ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P01985-24565
1033 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 1387 (Winter Haven, FL).

Pages or sheets covered by this seal: I72808488 thru I72808528

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

North Carolina COA: C-0844

April 16,2025

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	1033 Serenity	
P01985-24565	H1	Hip Girder	1	1	Job Reference (optional)	I72808488

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:23 Page: 1
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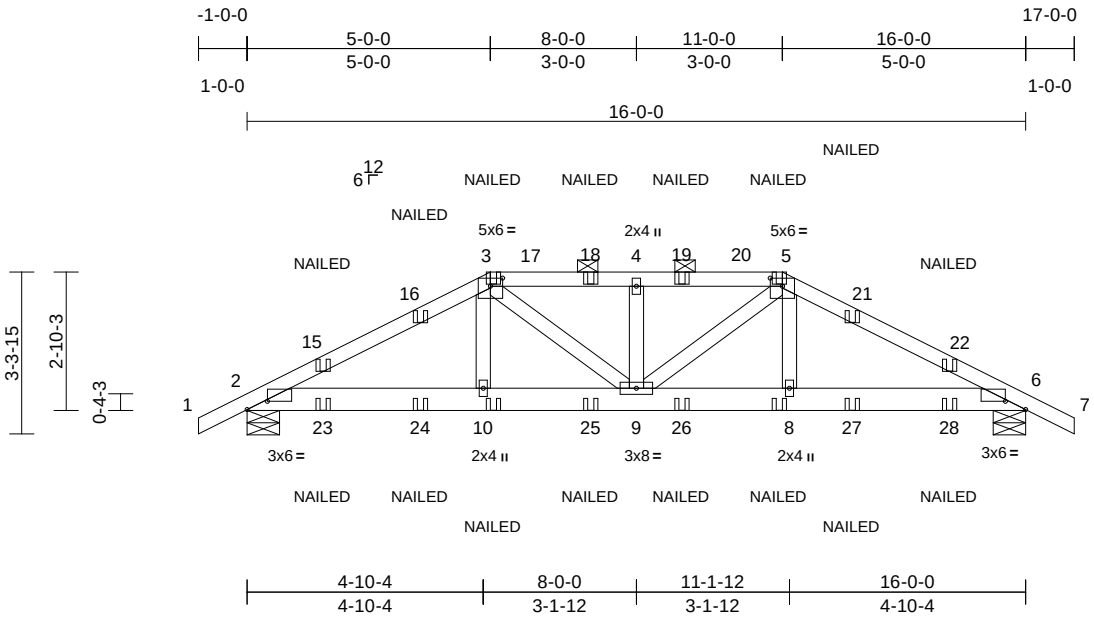

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Plate Offsets (X, Y): [2:0-5-0,0-2-1], [3:0-3-0,0-2-0], [5:0-3-0,0-2-0], [6:0-5-0,0-2-1]

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	0.41	Vert(LL)	-0.05	9	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.10	9	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.17	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 86 lb	FT = 20%

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

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

REACTIONS (size) 2=0-8-0, 6=0-8-0
Max Horiz 2=48 (LC 16)
Max Uplift 2=-293 (LC 12), 6=-293 (LC 13)
Max Grav 2=1162 (LC 2), 6=1162 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-1946/496, 3-4=-1809/509, 4-5=-1809/509, 5-6=-1946/496, 6-7=0/28
BOT CHORD 2-10=-420/1676, 9-10=-417/1652, 8-9=-397/1652, 6-8=-400/1676
WEBS 3-10=-69/412, 3-9=-94/242, 4-9=-282/145, 5-9=-95/242, 5-8=-69/412

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 293 lb uplift at joint 2 and 293 lb uplift at joint 6.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-5=-45, 5-7=-35, 2-6=-20
Concentrated Loads (lb)
Vert: 10=-42 (B), 3=-79 (B), 5=-79 (B), 8=-42 (B), 15=-74 (B), 16=-14 (B), 18=-74 (B), 19=-74 (B), 21=-14 (B), 22=-74 (B), 23=-66 (B), 24=-114 (B), 25=-42 (B), 26=-42 (B), 27=-114 (B), 28=-66 (B)

April 16,2025

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H2	Hip	1	1	Job Reference (optional)	I72808489

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:24 Page: 1
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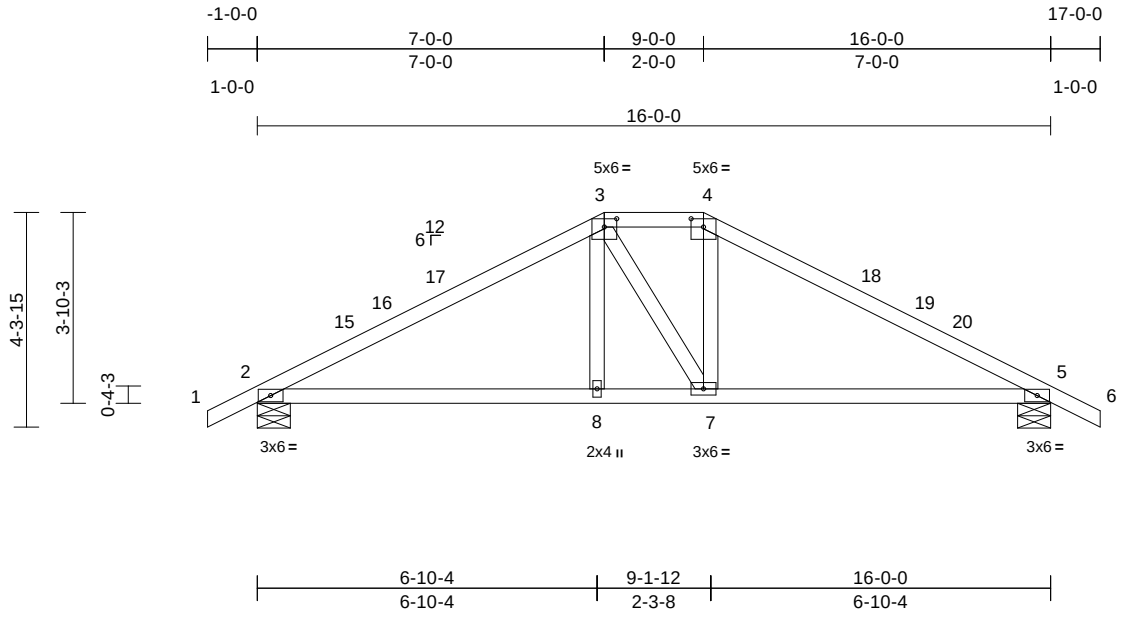

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Plate Offsets (X, Y): [3:0-3-0,0-2-0], [4:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	0.08	8-11	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.17	8-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 69 lb	FT = 20%

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

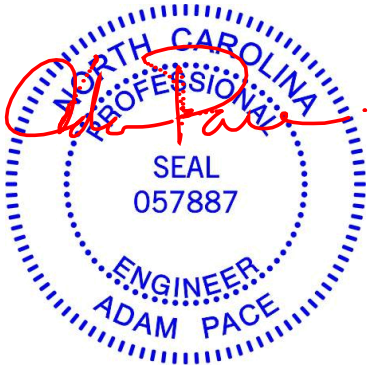
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-1-9 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-8-0, 5=0-8-0
Max Horiz 2=-64 (LC 21)
Max Uplift 2=-123 (LC 16), 5=-123 (LC 17)
Max Grav 2=700 (LC 2), 5=700 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-948/237, 3-4=-767/264, 4-5=-948/237, 5-6=0/28
BOT CHORD 2-8=-113/771, 7-8=-113/766, 5-7=-117/772
WEBS 3-8=-7/195, 3-7=-145/146, 4-7=-31/203

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-0-0, Exterior(2E) 7-0-0 to 9-0-0, Exterior(2R) 9-0-0 to 13-2-15, Interior (1) 13-2-15 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 2 and 123 lb uplift at joint 5.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 16,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J1	Jack-Open Girder	2	1	Job Reference (optional)	I72808490

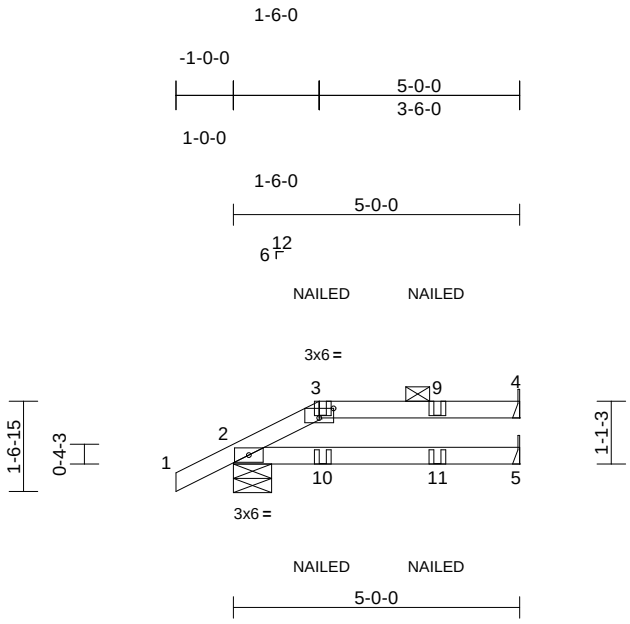

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Plate Offsets (X, Y): [3:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.04	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.10	5-8	>583	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.07	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

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

REACTIONS (size) 2=0-8-0, 4= Mechanical, 5= Mechanical
Max Horiz 2=44 (LC 12)
Max Uplift 2=-47 (LC 12), 4=-42 (LC 8), 5=-1 (LC 9)
Max Grav 2=264 (LC 2), 4=109 (LC 33), 5=113 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-74/19, 3-4=0/0
BOT CHORD 2-5=-14/55

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 4, 47 lb uplift at joint 2 and 1 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 10=0 (F), 11=0 (F)

April 16,2025

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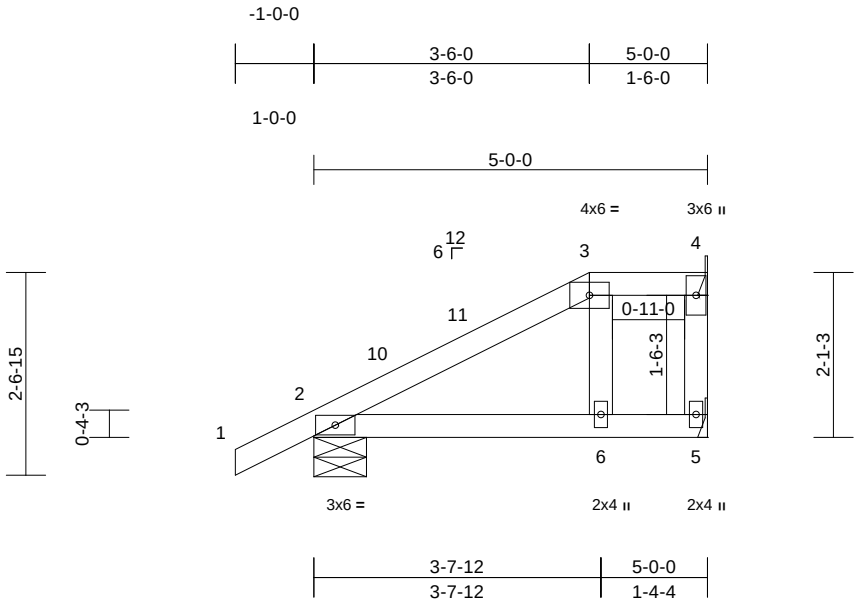
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J2	Jack-Open	2	1	Job Reference (optional)	I72808491



Scale = 1:29.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	0.05	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.08	6-9	>759	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.03	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 22 lb	FT = 20%

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

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

REACTIONS (size) 2=0-8-0, 4= Mechanical, 5= Mechanical
Max Horiz 2=81 (LC 16)
Max Uplift 2=-52 (LC 16), 4=-17 (LC 12), 5=-31 (LC 16)
Max Grav 2=266 (LC 38), 4=43 (LC 37), 5=147 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-70/30, 3-4=0/0
BOT CHORD 2-6=-33/69, 5-6=0/0
WEBS 4-5=0/0, 3-6=-140/134

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 3-6-0, Exterior(2E) 3-6-0 to 4-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 4, 52 lb uplift at joint 2 and 31 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 16,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J3	Jack-Open	4	1	Job Reference (optional)	I72808492

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:29 Page: 1
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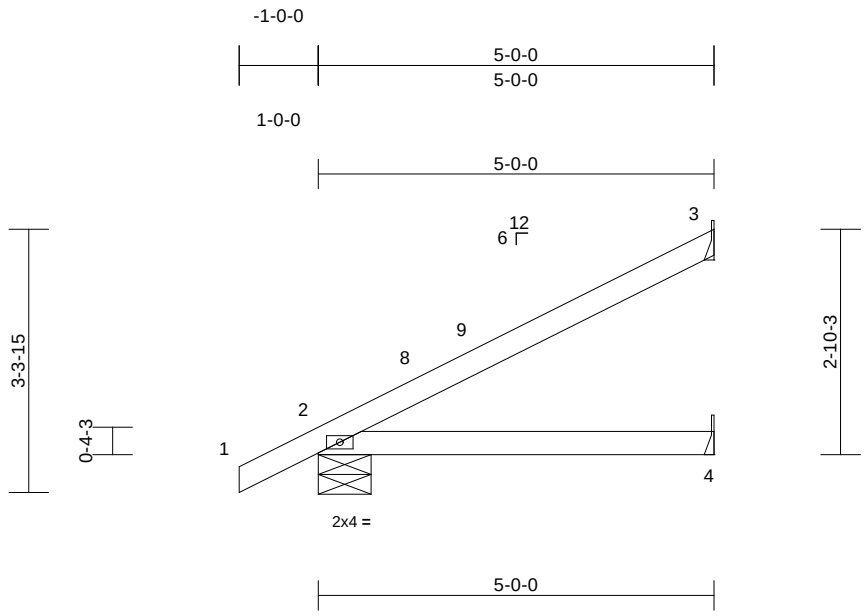


Scale = 1:29.1

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	0.35	Vert(LL)	0.04	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.06	4-7	>988	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

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

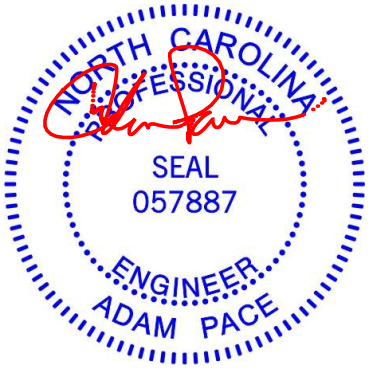
BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-8-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=106 (LC 16)
Max Uplift 2=-45 (LC 16), 3=-66 (LC 16), 4=-1 (LC 16)
Max Grav 2=264 (LC 2), 3=127 (LC 2), 4=91 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-84/47
BOT CHORD 2-4=-58/78

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 4-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3, 45 lb uplift at joint 2 and 1 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

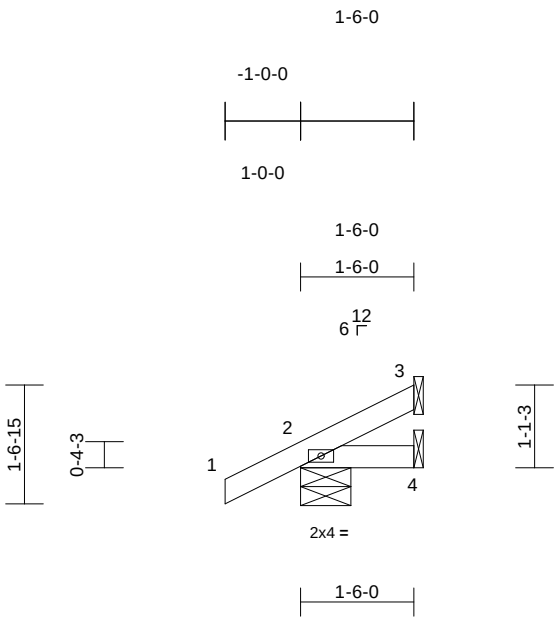


April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity
P01985-24565	J4	Jack-Open	4	1	I72808493 Job Reference (optional)

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:29 Page: 1
ID:ksFBKXmSRXyXNyRolcDonOzQTUg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.5

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	0.07	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 7 lb	FT = 20%

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

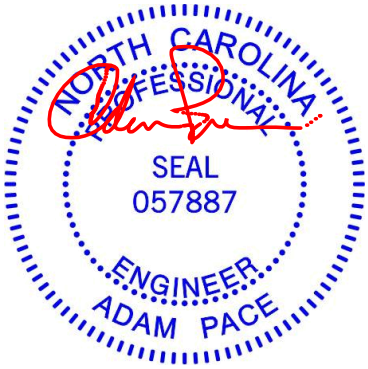
BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-8-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=43 (LC 16)
Max Uplift 2=-35 (LC 16), 3=-14 (LC 16)
Max Grav 2=140 (LC 2), 3=27 (LC 2), 4=23 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-38/15
BOT CHORD 2-4=-15/21

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 2 and 14 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

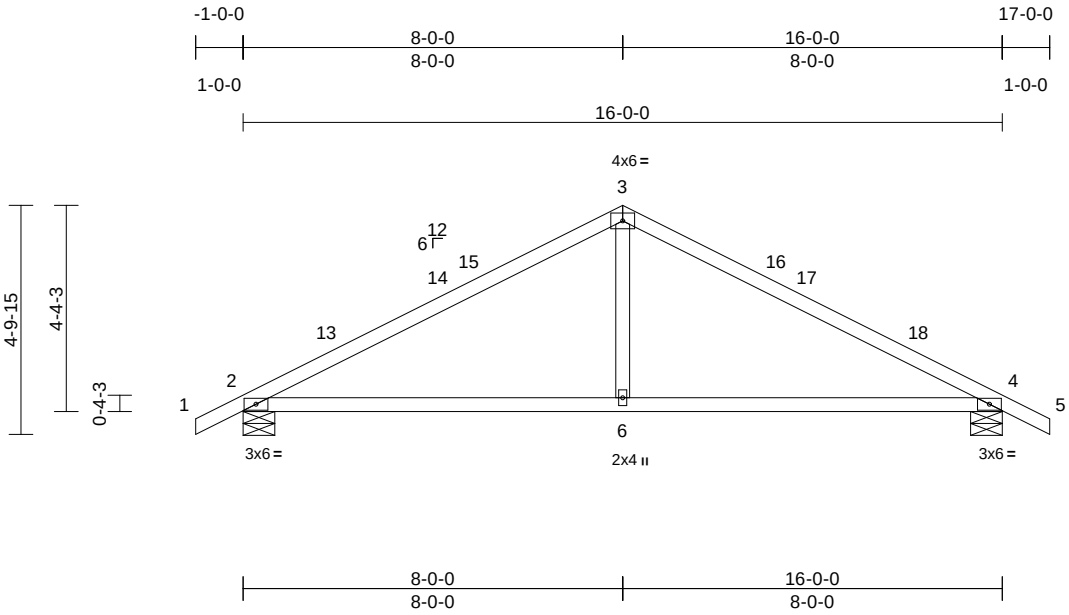


April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A1	Common	2	1	Job Reference (optional)	I72808494

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:18 Page: 1
ID:YUZbSyQu1xRV0eIQ6jjEeUzQTV6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:48.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.14	6-9	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.26	6-9	>744	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 60 lb	FT = 20%

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

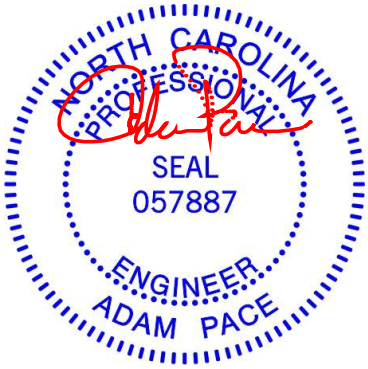
BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-8-0, 4=0-8-0
Max Horiz 2=71 (LC 16)
Max Uplift 2=-130 (LC 16), 4=-130 (LC 17)
Max Grav 2=700 (LC 2), 4=700 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-920/279, 3-4=-920/279, 4-5=0/27
BOT CHORD 2-6=-119/738, 4-6=-119/738
WEBS 3-6=-5/382

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 8-0-0, Exterior(2R) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 2 and 130 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

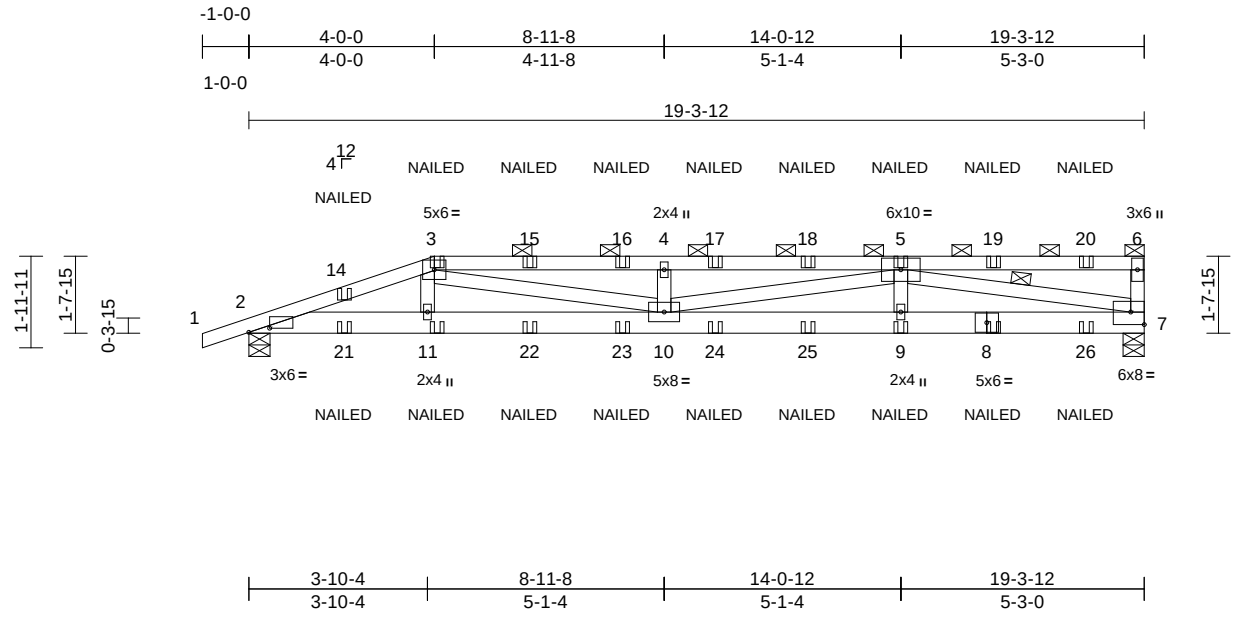


April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H4	Half Hip Girder	1	1	Job Reference (optional)	I72808495

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:24 Page: 1
ID:z8MRMEHRJlNQ1ZD3m7Ut0SzQTU?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:49.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.23	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.46	9-10	>502	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.06	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 103 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-6:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

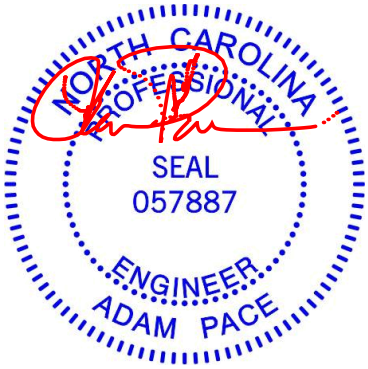
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-6 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 7-10-8 oc bracing.
WEBS 1 Row at midpt 5-7

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=59 (LC 52)
Max Uplift 2=-314 (LC 8), 7=-293 (LC 8)
Max Grav 2=1132 (LC 2), 7=1102 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-2951/762, 3-4=-4028/1077, 4-5=-4028/1077, 5-6=-192/67, 6-7=-199/80
BOT CHORD 2-11=-724/2782, 10-11=-722/2750, 9-10=-866/3245, 7-9=-866/3245
WEBS 3-11=-25/332, 3-10=-361/1359, 4-10=-402/171, 5-10=-212/807, 5-9=0/275, 5-7=-3149/831

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 293 lb uplift at joint 7 and 314 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-6=-45, 2-7=-20
Concentrated Loads (lb)
Vert: 8=-30 (B), 11=-30 (B), 3=-45 (B), 5=-40 (B), 9=-30 (B), 14=-22 (B), 15=-40 (B), 16=-40 (B), 17=-40 (B), 18=-40 (B), 19=-40 (B), 20=-40 (B), 21=-60 (B), 22=-30 (B), 23=-30 (B), 24=-30 (B), 25=-30 (B), 26=-32 (B)



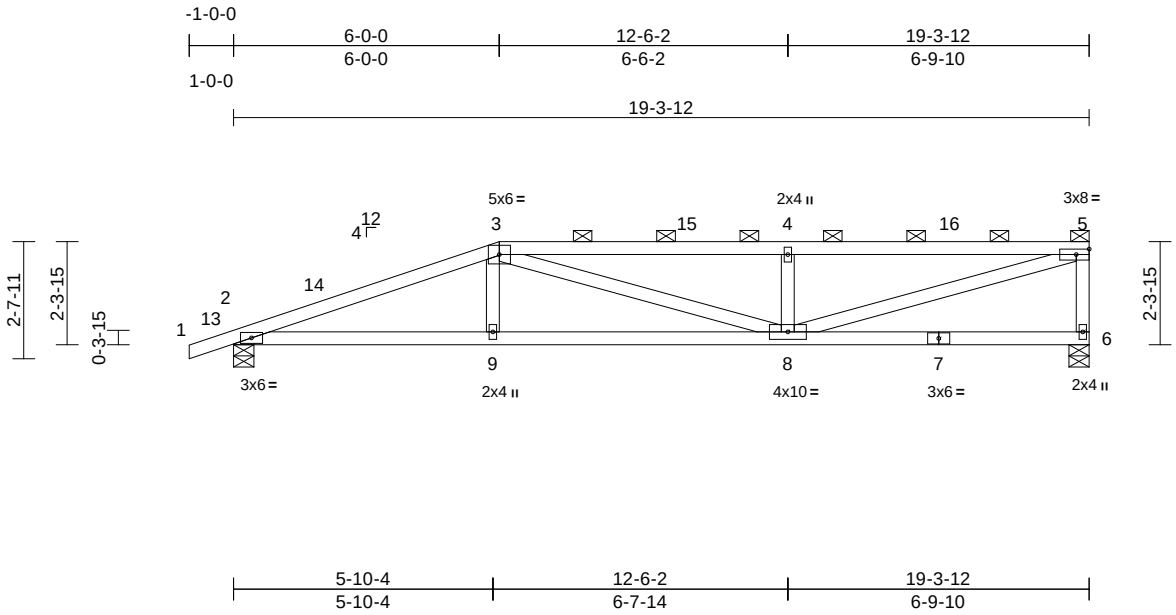
April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	I72808496
P01985-24565	H5	Half Hip	1	1	Job Reference (optional)	

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:25 Page: 1

ID:RWKXs8g34O4W2tOSqdb9?vzQTUn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:52

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.09	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.20	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 87 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-3,8-5:2x4 SP No.2

BRACING

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

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=88 (LC 15)
Max Uplift 2=-215 (LC 12), 6=-180 (LC 12)
Max Grav 2=828 (LC 2), 6=765 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1762/479, 3-4=-1773/496, 4-5=-1773/496, 5-6=-698/215
BOT CHORD 2-9=-498/1638, 8-9=-499/1627, 6-8=-46/79
WEBS 3-9=0/263, 3-8=-86/312, 4-8=-446/190, 5-8=-464/1774

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 6-0-0, Exterior(2R) 6-0-0 to 10-2-15, Interior (1) 10-2-15 to 19-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 180 lb uplift at joint 6 and 215 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H6	Half Hip	1	1	Job Reference (optional)	I72808497

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 E Dec 4 2024 Print: 8.830 E Dec 4 2024 MiTek Industries, Inc. Wed Apr 16 11:56:29 Page: 1
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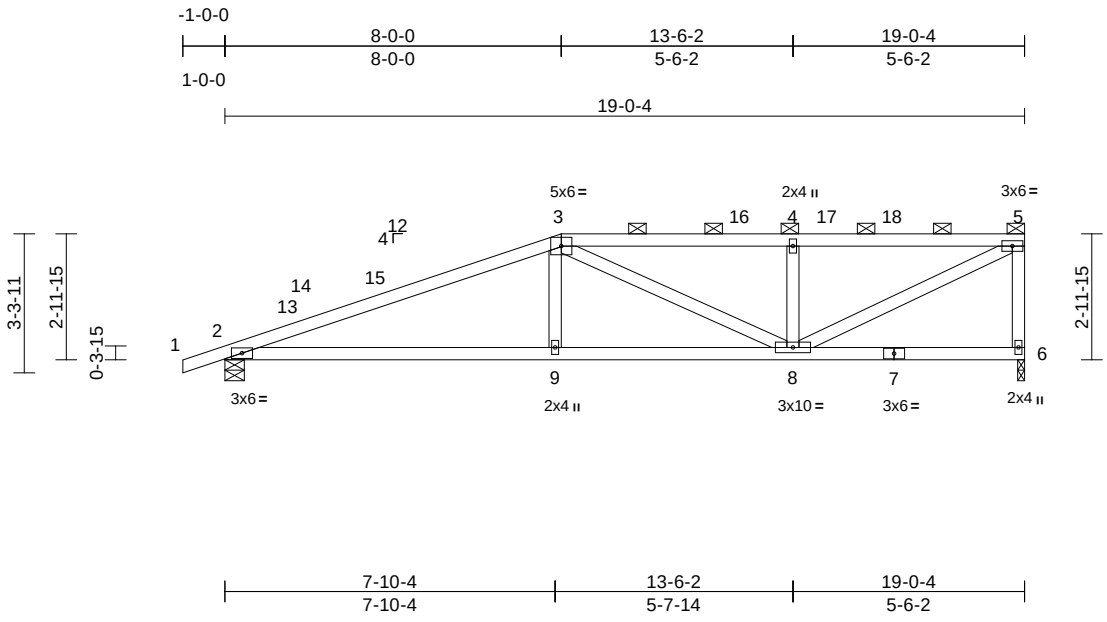


Scale = 1:48.5

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	0.80	Vert(LL)	-0.13	9-12	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.29	9-12	>774	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.03	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 87 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 3-5:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-3 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 8-0-4 oc bracing.

REACTIONS (lb/size) 2=591/0-5-8, 6=599/0-2-0
Max Horiz 2=114 (LC 15)
Max Uplift 2=-211 (LC 12), 6=-179 (LC 12)
Max Grav 2=817 (LC 2), 6=753 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-13=-1525/391, 13-14=-1516/392, 14-15=-1483/399, 3-15=-1475/415, 3-16=-1132/355, 4-16=-1132/355, 4-17=-1132/355, 17-18=-1132/355, 5-18=-1132/355, 5-6=-696/221
BOT CHORD 2-9=-467/1398, 8-9=-468/1388
WEBS 3-9=0/305, 3-8=-346/142, 4-8=-366/159, 5-8=-334/1228

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 18-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 179 lb uplift at joint 6 and 211 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.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

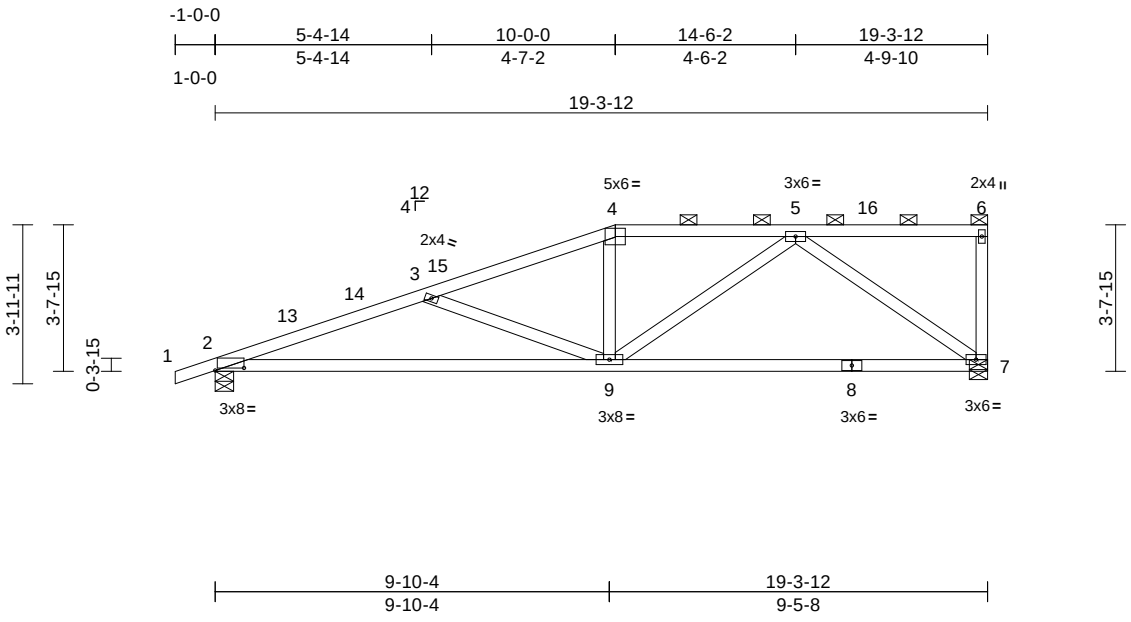
LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H7	Half Hip	1	1	Job Reference (optional)	I72808498

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:25 Page: 1
ID:r50gUAjyNJS5vL71Wm8scYzQTUk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:57.6

Plate Offsets (X, Y): [2:0-8-10,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.18	7-9	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.36	7-9	>636	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.04	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 92 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=141 (LC 15)
Max Uplift 2=-212 (LC 12), 7=-183 (LC 12)
Max Grav 2=828 (LC 2), 7=765 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1767/479, 3-4=-1281/349, 4-5=-1159/350, 5-6=-84/63, 6-7=-121/59
BOT CHORD 2-9=-620/1661, 7-9=-301/808
WEBS 3-9=-530/248, 4-9=0/245, 5-9=-109/461, 5-7=-962/322

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 10-0-0, Exterior(2R) 10-0-0 to 14-6-2, Interior (1) 14-6-2 to 19-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 212 lb uplift at joint 2 and 183 lb uplift at joint 7.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H8	Half Hip	1	1	Job Reference (optional)	I72808499

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:26 Page: 1
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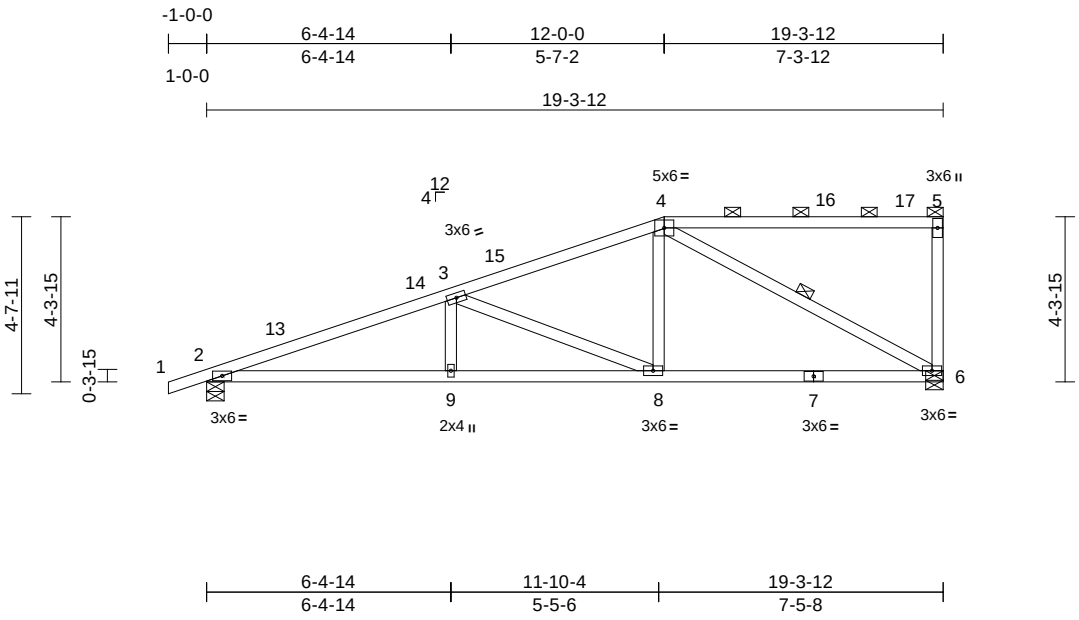

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	-0.09	6-8	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.19	6-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.04	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 94 lb	FT = 20%

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

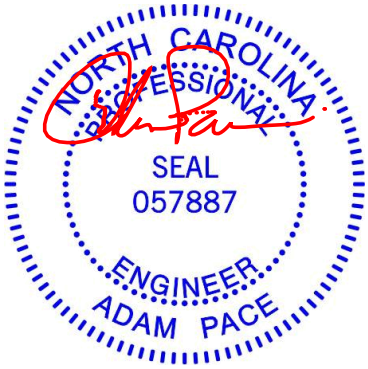
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 7-8-11 oc bracing.
WEBS 1 Row at midpt 4-6

REACTIONS (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=168 (LC 15)
Max Uplift 2=-210 (LC 12), 6=-185 (LC 12)
Max Grav 2=828 (LC 2), 6=765 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-1733/426, 3-4=-1019/302, 4-5=-98/89, 5-6=-216/99
BOT CHORD 2-9=-577/1613, 8-9=-577/1613, 6-8=-345/899
WEBS 3-9=0/227, 3-8=-766/248, 4-8=-45/483, 4-6=-983/327

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 12-0-0, Exterior(2R) 12-0-0 to 16-2-15, Interior (1) 16-2-15 to 19-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 210 lb uplift at joint 2 and 185 lb uplift at joint 6.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J5	Jack-Open	7	1	Job Reference (optional)	I72808500

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:29 Page: 1
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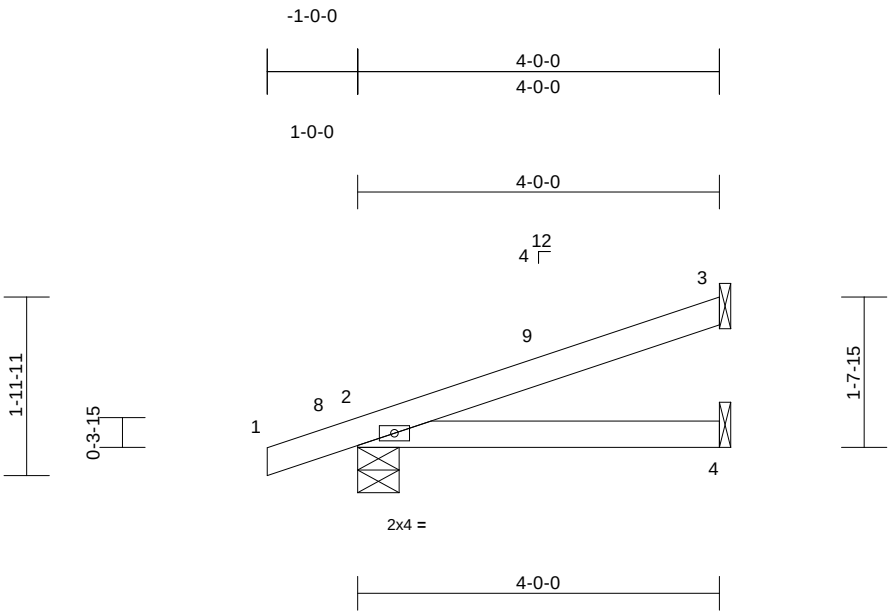

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.02	4-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 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 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=64 (LC 12)
Max Uplift 2=-71 (LC 12), 3=-42 (LC 16), 4=-1 (LC 16)
Max Grav 2=225 (LC 2), 3=98 (LC 2), 4=70 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-68/25
BOT CHORD 2-4=-61/77

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 3, 71 lb uplift at joint 2 and 1 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J6	Jack-Open	1	1	Job Reference (optional)	I72808501

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:29
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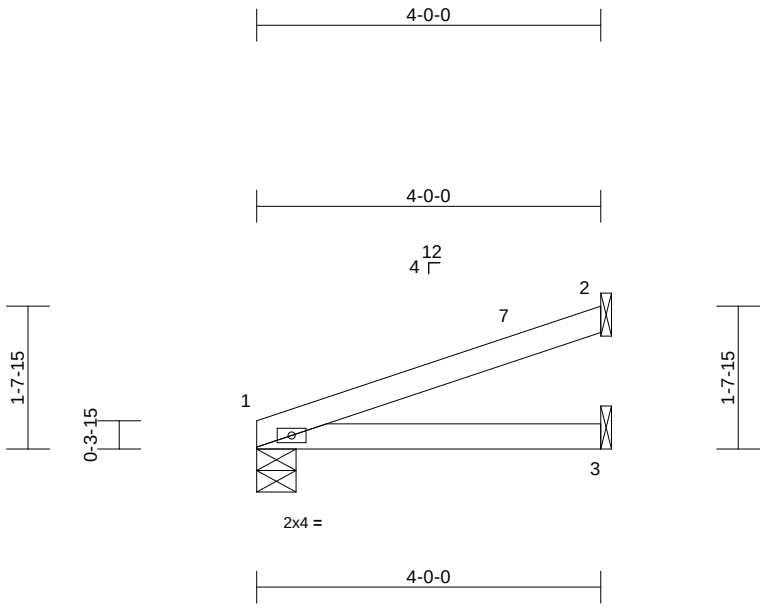

Scale = 1:26.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.02	3-6	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.03	3-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	1	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 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 2= Mechanical, 3= Mechanical
Max Horiz 1=48 (LC 12)
Max Uplift 1=-28 (LC 12), 2=-43 (LC 12), 3=-2 (LC 12)
Max Grav 1=158 (LC 2), 2=102 (LC 2), 3=72 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-95/36
BOT CHORD 1-3=-83/83

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 43 lb uplift at joint 2 and 2 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J7	Jack-Open Girder	1	1	Job Reference (optional)	I72808502

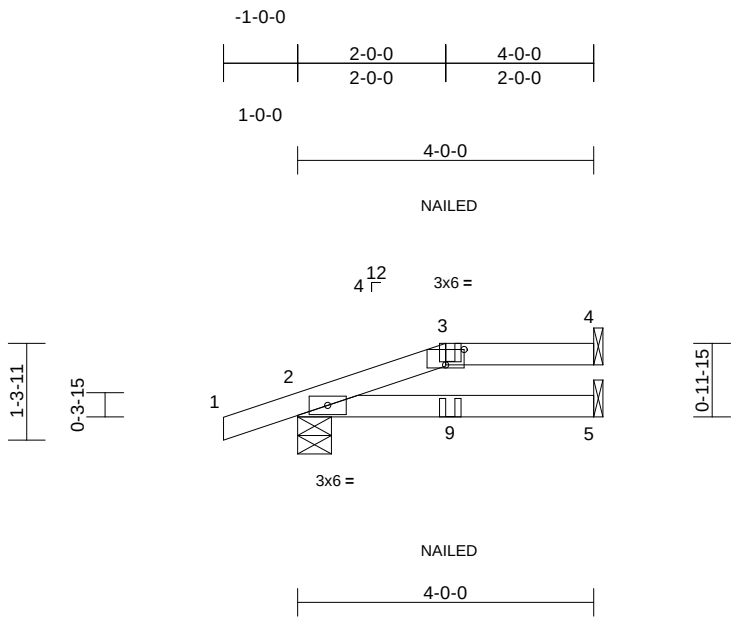

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Plate Offsets (X, Y): [3:0-3-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.03	5-8	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.06	5-8	>843	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.04	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 14 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 4-0-0 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=41 (LC 8)
Max Uplift 2=-80 (LC 8), 4=-24 (LC 8), 5=-13 (LC 8)
Max Grav 2=228 (LC 2), 4=58 (LC 2), 5=99 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-49/7, 3-4=0/0
BOT CHORD 2-5=-12/52

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 4, 80 lb uplift at joint 2 and 13 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 9=-4 (F)

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity
P01985-24565	J8	Jack-Open	1	1	I72808503
					Job Reference (optional)

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:30 Page: 1
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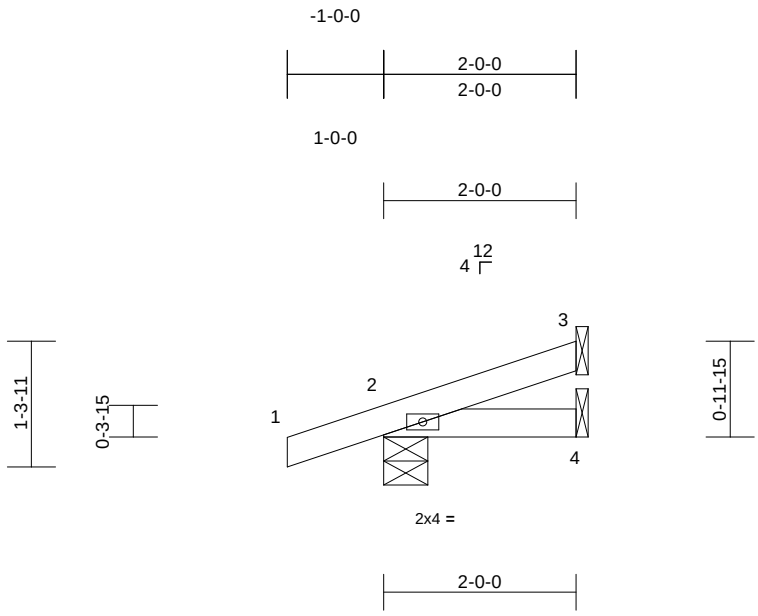

Scale = 1:23.9

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	0.07	Vert(LL)	0.00	7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	4-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 8 lb	FT = 20%

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

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

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=41 (LC 12)
Max Uplift 2=-61 (LC 12), 3=-17 (LC 16), 4=-1 (LC 16)
Max Grav 2=155 (LC 2), 3=41 (LC 2), 4=32 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-31/12
BOT CHORD 2-4=-2/33

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2, 1 lb uplift at joint 4 and 17 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A2	Common Supported Gable	1	1	Job Reference (optional)	I72808504

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:20 Page: 1
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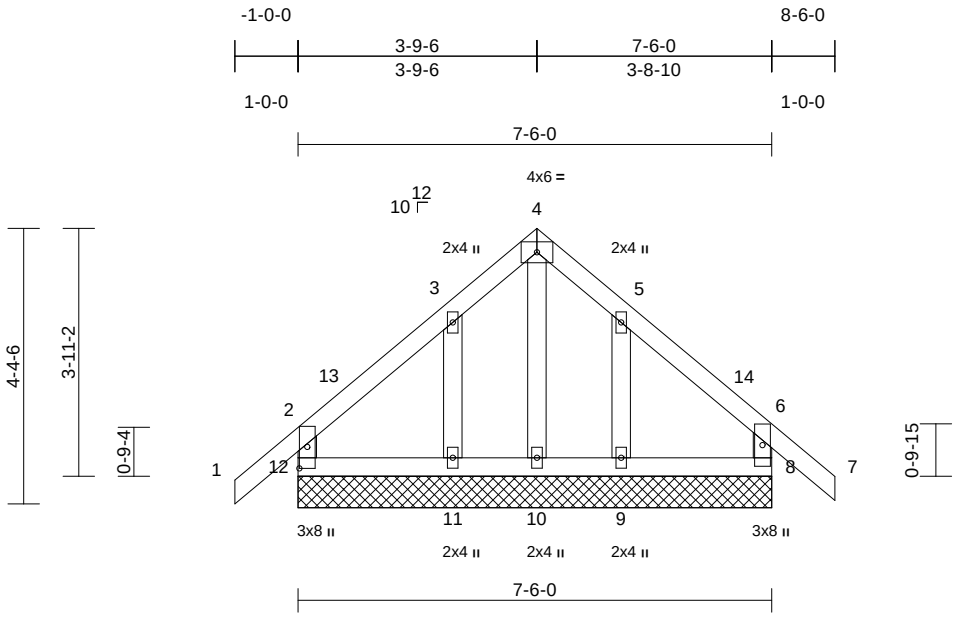

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Plate Offsets (X, Y): [12:0-4-1,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 43 lb	FT = 20%

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

BRACING
TOP CHORD 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) 8=7-6-0, 9=7-6-0, 10=7-6-0, 11=7-6-0, 12=7-6-0
Max Horiz 12=113 (LC 13)
Max Uplift 8=-48 (LC 15), 9=-96 (LC 15), 11=-101 (LC 14), 12=-52 (LC 15)
Max Grav 8=165 (LC 33), 9=182 (LC 27), 10=117 (LC 15), 11=192 (LC 26), 12=168 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-12=-146/167, 1-2=0/44, 2-3=-78/89, 3-4=-123/179, 4-5=-122/179, 5-6=-68/85, 6-7=0/44, 6-8=-144/163
BOT CHORD 11-12=-45/69, 10-11=-45/69, 9-10=-45/69, 8-9=-45/69
WEBS 4-10=-177/92, 3-11=-149/162, 5-9=-145/157

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 3-9-6, Exterior(2R) 3-9-6 to 6-9-6, Interior (1) 6-9-6 to 8-6-0 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=10.0 psf; Pf=7.7 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 7.7 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 requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 52 lb uplift at joint 12, 48 lb uplift at joint 8, 101 lb uplift at joint 11 and 96 lb uplift at joint 9.
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 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A3	Common	1	1	Job Reference (optional)	I72808505

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:21 Page: 1
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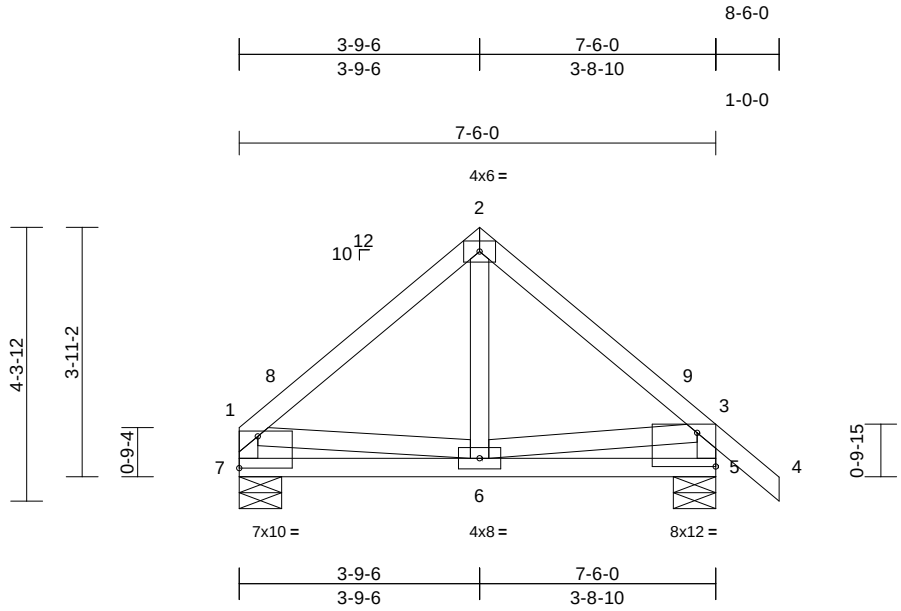

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Plate Offsets (X, Y): [5:Edge,0-6-6], [7:Edge,0-6-6]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.01	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 44 lb	FT = 20%

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

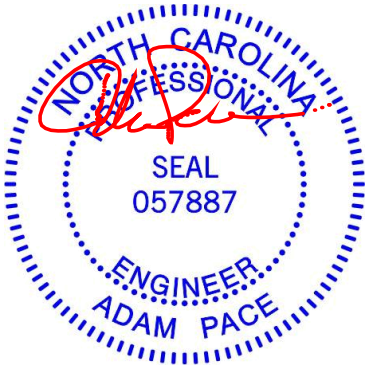
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-8-0, 7=0-8-0
Max Horiz 7=-105 (LC 12)
Max Uplift 5=-63 (LC 15), 7=-40 (LC 14)
Max Grav 5=363 (LC 2), 7=283 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-248/108, 2-3=-267/119, 3-4=0/44, 1-7=-254/132, 3-5=-335/203
BOT CHORD 6-7=-96/101, 5-6=-11/12
WEBS 2-6=0/138, 1-6=-10/161, 3-6=-1/174

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 3-9-6, Exterior(2R) 3-9-6 to 6-9-6, Interior (1) 6-9-6 to 8-6-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 7 and 63 lb uplift at joint 5.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A4	Common	4	1	Job Reference (optional)	I72808506

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:22 Page: 1
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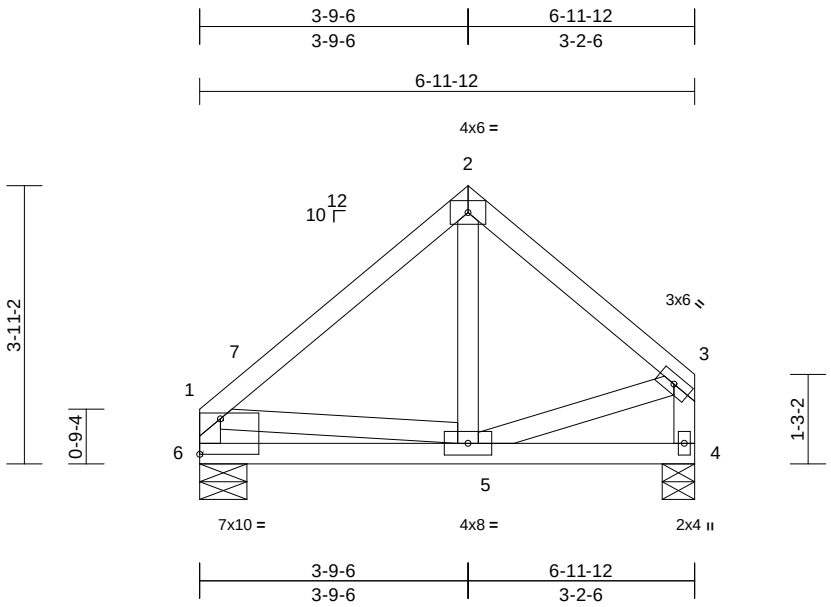

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Plate Offsets (X, Y): [6:Edge,0-6-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 40 lb	FT = 20%

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

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

REACTIONS (size) 4=0-5-8, 6=0-8-0
Max Horiz 6=96 (LC 11)
Max Uplift 4=-40 (LC 14), 6=-37 (LC 14)
Max Grav 4=267 (LC 2), 6=267 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-224/92, 2-3=-217/110, 1-6=-236/123, 3-4=-249/134
BOT CHORD 5-6=-94/85, 4-5=-18/20
WEBS 2-5=0/113, 1-5=-13/145, 3-5=-25/151

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 3-9-6, Exterior(2E) 3-9-6 to 6-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 6 and 40 lb uplift at joint 4.
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 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	I72808507
P01985-24565	A1E	Roof Special Supported Gable	1	1	Job Reference (optional)	

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 E Dec 4 2024 Print: 8.830 E Dec 4 2024 MiTek Industries, Inc. Wed Apr 16 11:59:38 Page: 1
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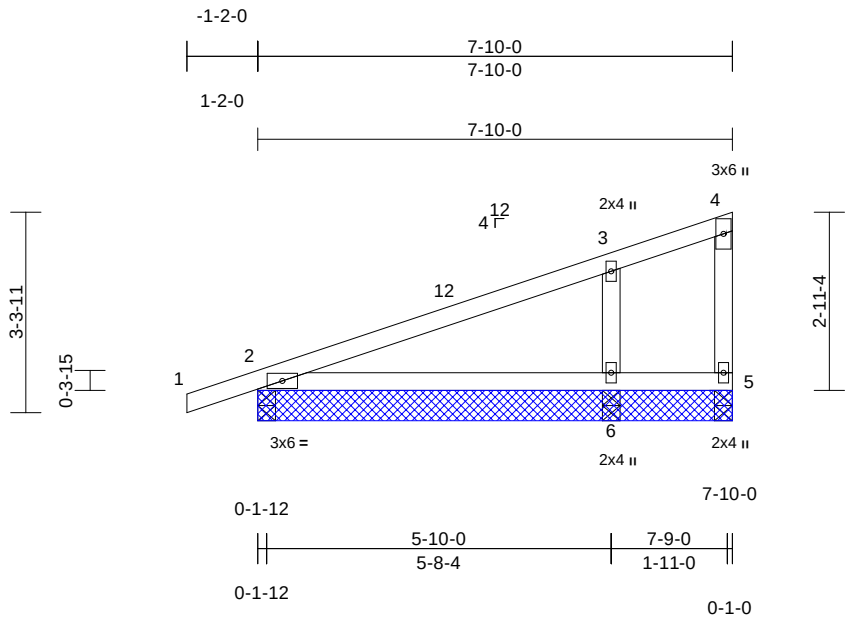

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.02	6-11	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.04	6-11	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
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 (lb/size) 2=198/0-3-8, 5=-23/0-3-8, 6=292/0-3-8
Max Horiz 6=111 (LC 15)
Max Uplift 2=-89 (LC 12), 5=-32 (LC 33), 6=-122 (LC 16)
Max Grav 2=299 (LC 2), 5=18 (LC 16), 6=417 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
BOT CHORD 2-6=-163/294
WEBS 3-6=-289/361

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-2-0 to 1-10-0, Exterior(2N) 1-10-0 to 7-8-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5, 122 lb uplift at joint 6 and 89 lb uplift at joint 2.
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 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A5	Monopitch	4	1	Job Reference (optional)	I72808508

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:22 Page: 1
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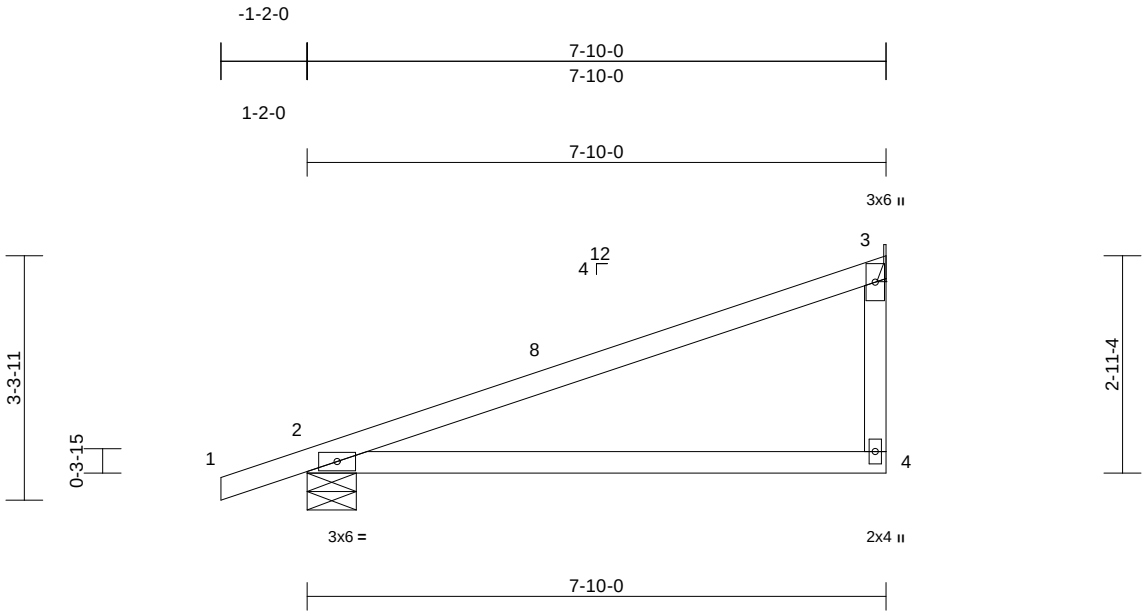

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	0.19	4-7	>483	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.36	4-7	>258	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 29 lb	FT = 20%

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

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

REACTIONS (size) 2=0-8-0, 3= Mechanical
Max Horiz 2=111 (LC 15)
Max Uplift 2=-111 (LC 12), 3=-78 (LC 16)
Max Grav 2=383 (LC 2), 3=302 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-140/82, 3-4=-16/141
BOT CHORD 2-4=-113/168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 7-8-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 3 and 111 lb uplift at joint 2.
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) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A2E	Common Supported Gable	1	1	Job Reference (optional)	I72808509

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:20 Page: 1
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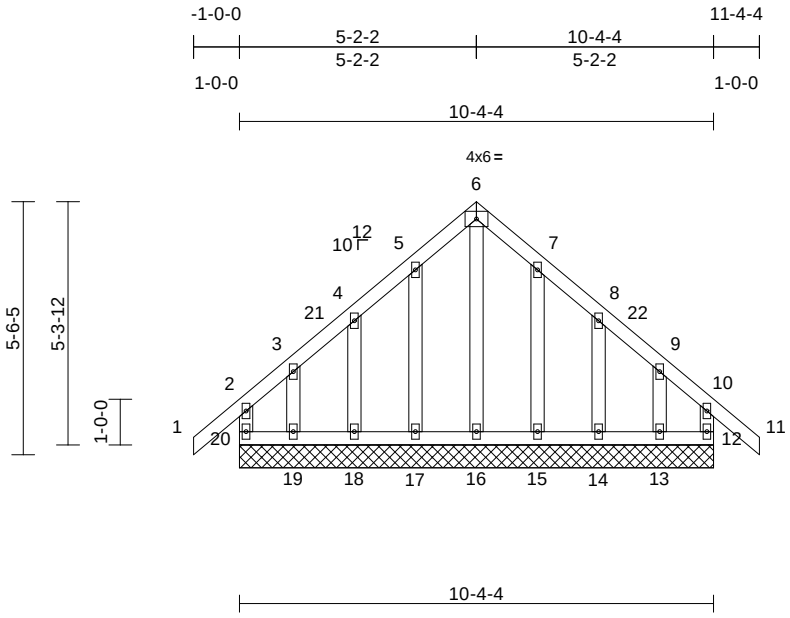

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 71 lb	FT = 20%

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

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

REACTIONS (size) 12=10-4-4, 13=10-4-4, 14=10-4-4, 15=10-4-4, 16=10-4-4, 17=10-4-4, 18=10-4-4, 19=10-4-4, 20=10-4-4
Max Horiz 20=-148 (LC 12)
Max Uplift 12=-64 (LC 11), 13=-92 (LC 15), 14=-58 (LC 15), 15=-51 (LC 15), 17=-51 (LC 14), 18=-57 (LC 14), 19=-97 (LC 14), 20=-83 (LC 10)
Max Grav 12=144 (LC 26), 13=120 (LC 13), 14=114 (LC 27), 15=121 (LC 27), 16=150 (LC 29), 17=123 (LC 26), 18=113 (LC 32), 19=133 (LC 12), 20=160 (LC 27)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-20=-127/125, 1-2=0/44, 2-3=-88/90, 3-4=-56/84, 4-5=-70/167, 5-6=-102/228, 6-7=-102/228, 7-8=-70/166, 8-9=-41/85, 9-10=-69/73, 10-11=0/44, 10-12=-120/125
BOT CHORD 19-20=-73/90, 18-19=-73/90, 17-18=-73/90, 16-17=-73/90, 15-16=-73/90, 14-15=-73/90, 13-14=-73/90, 12-13=-73/90
WEBS 6-16=-218/55, 5-17=-95/80, 4-18=-92/120, 3-19=-96/87, 7-15=-94/80, 8-14=-91/120, 9-13=-95/86

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 5-2-2, Corner(3R) 5-2-2 to 8-2-2, Exterior(2N) 8-2-2 to 11-4-4 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=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 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 83 lb uplift at joint 20, 64 lb uplift at joint 12, 51 lb uplift at joint 17, 57 lb uplift at joint 18, 97 lb uplift at joint 19, 51 lb uplift at joint 15, 58 lb uplift at joint 14 and 92 lb uplift at joint 13.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A6	Common Structural Gable	1	1	Job Reference (optional)	I72808510

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:22 Page: 1
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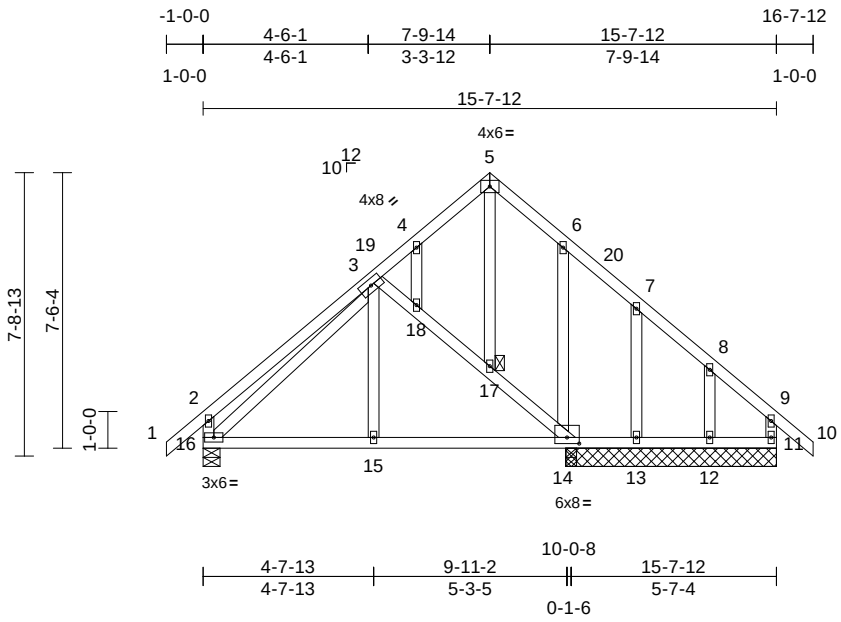

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Plate Offsets (X, Y): [14:0-4-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	-0.01	14-15	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.03	14-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 111 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 3-14:2x4 SP No.2
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.
JOINTS 1 Brace at Jt(s): 17

REACTIONS (size) 11=5-9-0, 12=5-9-0, 13=5-9-0, 14=5-9-0, 16=0-5-8
Max Horiz 16=-200 (LC 12)
Max Uplift 11=-10 (LC 11), 12=-194 (LC 15), 13=-88 (LC 15), 14=-112 (LC 14), 16=-49 (LC 14)
Max Grav 11=243 (LC 29), 12=169 (LC 27), 13=148 (LC 27), 14=430 (LC 2), 16=479 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-235/176, 3-4=-127/41, 4-5=-95/67, 5-6=-107/64, 6-7=-96/21, 7-8=-128/50, 8-9=-224/105, 9-10=0/44, 2-16=-301/178, 9-11=-193/41
BOT CHORD 15-16=-80/330, 14-15=-79/333, 13-14=-86/193, 12-13=-86/193, 11-12=-86/193
WEBS 5-17=-40/7, 3-15=0/210, 4-18=-41/35, 6-14=-143/77, 7-13=-134/105, 8-12=-138/149, 3-18=-279/144, 17-18=-303/162, 14-17=-329/162, 3-16=-250/8

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-9-14, Exterior(2R) 7-9-14 to 10-9-14, Interior (1) 10-9-14 to 16-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 11, 88 lb uplift at joint 13, 194 lb uplift at joint 12, 112 lb uplift at joint 14 and 49 lb uplift at joint 16.
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 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A7	Common	1	1	Job Reference (optional)	I72808511

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:22 Page: 1
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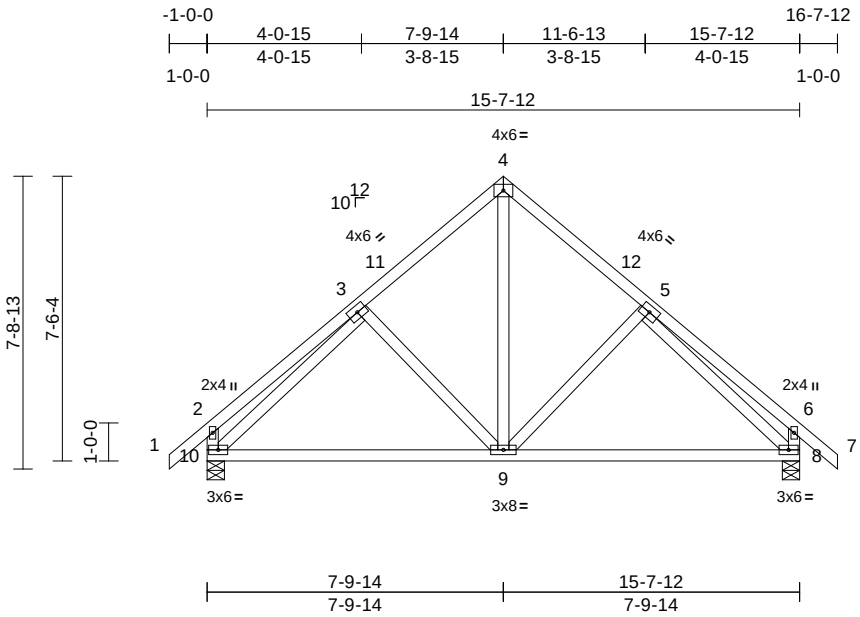

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.07	8-9	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.14	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 101 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 9-4:2x4 SP No.2

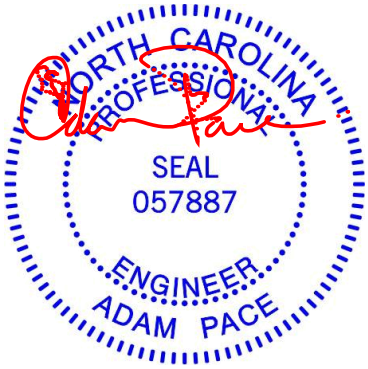
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-5-8, 10=0-5-8
Max Horiz 10=-200 (LC 12)
Max Uplift 8=-110 (LC 15), 10=-110 (LC 14)
Max Grav 8=683 (LC 2), 10=683 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-238/122, 3-4=-529/185, 4-5=-529/185, 5-6=-238/122, 6-7=0/44, 2-10=-289/133, 6-8=-289/133
BOT CHORD 9-10=-98/498, 8-9=-34/437
WEBS 4-9=-133/393, 3-9=-170/165, 5-9=-170/165, 3-10=-467/65, 5-8=-467/65

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-9-14, Exterior(2R) 7-9-14 to 10-9-14, Interior (1) 10-9-14 to 16-7-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 10 and 110 lb uplift at joint 8.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A1G	Common Girder	1	**2**	Job Reference (optional)	I72808512

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:20 Page: 1
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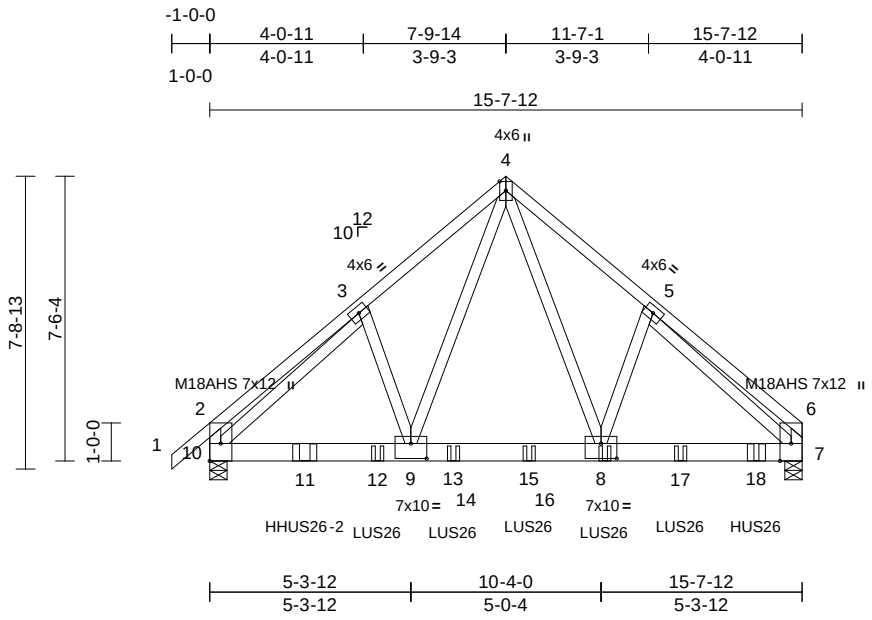

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Plate Offsets (X, Y): [2:Edge,0-3-8], [8:0-5-0,0-4-12], [9:0-5-0,0-4-12]

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	0.78	Vert(LL)	0.05	9-10	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.10	8-9	>999	180	M18AHS	186/179
TCDL	10.0	Rep Stress Incr	NO	WB	0.51	Horz(CT)	0.02	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 236 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP DSS
WEBS 2x4 SP No.2 *Except* 8-5,9-3,10-3,7-5:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-5-8, 10=0-5-8
Max Horiz 10=189 (LC 9)
Max Uplift 7=-959 (LC 11), 10=-1158 (LC 10)
Max Grav 7=4914 (LC 2), 10=4367 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-1479/529, 3-4=-4736/1232, 4-5=-4795/1079, 5-6=-1545/364, 2-10=-1119/401, 6-7=-1075/266
BOT CHORD 9-10=-877/3513, 8-9=-546/2607, 7-8=-690/3566
WEBS 4-8=-606/3133, 5-8=-141/356, 4-9=-964/3006, 3-9=-147/380, 3-10=-3521/695, 5-7=-3503/697

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
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 7.7 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 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, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1158 lb uplift at joint 10 and 959 lb uplift at joint 7.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 2-6-2 from the left end to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 4-5-4 from the left end to 12-5-4 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 14-5-4 from the left end to connect truss(es) to back face of bottom chord.
16) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-4=-35, 4-6=-35, 7-10=-20
Concentrated Loads (lb)
Vert: 8=-790 (B), 11=-1128 (B), 12=-1122 (B), 13=-1101 (B), 15=-790 (B), 17=-790 (B), 18=-790 (B)

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A3E	Common Supported Gable	1	1	Job Reference (optional)	I72808513

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:21 Page: 1
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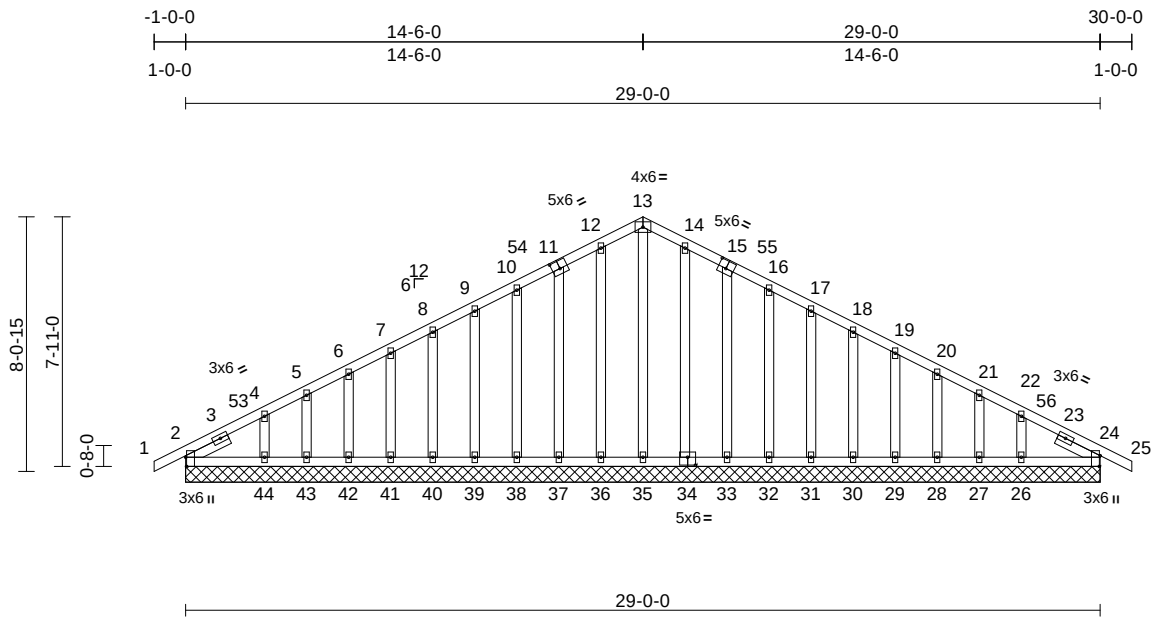

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Plate Offsets (X, Y): [2:0-3-8,Edge], [11:0-3-0,0-3-0], [15:0-3-0,0-3-0], [24:0-4-1,Edge], [34:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	24	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 218 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SP No.3 *Except* 35-13,36-12,37-11,34-14,33-15:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

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

REACTIONS (size) 2=29-0-0, 24=29-0-0, 26=29-0-0, 27=29-0-0, 28=29-0-0, 29=29-0-0, 30=29-0-0, 31=29-0-0, 32=29-0-0, 33=29-0-0, 34=29-0-0, 35=29-0-0, 36=29-0-0, 37=29-0-0, 38=29-0-0, 39=29-0-0, 40=29-0-0, 41=29-0-0, 42=29-0-0, 43=29-0-0, 44=29-0-0

Max Horiz 2=123 (LC 16)

Max Uplift 2=-27 (LC 17), 24=-3 (LC 13), 26=-89 (LC 17), 27=-17 (LC 17), 28=-41 (LC 17), 29=-36 (LC 17), 30=-37 (LC 17), 31=-37 (LC 17), 32=-35 (LC 17), 33=-44 (LC 17), 34=-22 (LC 17), 36=-27 (LC 16), 37=-42 (LC 16), 38=-36 (LC 16), 39=-37 (LC 16), 40=-37 (LC 16), 41=-36 (LC 16), 42=-42 (LC 16), 43=-12 (LC 16), 44=-101 (LC 16)

Max Grav 2=170 (LC 2), 24=169 (LC 2), 26=174 (LC 37), 27=81 (LC 2), 28=112 (LC 37), 29=105 (LC 2), 30=107 (LC 37), 31=107 (LC 37), 32=105 (LC 2), 33=107 (LC 37), 34=110 (LC 37), 35=133 (LC 33), 36=110 (LC 36), 37=108 (LC 36), 38=105 (LC 2), 39=107 (LC 36), 40=107 (LC 36), 41=105 (LC 2), 42=112 (LC 36), 43=82 (LC 2), 44=174 (LC 36)

FORCES (lb) - Maximum Compression/Maximum Tension

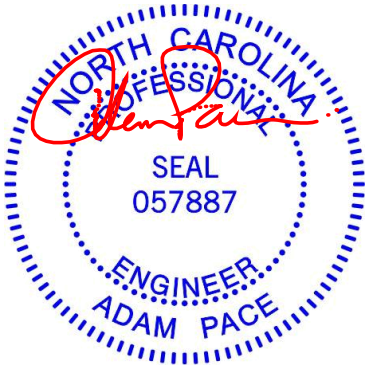
TOP CHORD 1-2=0/27, 2-4=-135/65, 4-5=-93/64, 5-6=-78/79, 6-7=-63/95, 7-8=-54/110, 8-9=-52/126, 9-10=-65/151, 10-12=-90/214, 12-13=-99/236, 13-14=-99/236, 14-16=-89/213, 16-17=-64/151, 17-18=-52/121, 18-19=-41/91, 19-20=-37/61, 20-21=-40/29, 21-22=-56/16, 22-24=-83/29, 24-25=0/27

BOT CHORD 2-44=-34/118, 43-44=-34/118, 42-43=-34/118, 41-42=-34/118, 40-41=-34/118, 39-40=-34/118, 38-39=-34/118, 37-38=-34/118, 36-37=-34/119, 35-36=-34/119, 33-35=-34/119, 32-33=-34/119, 31-32=-34/119, 30-31=-34/119, 29-30=-34/119, 28-29=-34/119, 27-28=-34/119, 26-27=-34/119, 24-26=-34/119

WEBS 13-35=-148/40, 12-36=-83/35, 11-37=-81/60, 10-38=-78/50, 9-39=-80/52, 8-40=-80/52, 7-41=-80/51, 6-42=-82/55, 5-43=-67/40, 4-44=-119/106, 14-34=-84/33, 15-33=-81/60, 16-32=-78/50, 17-31=-80/52, 18-30=-80/52, 19-29=-80/51, 20-28=-82/55, 21-27=-67/39, 22-26=-119/104

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-0-0 to 2-0-0, Exterior(2N) 2-0-0 to 14-6-0, Corner(3R) 14-6-0 to 17-6-0, Exterior(2N) 17-6-0 to 30-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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.



April 16,2025

Continued on page 2

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Edenton, NC 27932

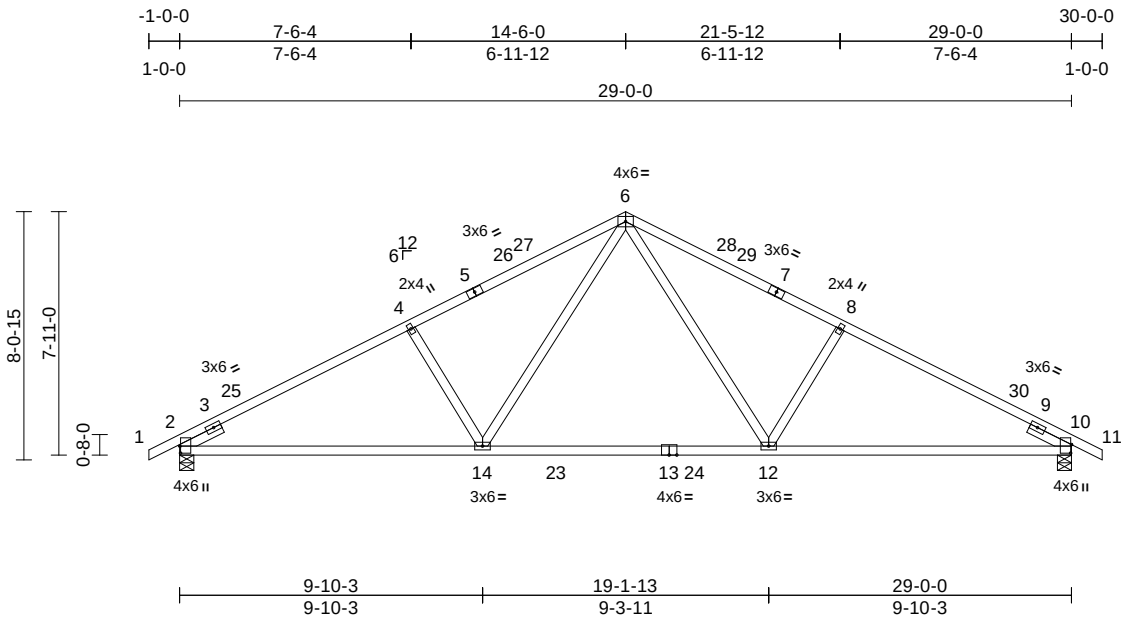
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 3 lb uplift at joint 24, 27 lb uplift at joint 36, 42 lb uplift at joint 37, 36 lb uplift at joint 38, 37 lb uplift at joint 39, 37 lb uplift at joint 40, 36 lb uplift at joint 41, 42 lb uplift at joint 42, 12 lb uplift at joint 43, 101 lb uplift at joint 44, 22 lb uplift at joint 34, 44 lb uplift at joint 33, 35 lb uplift at joint 32, 37 lb uplift at joint 31, 37 lb uplift at joint 30, 36 lb uplift at joint 29, 41 lb uplift at joint 28, 17 lb uplift at joint 27, 89 lb uplift at joint 26, 27 lb uplift at joint 2 and 3 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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A8	Common	9	1	Job Reference (optional)	I72808514

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:22 Page: 1

ID:CnI8z3ZQCdxoSVCkpEw270zQTUw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.9

Plate Offsets (X, Y): [2:0-2-12,0-0-5], [10:0-3-5,0-0-5]

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	0.69	Vert(LL)	-0.28	12-14	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.43	12-14	>811	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 139 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3 *Except* 14-6,12-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-1-11 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=-123 (LC 21)
Max Uplift 2=-217 (LC 16), 10=-217 (LC 17)
Max Grav 2=1316 (LC 3), 10=1316 (LC 3)

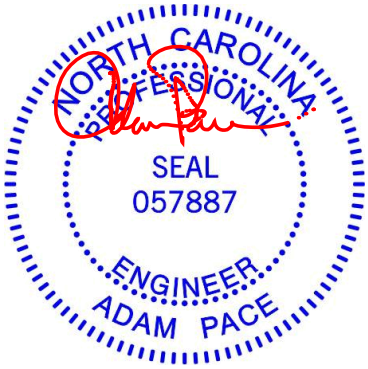
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/27, 2-4=-2048/344, 4-6=-1885/371, 6-8=-1885/371, 8-10=-2048/344, 10-11=0/27
BOT CHORD	2-14=-319/1772, 12-14=-108/1219, 10-12=-217/1772
WEBS	4-14=-404/234, 6-14=-176/771, 6-12=-176/771, 8-12=-404/234

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 30-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 217 lb uplift at joint 2 and 217 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 16,2025

ENGINEERING BY TRENCO
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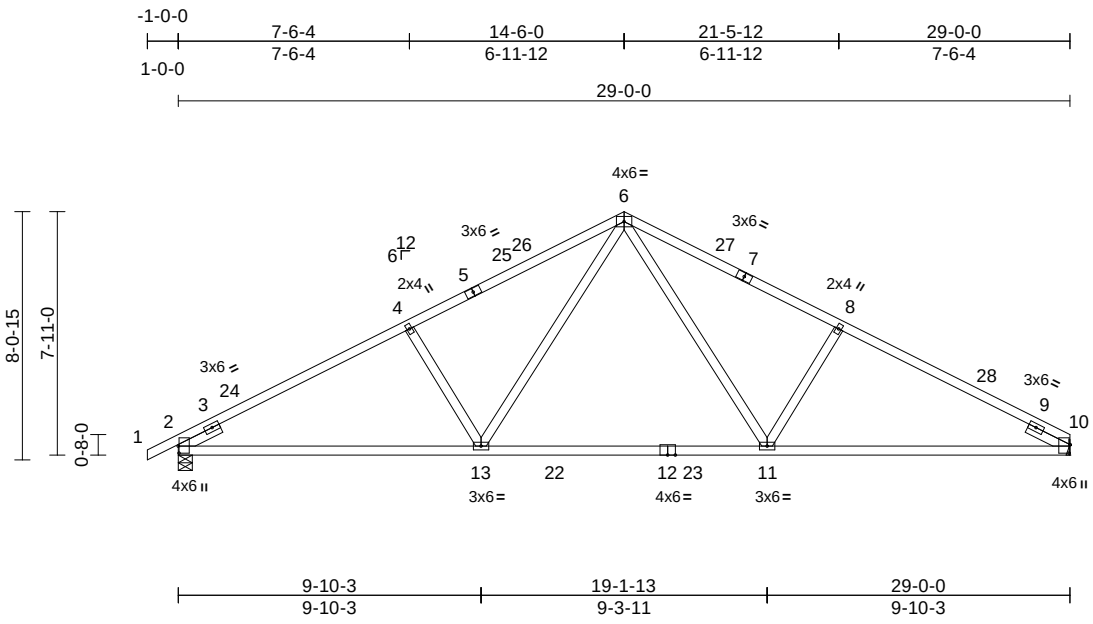
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	A9	Common	1	1	Job Reference (optional)	I72808515

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:23 Page: 1

ID:g_rWBPa2zw3f4enwMyRHgDzQTUv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.9

Plate Offsets (X, Y): [2:0-2-12,0-0-5], [10:0-3-5,0-0-5]

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	0.69	Vert(LL)	-0.28	11-13	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.43	11-13	>819	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.06	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 137 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

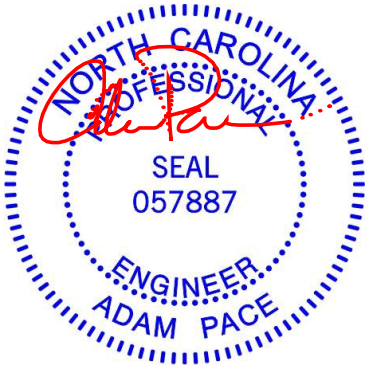
REACTIONS (size) 2=0-5-8, 10= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-217 (LC 16), 10=-198 (LC 17)
Max Grav 2=1317 (LC 3), 10=1265 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-2049/344, 4-6=-1886/371, 6-8=-1889/378, 8-10=-2053/351
BOT CHORD 2-13=-327/1773, 11-13=-116/1221, 10-11=-233/1777
WEBS 4-13=-404/234, 6-11=-178/775, 6-13=-176/770, 8-11=-407/235

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 29-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 217 lb uplift at joint 2 and 198 lb uplift at joint 10.
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

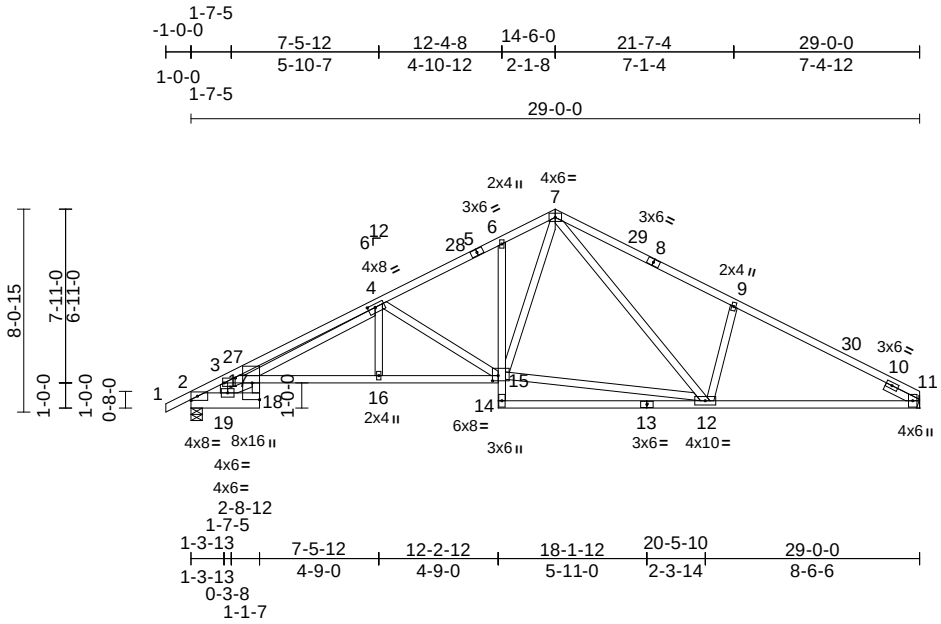


April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	T1	Roof Special	3	1	Job Reference (optional)	I72808516

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:31 Page: 1
ID:8RxJyZoLjSL6EP9NQkmVO0zQTUd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:91.7

Plate Offsets (X, Y): [3:0-5-5,0-2-5], [4:0-3-9,0-1-8], [11:0-3-9,0-1-5], [15:0-2-12,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.19	16-17	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.40	12-14	>873	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.17	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 177 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-18:2x8 SP DSS, 18-17:2x4 SP No.3, 3-15:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 12-15,15-7,12-7:2x4 SP No.2
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=131 (LC 16)
Max Uplift 2=-218 (LC 16), 11=-198 (LC 17)
Max Grav 2=1221 (LC 2), 11=1159 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-1561/256, 3-4=-3936/787, 4-6=-1739/347, 6-7=-1648/394, 7-9=-1826/421, 9-11=-1916/349
BOT CHORD 2-19=-345/1363, 18-19=-85/298, 17-18=-67/276, 3-17=-394/2162, 16-17=-404/2176, 15-16=-404/2176, 14-15=0/149, 6-15=-164/100, 12-14=-6/156, 11-12=-233/1643
WEBS 4-15=-819/249, 12-15=-118/1076, 7-15=-220/821, 7-12=-234/588, 9-12=-404/240, 4-16=0/302, 4-17=-380/1534, 3-19=-1268/350, 17-19=-296/1219

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 29-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 218 lb uplift at joint 2 and 198 lb uplift at joint 11.
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.

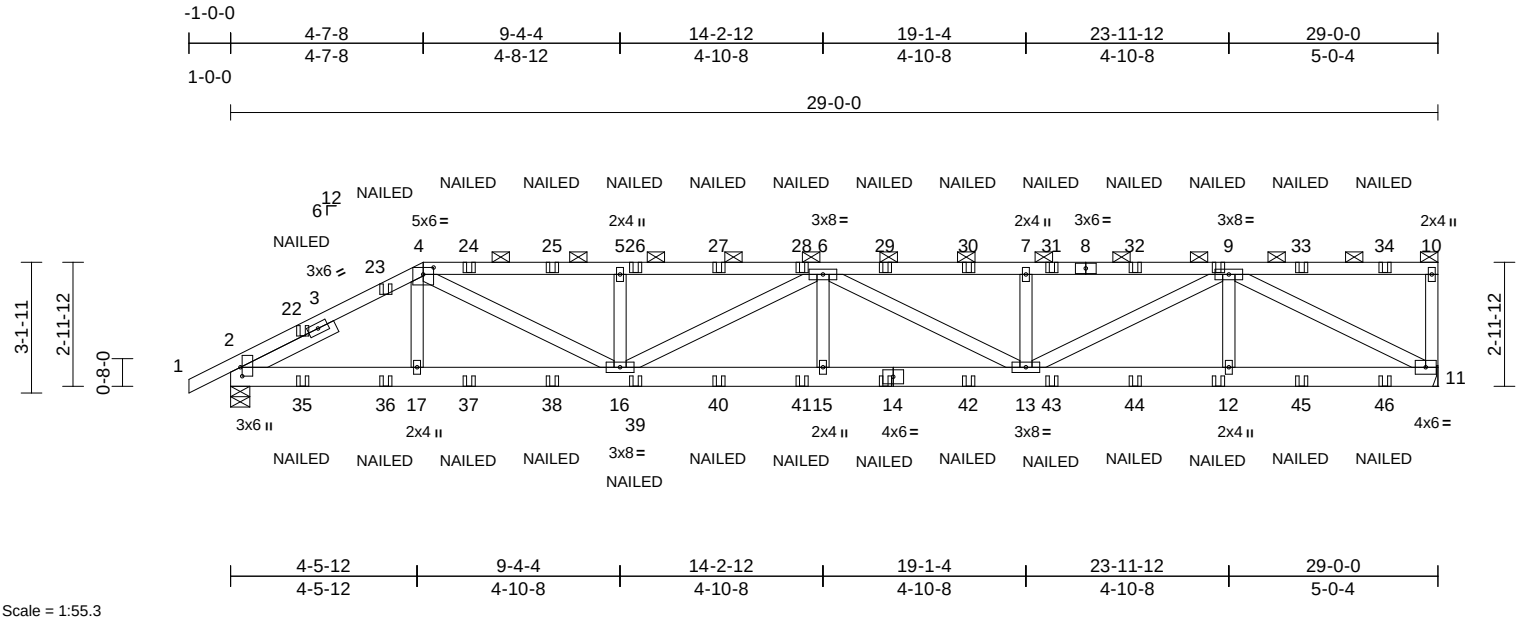
LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity
P01985-24565	H9	Half Hip Girder	1	2	I72808517 Job Reference (optional)

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:27 Page: 1
ID:VgGea438YD6_torciM9flfzQTUH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.13	13-15	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.18	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.32	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 350 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-6-0

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

REACTIONS (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=103 (LC 11)
Max Uplift 2=-476 (LC 9), 11=-557 (LC 9)
Max Grav 2=1255 (LC 2), 11=1200 (LC 29)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-4=-1902/839, 4-5=-2882/1321, 5-6=-2882/1321, 6-7=-2996/1382, 7-9=-2996/1382, 9-10=-58/42, 10-11=-137/69
BOT CHORD 2-17=-795/1661, 16-17=-796/1660, 15-16=-1567/3313, 13-15=-1567/3313, 12-13=-912/1923, 11-12=-912/1923
WEBS 4-17=-8/120, 4-16=-664/1413, 5-16=-339/165, 6-16=-520/250, 6-15=-41/230, 6-13=-394/183, 7-13=-282/150, 9-13=-559/1195, 9-12=-39/241, 9-11=-2137/991

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 557 lb uplift at joint 11 and 476 lb uplift at joint 2.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-35, 4-10=-45, 11-18=-20
Concentrated Loads (lb)
Vert: 14=-6 (F), 12=-6 (F), 22=-34 (F), 23=-7 (F), 35=-4 (F), 36=-4 (F), 37=-6 (F), 38=-6 (F), 39=-6 (F), 40=-6 (F), 41=-6 (F), 42=-6 (F), 43=-6 (F), 44=-6 (F), 45=-6 (F), 46=-6 (F)

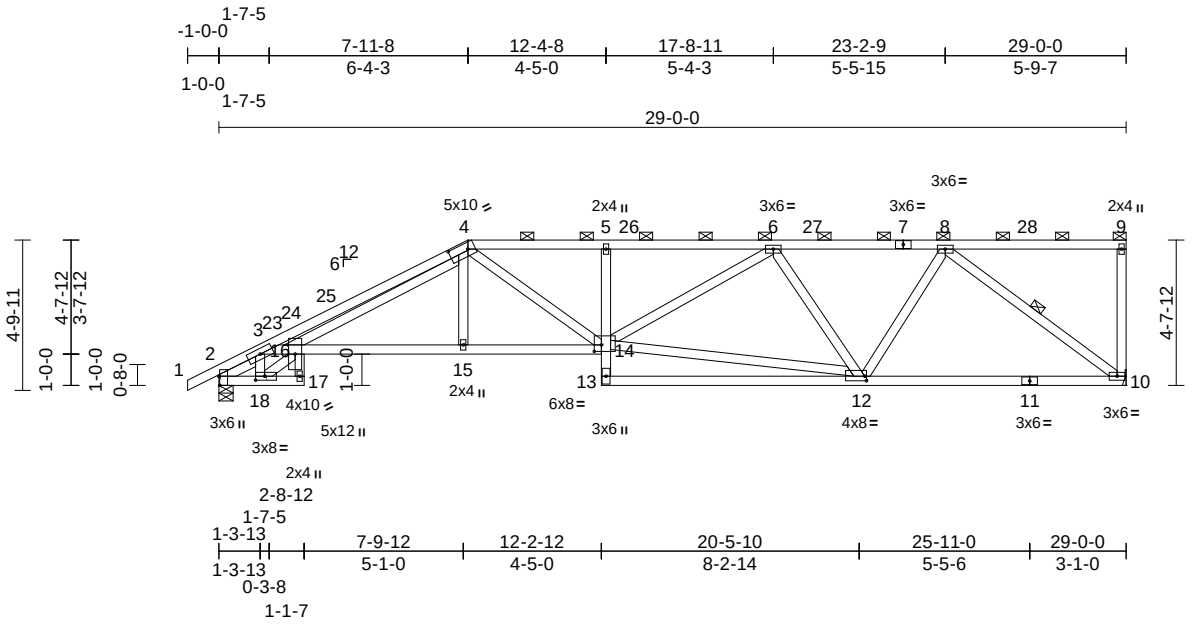
April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H10	Half Hip	1	1	Job Reference (optional)	I72808518

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:27 Page: 1

ID:4ZXepRdxGrSEx6WV24?_IszQTUs-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:73.6

Plate Offsets (X, Y): [2:0-3-8,Edge], [4:0-7-4,0-2-8], [12:0-0-10,0-1-12], [14:0-2-12,0-2-8], [18:0-3-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.18	15-16	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.37	15-16	>938	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.20	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 176 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP DSS

BOT CHORD 2x4 SP No.2 *Except* 17-16,5-13:2x4 SP No.3, 3-14:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 16-4,12-14,10-8:2x4 SP No.2

SLIDER Left 2x4 SP No.1 -- 1-4-0

BRACING

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

BOT CHORD Rigid ceiling directly applied or 8-8-2 oc bracing.

WEBS 1 Row at midpt 8-10

REACTIONS (size) 2=0-5-8, 10= Mechanical

Max Horiz 2=167 (LC 15)

Max Uplift 2=-165 (LC 13), 10=-266 (LC 13)

Max Grav 2=1215 (LC 2), 10=1153 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/28, 2-3=-778/118, 3-4=-4042/915, 4-5=-2438/536, 5-6=-2412/531, 6-8=-1580/331, 8-9=-94/84, 9-10=-158/62

BOT CHORD 2-18=-424/1375, 17-18=-66/194, 16-17=-20/89, 3-16=-460/1942, 15-16=-499/2056, 14-15=-499/2046, 13-14=0/142, 5-14=-320/129, 12-13=-34/222, 10-12=-329/1231

WEBS 4-16=-544/1761, 4-15=0/298, 4-14=-194/597, 12-14=-469/1764, 6-14=-133/519, 6-12=-720/229, 8-12=-87/669, 8-10=-1525/372, 3-18=-1316/411, 16-18=-557/1826

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 7-11-8, Exterior(2R) 7-11-8 to 12-4-8, Interior (1) 12-4-8 to 28-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 266 lb uplift at joint 10 and 165 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	H11	Half Hip	1	1	Job Reference (optional)	I72808519

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:28 Page: 1

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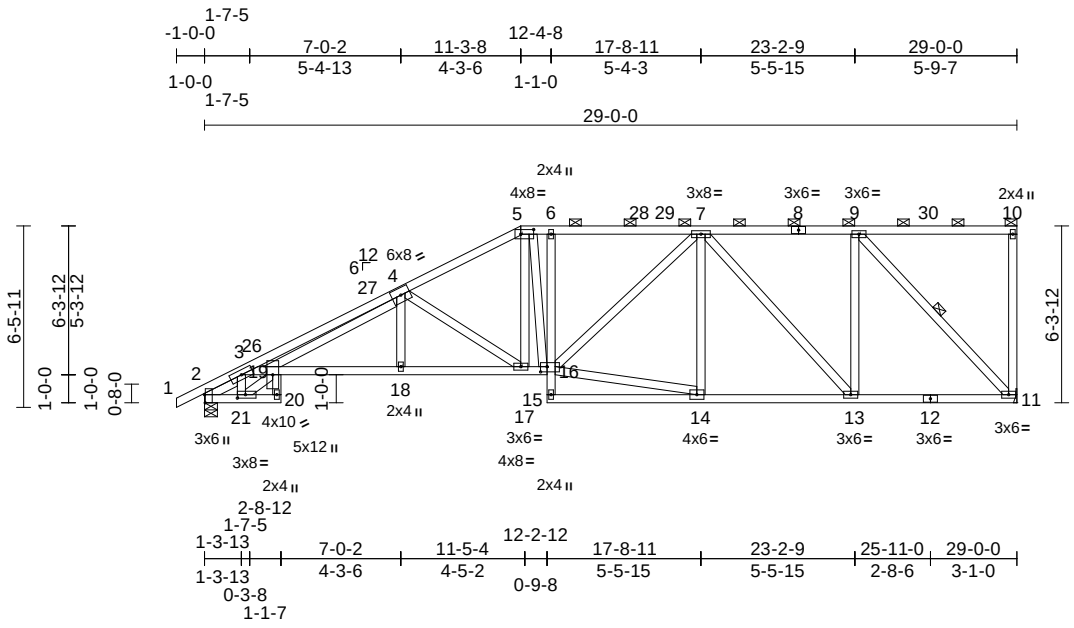

Scale = 1:82.2

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-5-8,0-2-0], [16:0-2-12,0-2-4], [21:0-3-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.17	18-19	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.35	18-19	>991	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.19	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MS								
BCDL	10.0										Weight: 207 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 20-19,6-15:2x4 SP No.3, 3-16:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 11-9,16-7,13-7:2x4 SP No.2

SLIDER Left 2x4 SP No.3 -- 1-4-0

BRACING

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

BOT CHORD Rigid ceiling directly applied or 7-8-0 oc bracing.

WEBS 1 Row at midpt 9-11

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

Max Horiz 2=230 (LC 15)

Max Uplift 2=-193 (LC 16), 11=-262 (LC 13)

Max Grav 2=1215 (LC 2), 11=1153 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/27, 2-3=-788/111, 3-4=-3924/907, 4-5=-1826/330, 5-6=-1626/327, 6-7=-1625/329, 7-9=-908/240, 9-10=-111/113, 10-11=-154/64

BOT CHORD 2-21=-464/1359, 20-21=-65/200, 19-20=-18/90, 3-19=-520/1893, 18-19=-639/2226, 17-18=-639/2225, 16-17=-449/1581, 15-16=0/99, 6-16=-277/109, 14-15=-20/124, 13-14=-343/1340, 11-13=-250/908

WEBS 9-11=-1311/296, 4-19=-500/1480, 5-16=-133/310, 3-21=-1289/430, 19-21=-613/1792, 4-18=-3/278, 4-17=-786/236, 5-17=-97/510, 7-16=-160/391, 7-14=-120/94, 14-16=-329/1237, 9-13=-59/597, 7-13=-641/141

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 11-3-8, Exterior(2R) 11-3-8 to 15-6-7, Interior (1) 15-6-7 to 28-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 262 lb uplift at joint 11 and 193 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J10	Jack-Open	12	1	Job Reference (optional)	I72808520

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:30 Page: 1
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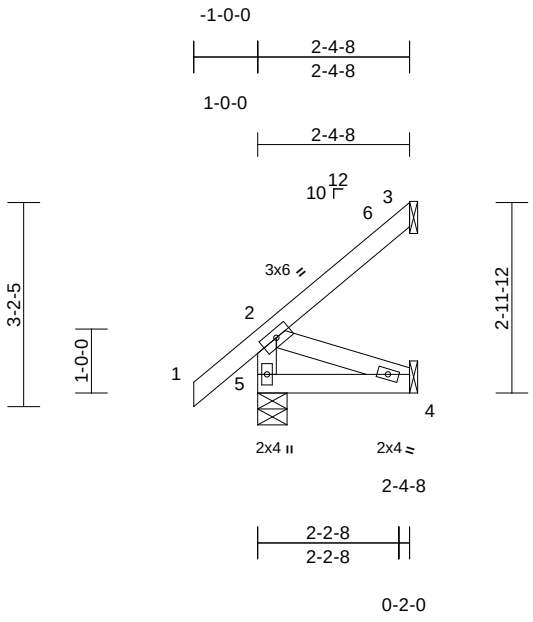


Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	4-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=86 (LC 14)
Max Uplift 3=-42 (LC 14), 4=-20 (LC 14)
Max Grav 3=54 (LC 26), 4=51 (LC 5), 5=177 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-152/78, 1-2=0/44, 2-3=-73/47
BOT CHORD 4-5=-208/61
WEBS 2-4=-64/217

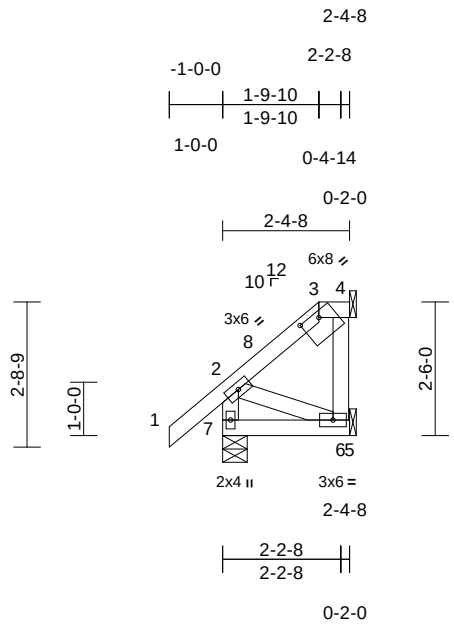
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-0-0 to 2-0-0, Interior (1) 2-0-0 to 2-3-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 3 and 20 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity
P01985-24565	J11	Jack-Open	1	1	I72808521 Job Reference (optional)



Scale = 1:43.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	0.00	6-7	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	6-7	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

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

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

REACTIONS (size) 4= Mechanical, 6= Mechanical, 7=0-5-8
Max Horiz 7=72 (LC 16)
Max Uplift 4=-27 (LC 16), 6=-20 (LC 16), 7=-7 (LC 16)
Max Grav 4=45 (LC 2), 6=48 (LC 7), 7=198 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-174/90, 1-2=0/53, 2-3=-60/19, 3-4=0/0
BOT CHORD 6-7=-150/86, 5-6=0/0
WEBS 4-6=0/0, 2-6=-92/160

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 7, 27 lb uplift at joint 4 and 20 lb uplift at joint 6.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J12	Jack-Open Girder	1	1	Job Reference (optional)	I72808522

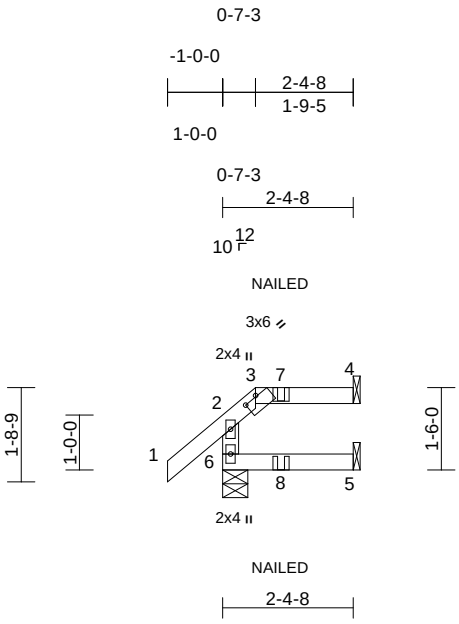


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Plate Offsets (X, Y): [3:0-3-0,0-0-4]

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	0.13	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	12.7/10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 10 lb	FT = 20%

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

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

REACTIONS (size) 4= Mechanical, 5= Mechanical, 6=0-5-8
Max Horiz 6=39 (LC 9)
Max Uplift 4=-27 (LC 9), 5=-3 (LC 9), 6=-34 (LC 12)
Max Grav 4=67 (LC 33), 5=40 (LC 7), 6=175 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-149/42, 1-2=0/53, 2-3=-55/15, 3-4=0/0
BOT CHORD 5-6=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 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
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 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 6, 27 lb uplift at joint 4 and 3 lb uplift at joint 5.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 8=-2 (B)

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	J13	Jack-Open	1	1	Job Reference (optional)	I72808523

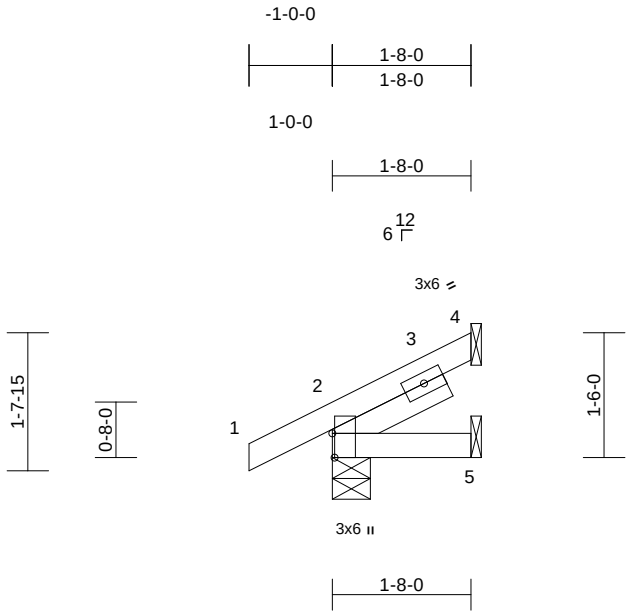

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Plate Offsets (X, Y): [2:0-3-8,Edge]

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)	0.00	8	>999	240	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-8-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=46 (LC 16)
Max Uplift 2=-26 (LC 16), 4=-23 (LC 16), 5=-2 (LC 16)
Max Grav 2=144 (LC 2), 4=33 (LC 2), 5=25 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-42/18
BOT CHORD 2-5=-25/25

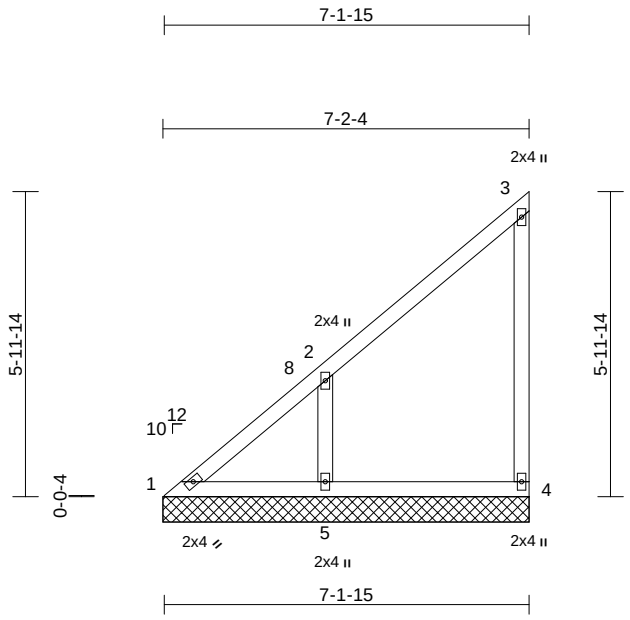
NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2, 2 lb uplift at joint 5 and 23 lb uplift at joint 4.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	V1A	Valley	1	1	Job Reference (optional)	I72808524



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 35 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=7-2-4, 4=7-2-4, 5=7-2-4
Max Horiz 1=201 (LC 11)
Max Uplift 1=-31 (LC 10), 4=-62 (LC 11), 5=-178 (LC 14)
Max Grav 1=140 (LC 26), 4=148 (LC 25), 5=379 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-421/257, 2-3=-201/148, 3-4=-151/188
BOT CHORD	1-5=-126/153, 4-5=-95/103
WEBS	2-5=-282/316

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-2-4, Interior (1) 3-2-4 to 7-0-8 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=10.0 psf; Pf=7.7 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 62 lb uplift at joint 4, 31 lb uplift at joint 1 and 178 lb uplift at joint 5.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	V2A	Valley	1	1	Job Reference (optional)	I72808525

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:32 Page: 1
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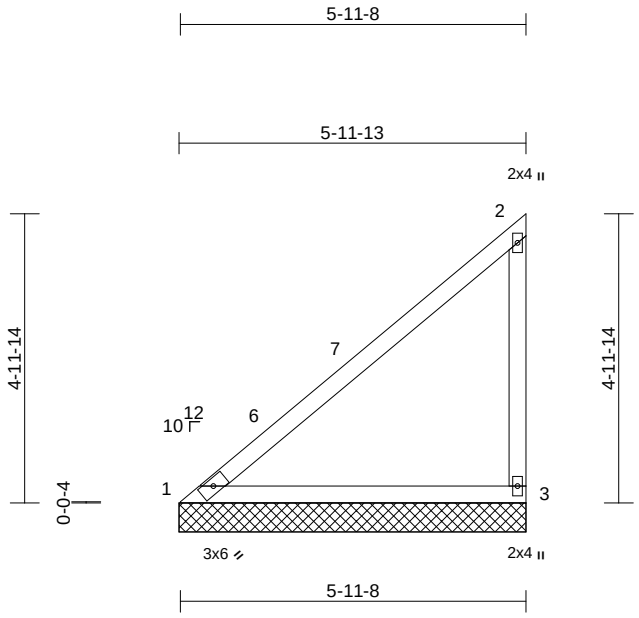

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.47	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 26 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-11-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-11-13, 3=5-11-13
Max Horiz 1=165 (LC 11)
Max Uplift 1=-19 (LC 14), 3=-90 (LC 14)
Max Grav 1=234 (LC 2), 3=264 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-305/168, 2-3=-199/251
BOT CHORD 1-3=-265/291

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-10-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 90 lb uplift at joint 3 and 19 lb uplift at joint 1.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	V3A	Valley	1	1	Job Reference (optional)	I72808526

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Wed Apr 16 10:58:32 Page: 1
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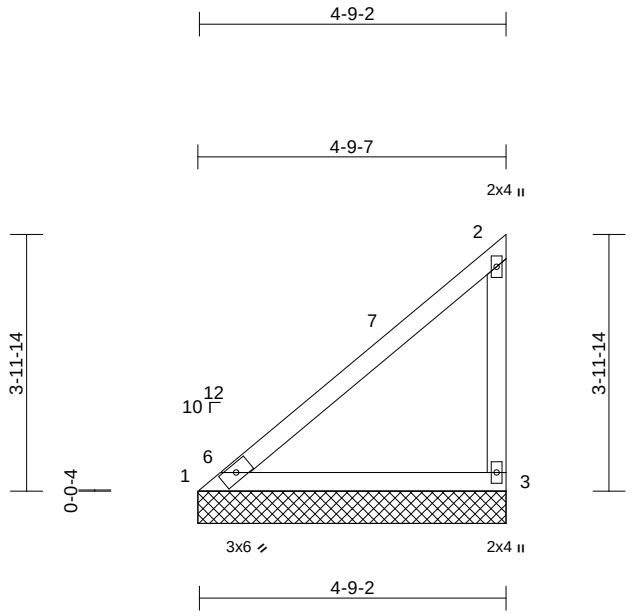

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.30	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 21 lb	FT = 20%

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

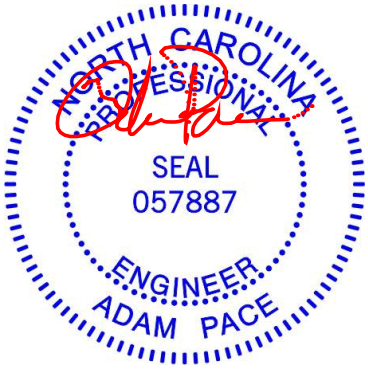
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-9-7, 3=4-9-7
Max Horiz 1=129 (LC 11)
Max Uplift 1=-16 (LC 14), 3=-71 (LC 14)
Max Grav 1=186 (LC 2), 3=209 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-239/133, 2-3=-159/205
BOT CHORD 1-3=-238/231

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-7-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 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 71 lb uplift at joint 3 and 16 lb uplift at joint 1.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.

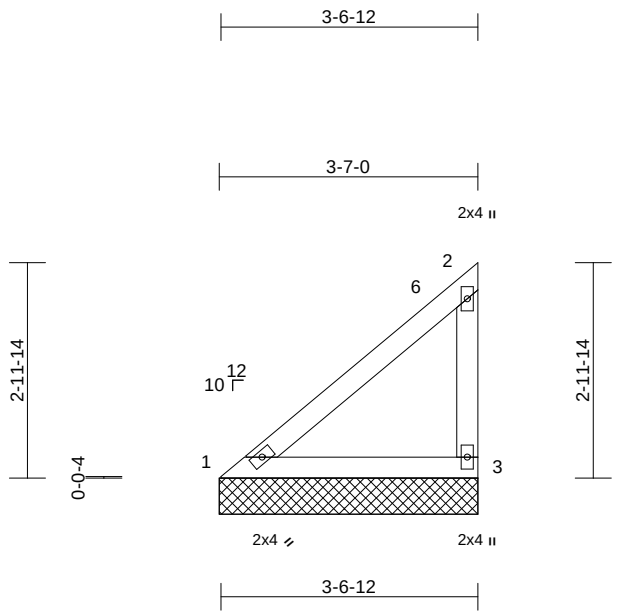
LOAD CASE(S) Standard



April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	V4A	Valley	1	1	Job Reference (optional)	I72808527



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 15 lb	FT = 20%

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

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

REACTIONS (size) 1=3-7-0, 3=3-7-0
Max Horiz 1=94 (LC 11)
Max Uplift 1=-13 (LC 14), 3=-52 (LC 14)
Max Grav 1=138 (LC 2), 3=155 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-172/98, 2-3=-117/154
BOT CHORD 1-3=-184/168

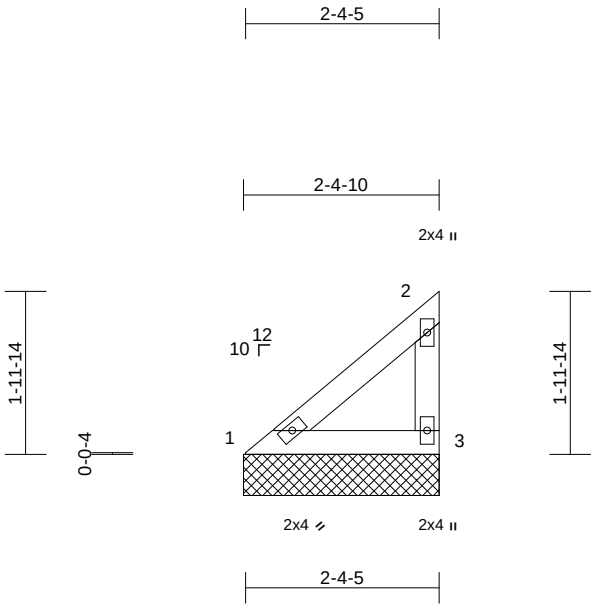
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-5-4 zone; cantilever 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=10.0 psf; Pf=7.7 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 52 lb uplift at joint 3 and 13 lb uplift at joint 1.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.

LOAD CASE(S) Standard

April 16,2025

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

Job	Truss	Truss Type	Qty	Ply	1033 Serenity	
P01985-24565	V5A	Valley	1	1	Job Reference (optional)	I72808528



Scale = 1:28.1

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	7.7/10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 9 lb	FT = 20%

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

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

REACTIONS (size) 1=2-4-10, 3=2-4-10
Max Horiz 1=58 (LC 11)
Max Uplift 1=-9 (LC 14), 3=-33 (LC 14)
Max Grav 1=90 (LC 2), 3=100 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-103/61, 2-3=-74/97
BOT CHORD 1-3=-117/103

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=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=10.0 psf; Pf=7.7 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 33 lb uplift at joint 3 and 9 lb uplift at joint 1.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.

LOAD CASE(S) Standard

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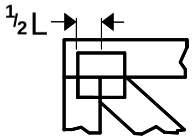
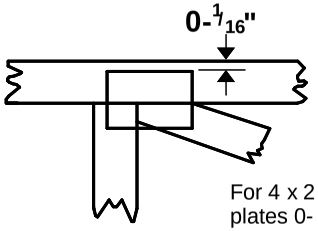
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

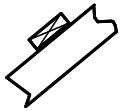
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

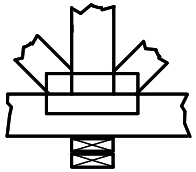
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

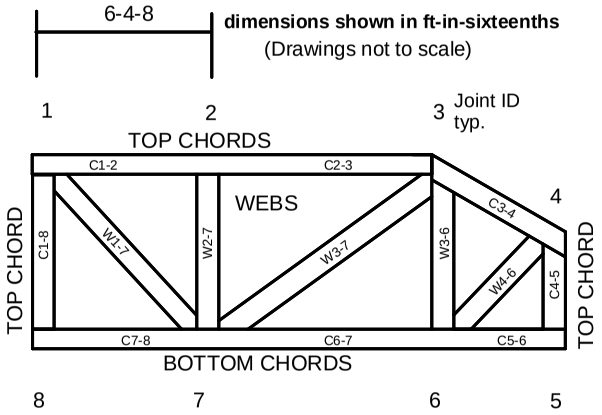


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
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MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.