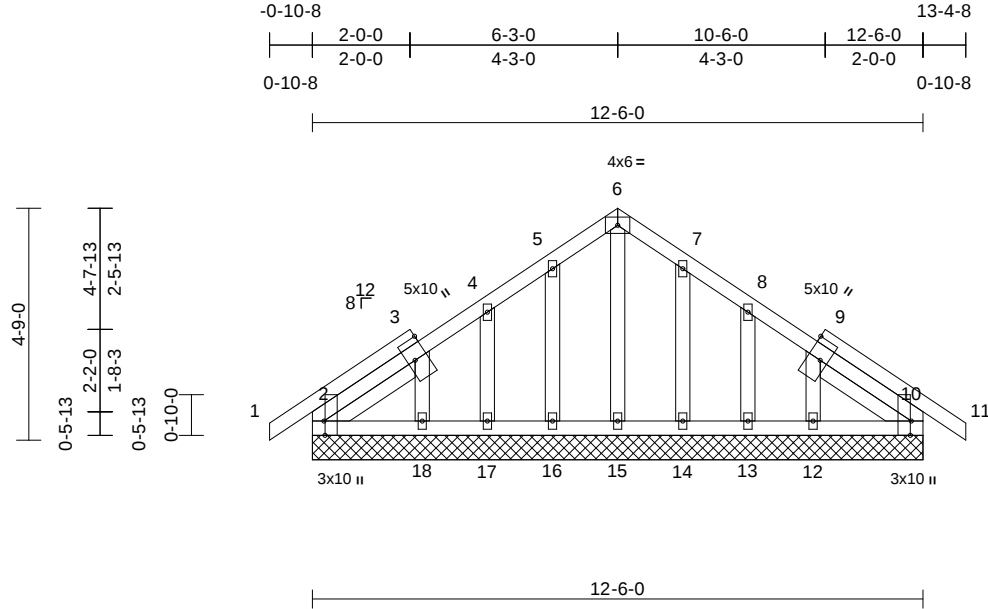
LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085223
P02235-24938	B01E	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:49
ID:9iIf0Lh1DobNKiOnfSjCDzMAIU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRcDoi7J4zJC?F

Page: 1



Scale = 1:47.2

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	10	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
Weight: 85 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 2-2-14, Right 2x4 SP No.3 -- 2-2-14

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=12-6-0, 10=12-6-0, 12=12-6-0, 13=12-6-0, 14=12-6-0, 15=12-6-0, 16=12-6-0, 17=12-6-0, 18=12-6-0
Max Horiz		2=-103 (LC 12)
Max Uplift		2=-13 (LC 15), 10=-15 (LC 15), 12=-68 (LC 15), 13=-57 (LC 15), 14=-47 (LC 15), 16=-49 (LC 14), 17=-55 (LC 14), 18=-61 (LC 14)
Max Grav		2=154 (LC 2), 10=154 (LC 2), 12=125 (LC 27), 13=104 (LC 27), 14=107 (LC 27), 15=98 (LC 29), 16=110 (LC 26), 17=103 (LC 26), 18=117 (LC 26)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/20, 2-3=-88/71, 3-4=-67/56, 4-5=-57/80, 5-6=-65/126, 6-7=-65/126, 7-8=-41/80, 8-9=-35/25, 9-10=-62/34, 10-11=0/20
BOT CHORD	2-18=-39/104, 17-18=-40/107, 16-17=-40/107, 15-16=-40/107, 14-15=-40/107, 13-14=-40/107, 12-13=-40/107, 10-12=-39/104
WEBS	6-15=-78/15, 5-16=-82/73, 4-17=-80/88, 3-18=-88/91, 7-14=-80/73, 8-13=-81/88, 9-12=-88/91

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-13, Exterior(2N) 2-1-13 to 6-3-0, Corner(3R) 6-3-0 to 9-3-0, Exterior(2N) 9-3-0 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 2, 15 lb uplift at joint 10, 49 lb uplift at joint 16, 55 lb uplift at joint 17, 61 lb uplift at joint 18, 47 lb uplift at joint 14, 57 lb uplift at joint 13 and 68 lb uplift at joint 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



April 30, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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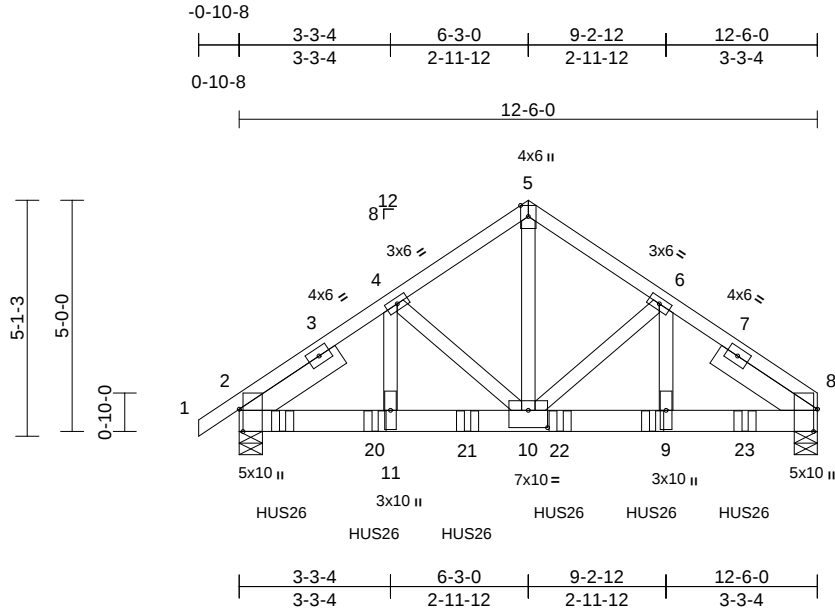
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	
P02235-24938	B02G	Common Girder	1	2	Job Reference (optional)	I73085224

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:50
ID:m9m58JAniJilNomDZ99vlszMAj8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:49.8

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

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	0.38	Vert(LL)	-0.06	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.10	10-11	>999	180		
TCDL	7.0	Rep Stress Incr	NO	WB	0.61	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 178 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except* 10-5:2x4 SP No.2
SLIDER Left 2x6 SP No.2 -- 2-6-0, Right 2x6 SP No.2 -- 2-6-0

BRACING

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

REACTIONS (size) 2=0-6-0, 8=0-6-0
Max Horiz 2=107 (LC 7)
Max Uplift 2=-1286 (LC 10), 8=-1163 (LC 11)
Max Grav 2=5708 (LC 3), 8=5202 (LC 3)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-6345/1432, 4-5=-4726/1098, 5-6=-4726/1097, 6-8=-6401/1446
BOT CHORD 2-11=-1181/5152, 10-11=-1181/5152, 9-10=-1135/5202, 8-9=-1135/5202
WEBS 4-11=-451/2106, 4-10=-1626/441, 5-10=-1121/4958, 6-10=-1692/457, 6-9=-467/2176

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 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.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1163 lb uplift at joint 8 and 1286 lb uplift at joint 2.
- 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-11-4 from the left end to 10-11-4 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-5=-37, 5-8=-37, 12-16=-20

Concentrated Loads (lb)

Vert: 9=-1164 (B), 18=-1165 (B), 20=-1164 (B), 21=-1164 (B), 22=-1164 (B), 23=-1164 (B)



April 30, 2025

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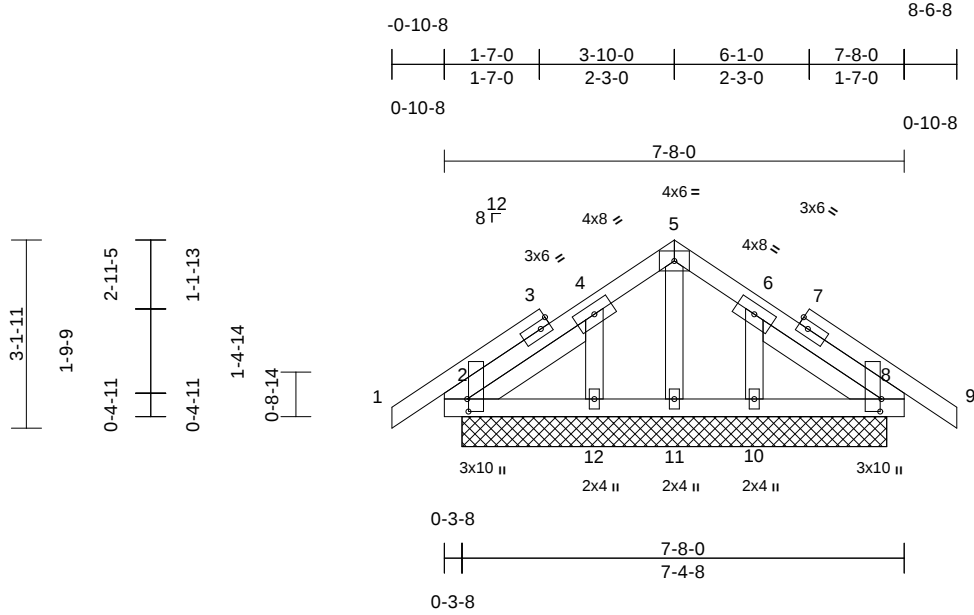
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085225
P02235-24938	E01	Common Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:50
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Page: 1



Scale = 1:38.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999	244/190
TCDL	7.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 50 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3
SLIDER	Left 2x4 SP No.3 -- 2-4-8, Right 2x4 SP No.3 -- 2-4-8

BRACING

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

REACTIONS

(size)	2=7-1-0, 8=7-1-0, 10=7-1-0, 11=7-1-0, 12=7-1-0
Max Horiz	2=-65 (LC 12)
Max Uplift	2=-39 (LC 14), 8=-46 (LC 15), 10=-71 (LC 15), 12=-68 (LC 14)
Max Grav	2=159 (LC 2), 8=159 (LC 2), 10=148 (LC 27), 11=65 (LC 29), 12=144 (LC 26)

FORCES

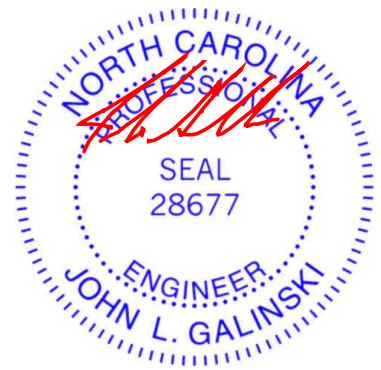
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/22, 2-4=-62/48, 4-5=-47/94, 5-6=-47/93, 6-8=-45/35, 8-9=0/22
BOT CHORD	2-12=-36/89, 11-12=-33/88, 10-11=-33/88, 8-10=-36/89
WEBS	5-11=-52/3, 4-12=-115/131, 6-10=-115/131

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=4.2psf; BCDL=3.0psf; 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 3-10-0, Corner(3R) 3-10-0 to 6-10-0, Exterior(2N) 6-10-0 to 8-6-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- 6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 2, 46 lb uplift at joint 8, 68 lb uplift at joint 12 and 71 lb uplift at joint 10.
- 11) Non Standard bearing condition. Review required.
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 30,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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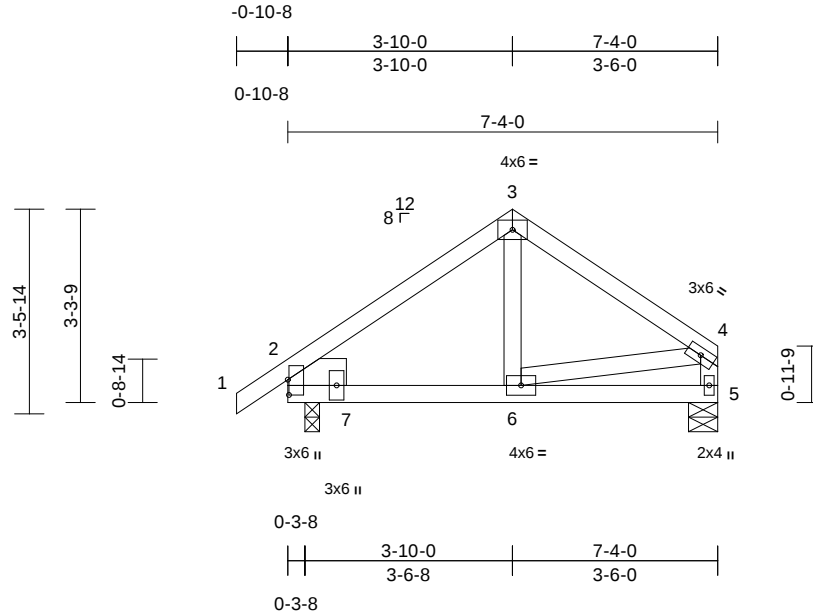
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085226
P02235-24938	E02	Common	3	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:50
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Page: 1



Scale = 1:39.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.01	5-6	>999	240	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.01	5-6	>999	180	
TCDL	7.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 38 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-0-0

BRACING

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

REACTIONS (size) 2=0-3-0, 5=0-6-0
Max Horiz 2=84 (LC 13)
Max Uplift 2=-84 (LC 14), 5=-52 (LC 15)
Max Grav 2=336 (LC 2), 5=244 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/26, 2-3=-232/110, 3-4=-205/102, 4-5=-212/131

BOT CHORD 2-6=-40/151, 5-6=-13/14

WEBS 3-6=0/112, 4-6=-32/148

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; 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 3-10-0, Exterior(2R) 3-10-0 to 6-10-0, Interior (1) 6-10-0 to 7-2-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 2 and 52 lb uplift at joint 5.
- 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



April 30, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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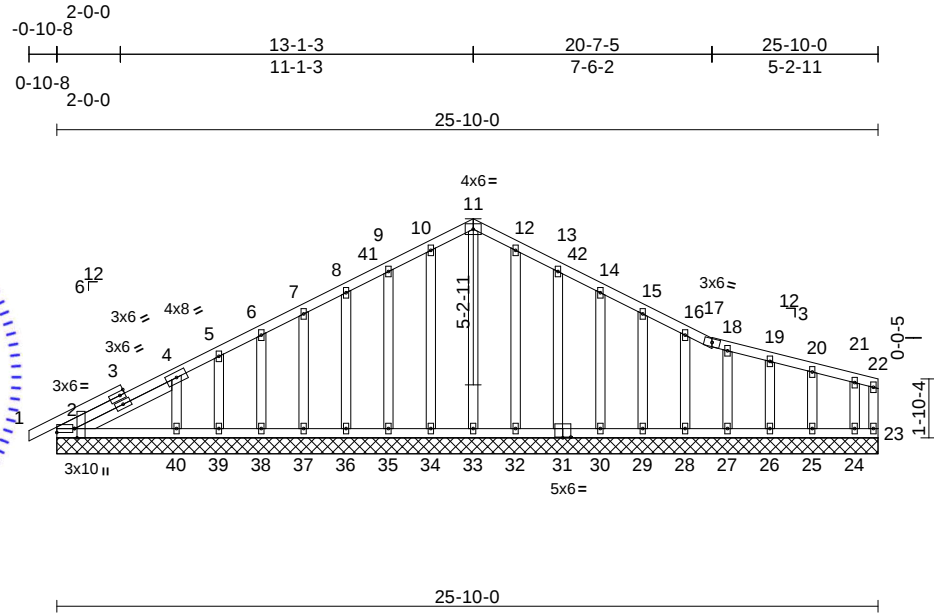
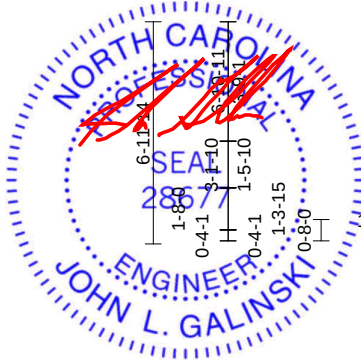
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085227
P02235-24938	G01E	Roof Special Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:51
ID:uVc2SITs4C9uRkU6VXV?2kzM8tG-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:72.5

Plate Offsets (X, Y): [2:0-3-8,Edge], [2:Edge,0-1-8], [31:0-3-0,0-0-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	23	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS							
BCDL	10.0										
										Weight: 185 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* 33-11:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 3-5-2

BRACING

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

REACTIONS

(size)	2=25-10-0, 23=25-10-0, 24=25-10-0, 25=25-10-0, 26=25-10-0, 27=25-10-0, 28=25-10-0, 29=25-10-0, 30=25-10-0, 31=25-10-0, 32=25-10-0, 33=25-10-0, 34=25-10-0, 35=25-10-0, 36=25-10-0, 37=25-10-0, 38=25-10-0, 39=25-10-0, 40=25-10-0
Max Horiz	2=113 (LC 20)
Max Uplift	2=-47 (LC 12), 24=-73 (LC 17), 25=-34 (LC 13), 26=-33 (LC 13), 27=-38 (LC 17), 28=-44 (LC 17), 29=-41 (LC 17), 30=-44 (LC 17), 31=-46 (LC 17), 32=-30 (LC 17), 34=-34 (LC 16), 35=-46 (LC 16), 36=-42 (LC 16), 37=-42 (LC 16), 38=-42 (LC 16), 39=-40 (LC 16), 40=-72 (LC 16)

FORCES

TOP CHORD

(lb) - Maximum Compression/Maximum Tension	1-2=0/18, 2-4=-106/84, 4-5=-69/92, 5-6=-49/116, 6-7=-60/144, 7-8=-71/171, 8-9=-81/198, 9-10=-93/228, 10-11=-100/247, 12-13=-93/204, 13-14=-80/160, 14-15=-69/132, 15-16=-59/106, 16-17=-43/76, 17-18=-44/71, 18-19=-38/57, 19-20=-33/46, 20-21=-28/32, 21-22=-35/37, 2-40=-36/54, 39-40=-33/53, 38-39=-33/53, 37-38=-33/53, 36-37=-33/53, 35-36=-33/53, 34-35=-33/53, 33-34=-33/53, 32-33=-33/53, 30-32=-34/55, 29-30=-34/55, 28-29=-34/55, 27-28=-34/55, 26-27=-34/55, 25-26=-34/55, 24-25=-34/55, 23-24=-34/55, 10-34=-87/76, 9-35=-84/81, 8-36=-72/50, 7-37=-72/50, 6-38=-74/51, 5-39=-59/45, 4-40=-131/85, 12-32=-87/71, 13-31=-85/82, 14-30=-72/52, 15-29=-72/49, 16-28=-72/58, 18-27=-73/54, 19-26=-71/41, 20-25=-75/43, 21-24=-56/54, 11-33=-145/42
--	--

BOT CHORD

WEBS

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=4.2psf; BCDL=3.0psf; 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 13-1-3, Corner(3R) 13-1-3 to 16-1-3, Exterior(2N) 16-1-3 to 25-8-4 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) 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); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 11.5 psf on overhangs non-concurrent with other live loads.

April 30,2025

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity
P02235-24938	G01E	Roof Special Supported Gable	1	1	I73085227
					Job Reference (optional)

- 7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 8) All plates are 2x4 (I) MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Gable studs spaced at 1-4-0 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 2, 46 lb uplift at joint 31, 34 lb uplift at joint 34, 46 lb uplift at joint 35, 42 lb uplift at joint 36, 42 lb uplift at joint 37, 42 lb uplift at joint 38, 40 lb uplift at joint 39, 72 lb uplift at joint 40, 30 lb uplift at joint 32, 44 lb uplift at joint 30, 41 lb uplift at joint 29, 44 lb uplift at joint 28, 38 lb uplift at joint 27, 33 lb uplift at joint 26, 34 lb uplift at joint 25 and 73 lb uplift at joint 24.
- 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



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Edenton, NC 27932

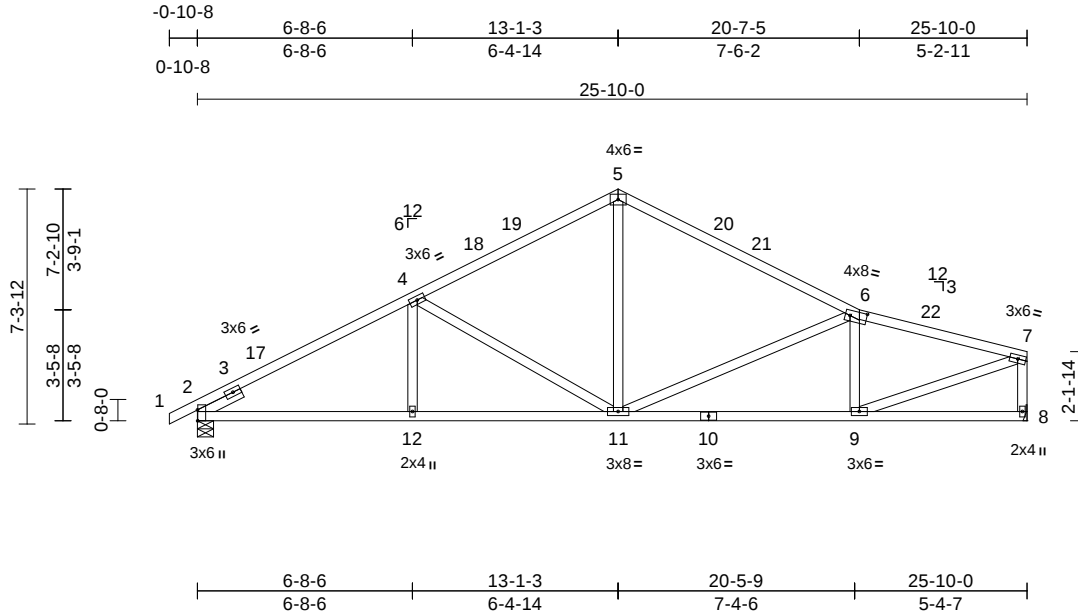
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085228
P02235-24938	G02	Roof Special	5	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:51

Page: 1

ID:um7T0hgX4QIUzLHN?cl_EJzM8t?-RfC?PsB70Hq3NSgPqnl8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.08	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.18	9-11	>999	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.04	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0											
											Weight: 136 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3 *Except* 11-4,11-5,11-6:2x4 SP No.2
 SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=0-6-0, 8= Mechanical
 Max Horiz 2=119 (LC 20)
 Max Uplift 2=243 (LC 16), 8=222 (LC 17)
 Max Grav 2=998 (LC 2), 8=950 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/21, 2-4=-1537/469, 4-5=-1103/398, 5-6=-1114/380, 6-7=-1370/428, 7-8=-903/300
 BOT CHORD 2-12=-446/1316, 11-12=-446/1316, 9-11=-408/1285, 8-9=-38/53
 WEBS 4-12=0/231, 4-11=-500/242, 5-11=-131/573, 6-11=-441/196, 6-9=-330/183, 7-9=-402/1337

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; 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 13-1-3, Exterior(2R) 13-1-3 to 16-1-3, Interior (1) 16-1-3 to 25-8-4 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

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 243 lb uplift at joint 2 and 222 lb uplift at joint 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



April 30,2025

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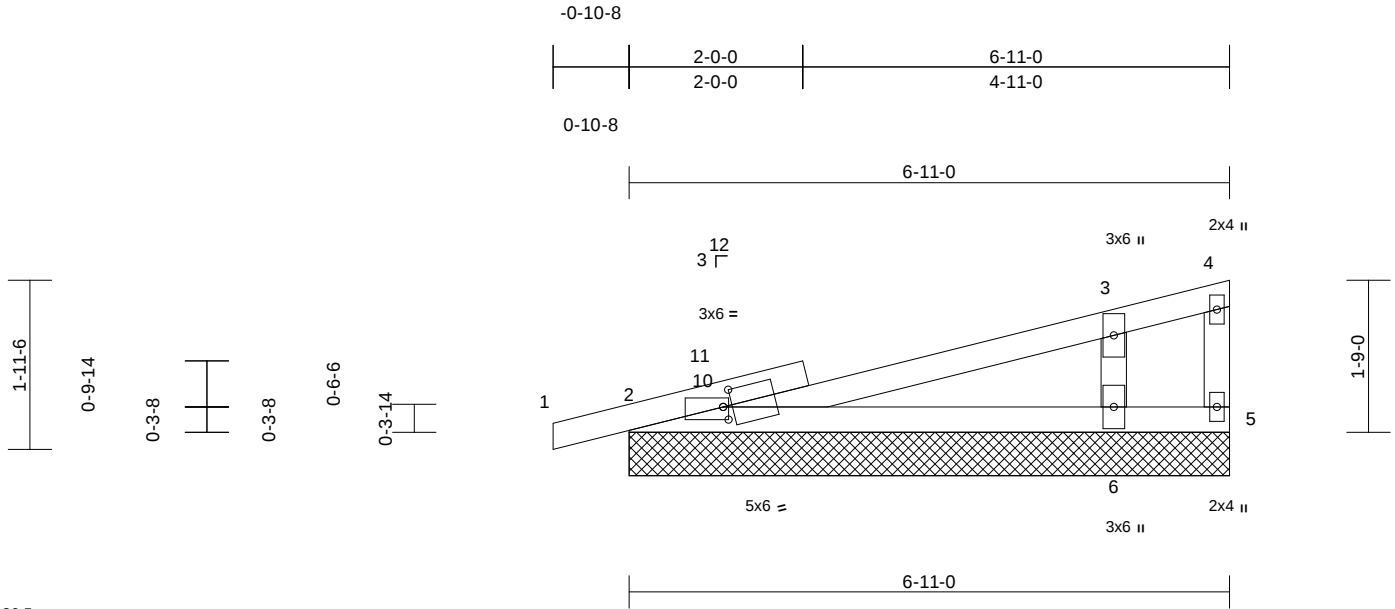
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085229
P02235-24938	G03E	Monopitch Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:51
ID:jk40_AMHfxUOJ68Kr4qL2LzM8s6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:26.5

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

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	0.32	Vert(LL)	n/a	-	n/a	999	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	n/a	-	n/a	999	
TCDL	7.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	2	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0										
										Weight: 27 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
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=6-11-0, 5=6-11-0, 6=6-11-0
	Max Horiz	2=68 (LC 13)
	Max Uplift	2=-131 (LC 12), 5=-180 (LC 23), 6=-190 (LC 16)
	Max Grav	2=308 (LC 2), 5=68 (LC 16), 6=547 (LC 23)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/11, 2-3=-100/57, 3-4=-46/63, 4-5=-129/93
BOT CHORD	2-6=-61/39, 5-6=-25/33
WEBS	3-6=-327/453

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=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-3-7, Exterior(2N) 2-3-7 to 6-9-4 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); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; 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 11.5 psf on overhangs non-concurrent with other live loads.
- 7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 1-4-0 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 131 lb uplift at joint 2, 180 lb uplift at joint 5, 190 lb uplift at joint 6 and 131 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



April 30, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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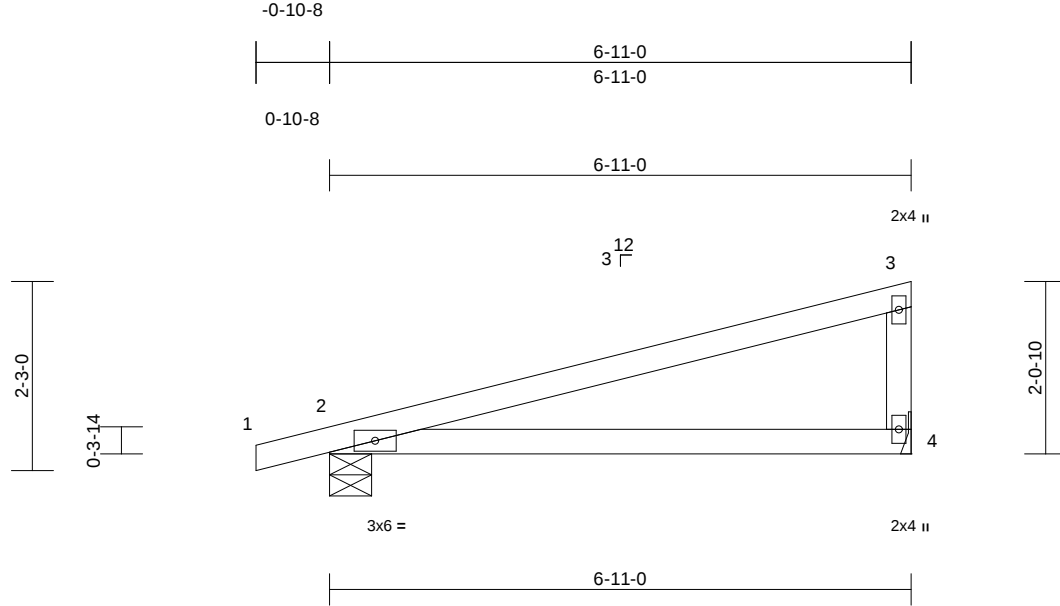
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	999 Serenity	I73085230
P02235-24938	G04	Monopitch	10	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:52
ID:ndUh8JYh7YNGcPnDDjbt9VzM8rt-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:27.4

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	0.63	Vert(LL)	0.12	4-7	>679	240	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.21	4-7	>391	180		
TCDL	7.0	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: 25 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 6-11-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	2=0-6-0, 4= Mechanical
Max Horiz	2=70 (LC 15)
Max Uplift	2=-109 (LC 12), 4=-78 (LC 26)
Max Grav	2=301 (LC 2), 4=250 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/11, 2-3=-178/83, 3-4=-162/165
BOT CHORD	2-4=-138/170

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-9-4 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.

- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * 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.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 4 and 109 lb uplift at joint 2.
 - 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



April 30,2025

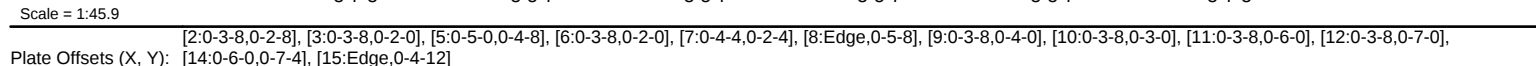
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:52 Page: 1
ID:HljTv1bSHAHmWmiDebY28yzM8hT-RfC?PsB70Hg3NSgPqnL8w3ulTXbGKwKCDoi7J4zJC?f



LUMBER		1) 3-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 0-4-0 oc. Web connected as follows: 2x4 - 1 row at 0-9-0 oc.	11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3500 lb uplift at joint 8 and 2450 lb uplift at joint 15.
TOP CHORD	2x6 SP DSS		
BOT CHORD	2x10 SP DSS		
WEBS	2x4 SP No.3 *Except* 7-8:2x6 SP No.2, 2-15,7-9:2x4 SP DSS, 3-14,4-12,5-11,6-10:2x4 SP No.1		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.
OTHERS	2x6 SP No.2		13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
BRACING		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.	14) Use Simpson Strong-Tie LUS28 (6-10d Girder, 3-10d Truss) 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 front face of bottom chord.
TOP CHORD	2-0-0 oc purlins (4-4-12 max.): 1-7, except end verticals.		
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.		
REACTIONS	(size) 8=0-6-0, 15=0-6-0 Max Horiz 15=-49 (LC 6) Max Uplift 8=-3500 (LC 7), 15=-2450 (LC 6) Max Grav 8=11688 (LC 21), 15=8506 (LC 2)	3) Unbalanced roof live loads have been considered for this design. 4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCdL=4.2psf; BCdL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60	15) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
FORCES	(lb) - Maximum Compression/Maximum Tension		16) Fill all nail holes where hanger is in contact with lumber.

TOP CHORD	1-2=-1307/390, 2-3=-17196/4980, 3-4=-29359/8570, 4-6=-36353/10735, 6-7=-20923/6293, 7-8=-8749/2645, 1-15=-403/134	5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=16.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
BOT CHORD	14-15=-5001/17196, 12-14=-8591/29359, 11-12=-10755/36353, 10-11=-9921/33184, 9-10=-6298/20923, 8-9=-528/1718	6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
WEBS	2-14=-1929/6834, 2-15=-17273/4999, 3-14=-13174/3896, 3-12=-1383/4824, 4-12=-8361/2390, 4-11=-858/3308, 5-11=-905/3437, 5-10=-1532/450, 6-10=-3912/13241, 6-9=-4849/1476, 7-9=-6273/20889	7) Provide adequate drainage to prevent water ponding. 8) All plates are MT20 plates unless otherwise indicated. 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
NOTES		

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Continued on page 2

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	999 Serenity
P02235-24938	G05G	Flat Girder	1	3	I73085231
			Job Reference (optional)		

17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3393 lb down and 909 lb up at 10-10-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-47, 15-21=-20, 8-21=-900 (F=-880)
Concentrated Loads (lb)
Vert: 13=-951 (F=-721, B=-230), 10=-230 (B), 16=-951 (F=-721, B=-230), 17=-951 (F=-721, B=-230), 18=-951 (F=-721, B=-230), 19=-951 (F=-721, B=-230), 20=-2738 (F), 21=-230 (B), 22=-230 (B), 23=-230 (B), 24=-233 (B)

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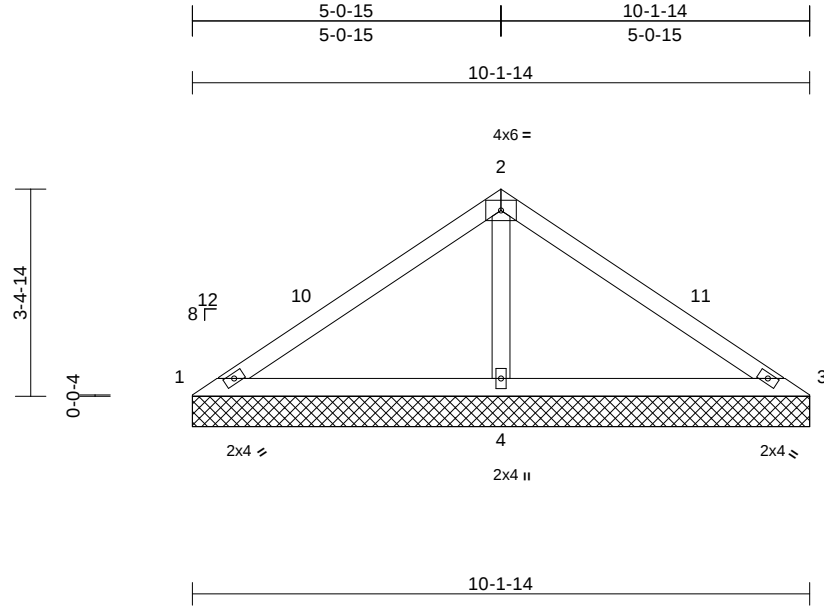
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085232
P02235-24938	V01	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:52

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Scale = 1:37.9

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	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 36 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=10-1-14, 3=10-1-14, 4=10-1-14
Max Horiz	1=76 (LC 13)
Max Uplift	1=-1 (LC 14), 3=-104 (LC 31), 4=-171 (LC 14)
Max Grav	1=3 (LC 25), 3=101 (LC 32), 4=752 (LC 2)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-204/399, 2-3=-114/383
BOT CHORD	1-4=-309/182, 3-4=-279/163
WEBS	2-4=-594/262

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 5-1-5, Exterior(2R) 5-1-5 to 8-1-5, Interior (1) 8-1-5 to 10-2-4 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
- 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.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1, 104 lb uplift at joint 3, 171 lb uplift at joint 4 and 1 lb uplift at joint 1.
- 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



April 30, 2025

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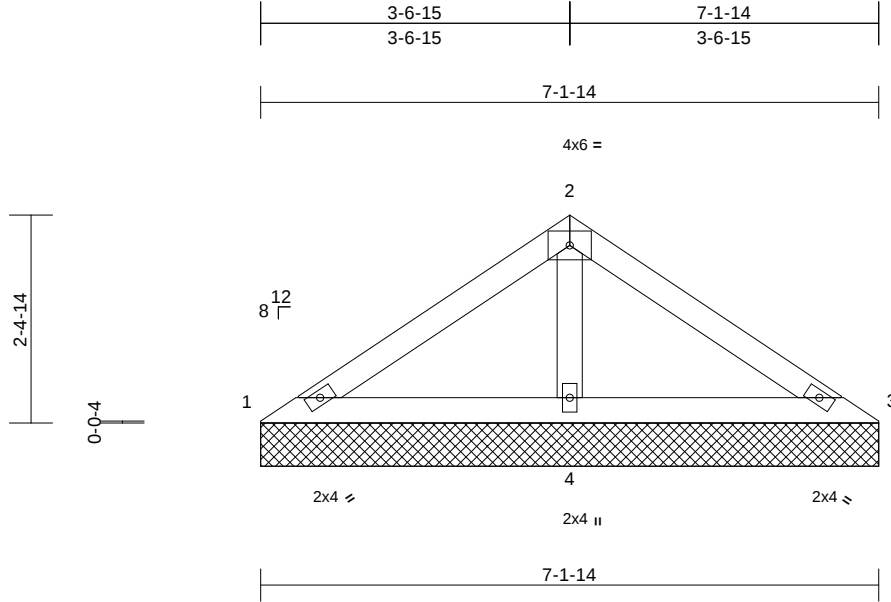
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085233
P02235-24938	V02	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:52

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Scale = 1:26.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 25 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 7-1-14 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	1=7-1-14, 3=7-1-14, 4=7-1-14
Max Horiz	1=-52 (LC 10)
Max Uplift	1=-5 (LC 14), 3=-14 (LC 10), 4=-109 (LC 14)
Max Grav	1=66 (LC 31), 3=66 (LC 32), 4=446 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-92/184, 2-3=-92/184
BOT CHORD	1-4=-152/145, 3-4=-152/145
WEBS	2-4=-308/197

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=4.2psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Interior (1) 3-0-6 to 3-7-5, Exterior(2R) 3-7-5 to 6-7-5, Interior (1) 6-7-5 to 7-2-4 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
- 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.

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1, 14 lb uplift at joint 3 and 109 lb uplift at joint 4.
- 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



April 30,2025

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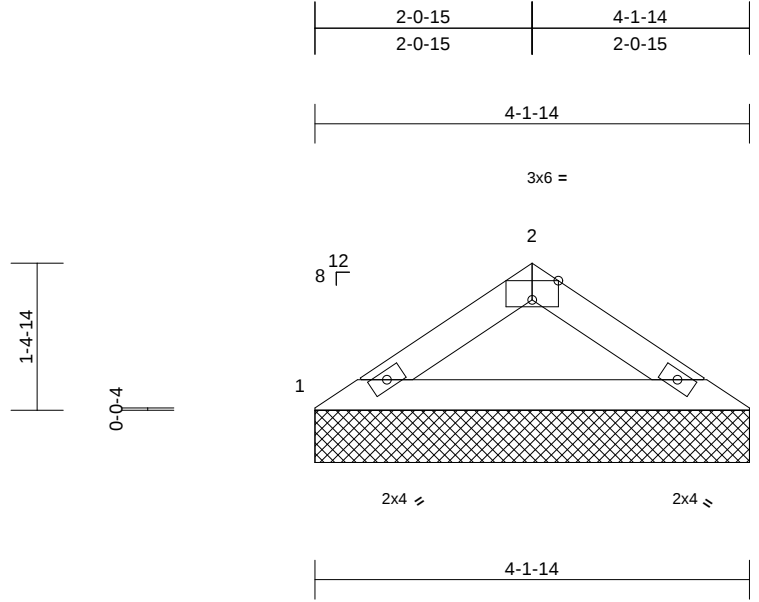
Job	Truss	Truss Type	Qty	Ply	999 Serenity	173085234
P02235-24938	V03	Valley	1	1	Job Reference (optional)	

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

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Mon Apr 28 16:23:53

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Scale = 1:22

Plate Offsets (X, Y): [2:0-3:0,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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.5/15.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	7.0	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: 12 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 4-1-14 oc purlins.

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

REACTIONS

(size) 1=4-1-14, 3=4-1-14

Max Horiz 1=-29 (LC 12)

Max Uplift 1=-35 (LC 14), 3=-35 (LC 15)

Max Grav 1=154 (LC 2), 3=154 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-231/132, 2-3=-231/132

BOT CHORD 1-3=-96/187

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=4.2psf; BCDL=3.0psf; 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); Pg=15.0 psf; Pf=11.5 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.

- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 1 and 35 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



April 30, 2025

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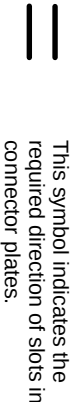
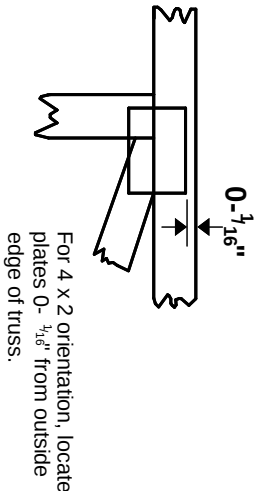
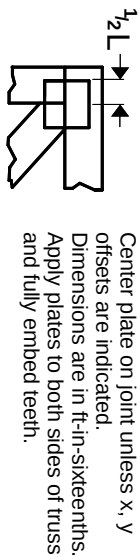
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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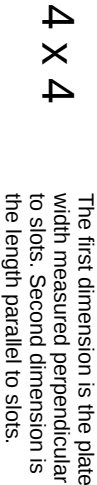
Symbols

PLATE LOCATION AND ORIENTATION

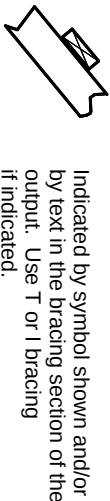


* Plate location details available in MITek software or upon request.

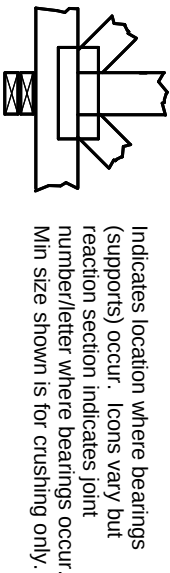
PLATE SIZE



LATERAL BRACING LOCATION

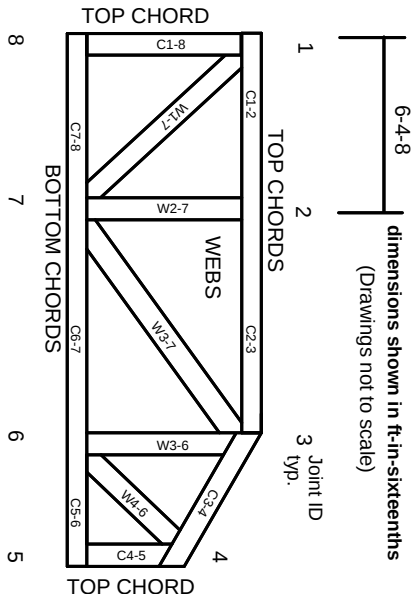


BEARING



Industry Standards:
ANSI/TPI-1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:
ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.
Lumber design values are in accordance with ANSI/TPI 1 section 6.3. These truss designs rely on lumber values established by others.

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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.

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