ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02595-25452
1034 Serenity

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

Pages or sheets covered by this seal: I73486199 thru I73486236

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

North Carolina COA: C-0844


May 15,2025

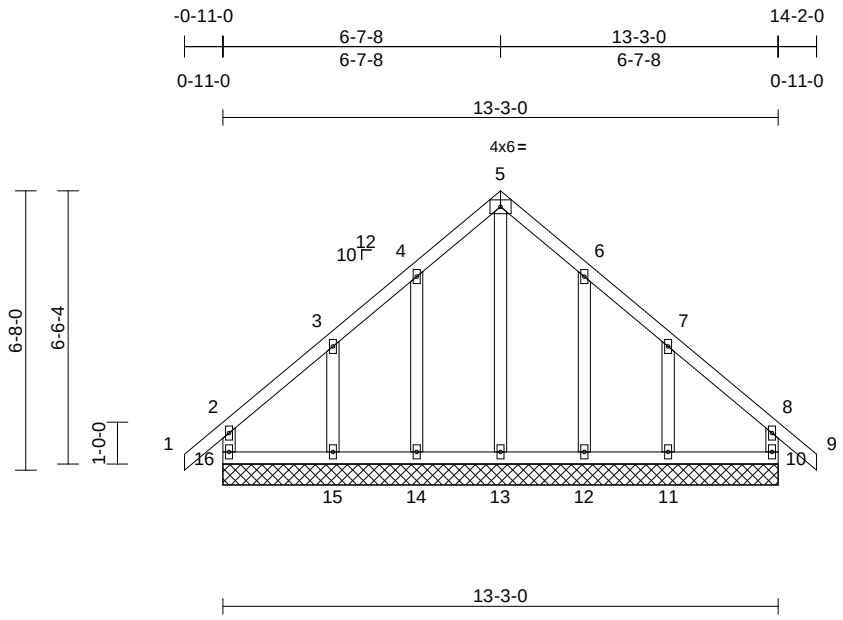
Gilbert, Eric

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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | A01E | Common Supported Gable | 1 | 1 | I73486199 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:01 Page: 1
ID:4Oy18DedUaJog2ANxa1Pcjzwly?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:55

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 81 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 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 6-0-0 oc bracing. |

**REACTIONS** (size) 10=13-3-0, 11=13-3-0, 12=13-3-0, 13=13-3-0, 14=13-3-0, 15=13-3-0, 16=13-3-0
Max Horiz 16=144 (LC 13)
Max Uplift 10=-47 (LC 14), 11=-113 (LC 15), 12=-58 (LC 15), 14=-56 (LC 14), 15=-110 (LC 14), 16=-50 (LC 15)
Max Grav 10=195 (LC 26), 11=256 (LC 27), 12=184 (LC 31), 13=195 (LC 29), 14=175 (LC 30), 15=227 (LC 26), 16=185 (LC 27)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 2-16=-153/81, 1-2=0/45, 2-3=-112/87, 3-4=-118/121, 4-5=-166/181, 5-6=-166/181, 6-7=-118/123, 7-8=-101/74, 8-9=0/45, 8-10=-152/79 |
| BOT CHORD | 15-16=-61/74, 14-15=-61/74, 13-14=-61/74, 12-13=-61/74, 11-12=-61/74, 10-11=-61/74 |
| WEBS | 5-13=-184/108, 4-14=-127/70, 3-15=-157/109, 6-12=-127/70, 7-11=-156/108 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 6-7-8, Corner (3) 6-7-8 to 9-7-8, Exterior (2) 9-7-8 to 14-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 16, 47 lb uplift at joint 10, 56 lb uplift at joint 14, 110 lb uplift at joint 15, 58 lb uplift at joint 12 and 113 lb uplift at joint 11.
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: 1-2=-43, 2-5=-43, 5-8=-43, 8-9=-43
   Trapezoidal Loads (lb/ft)
   Vert: 16=-20-to-15=-23 (F=-3), 15=-23 (F=-3)-to-14=-25 (F=-5), 14=-25 (F=-5)-to-13=-28 (F=-8), 13=-28 (F=-8)-to-12=-30 (F=-10), 12=-30 (F=-10)-to-11=-32 (F=-12), 11=-32 (F=-12)-to-10=-35 (F=-15)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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A02SE | Common Structural Gable | 1 | 1 | Job Reference (optional) | I73486200 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:02 Page: 1
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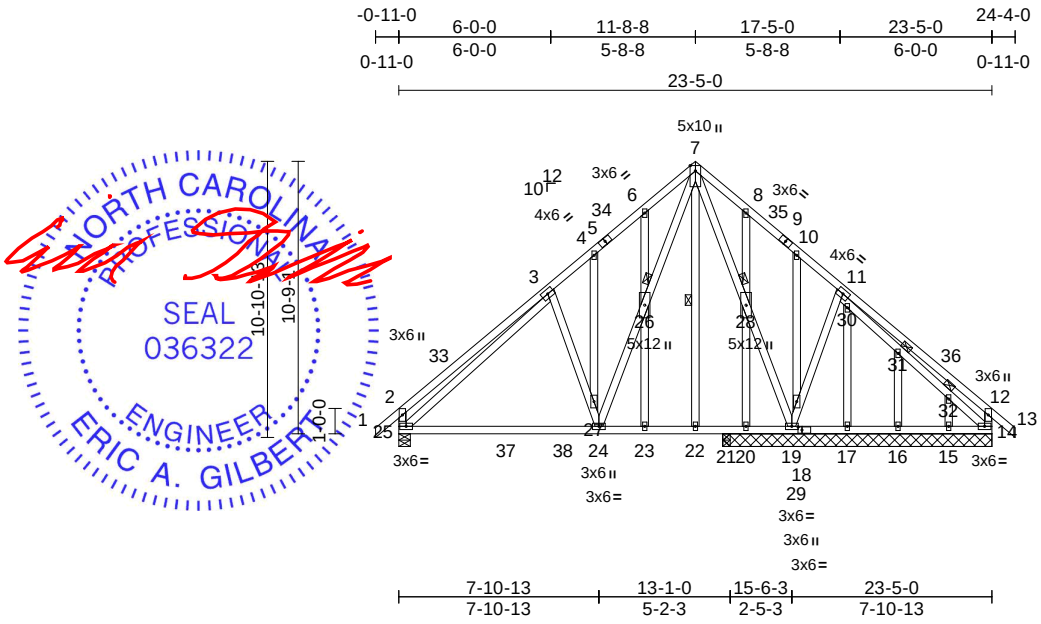





Scale = 1:90.9

Plate Offsets (X, Y): [18:0-1-14,0-1-8]

| 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 | 0.34 | Vert(LL) | -0.09 | 24-25 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.49 | Vert(CT) | -0.18 | 24-25 | >844 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.31 | Horz(CT) | 0.01 | 14 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 230 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.2 |

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 7-22 |
| JOINTS | 1 Brace at Jt(s): 26, 28, 31, 32 |

**REACTIONS** (size) 14=10-7-8, 15=10-7-8, 16=10-7-8, 17=10-7-8, 19=10-7-8, 20=10-7-8, 21=0-3-8, 25=0-5-8
Max Horiz 25=223 (LC 13)
Max Uplift 14=-77 (LC 15), 15=-24 (LC 15), 19=-94 (LC 14), 20=-94 (LC 15), 25=-74 (LC 14)
Max Grav 14=334 (LC 2), 15=106 (LC 5), 16=97 (LC 5), 17=155 (LC 2), 19=608 (LC 2), 20=117 (LC 31), 21=179 (LC 26), 25=671 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/45, 2-3=-461/216, 3-4=-504/157, 4-6=-491/189, 6-7=-535/241, 7-8=-230/213, 8-10=-180/162, 10-11=-195/138, 11-12=-290/201, 12-13=0/45, 2-25=-463/191, 12-14=-351/180

BOT CHORD 24-25=-96/511, 23-24=-44/229, 22-23=-44/229, 21-22=-44/228, 20-21=-44/228, 19-20=-44/228, 17-19=0/109, 16-17=0/109, 15-16=0/109, 14-15=0/109

WEBS 7-28=-400/47, 19-28=-437/52, 19-29=-262/223, 11-29=-247/208, 24-26=-178/566, 7-26=-200/612, 3-27=-246/168, 24-27=-277/203, 3-25=-289/42, 11-30=-144/75, 30-31=-129/117, 31-32=-114/101, 14-32=-119/105, 7-22=-36/46, 6-26=-135/57, 23-26=-86/33, 4-27=-49/37, 8-28=-159/60, 20-28=-136/73, 10-29=-19/17, 17-30=-89/4, 16-31=-22/24, 15-32=-7/7

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-6-2, Exterior (2) 11-6-2 to 14-6-2, Interior (1) 14-6-2 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 19, 74 lb uplift at joint 25, 77 lb uplift at joint 14, 94 lb uplift at joint 20 and 24 lb uplift at joint 15.
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-43, 2-7=-43, 7-12=-43, 12-13=-43, 24-25=-20
Trapezoidal Loads (lb/ft)

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Continued on page 2



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Vert: 24=-20-to-23=-22 (F=-2), 23=-22 (F=-2)-to-22=-24 (F=-4), 22=-24 (F=-4)-to-21=-25 (F=-5), 21=-25 (F=-5)-to-20=-26 (F=-6), 20=-26 (F=-6)-to-19=-27 (F=-7), 19=-27 (F=-7)-to-18=-28 (F=-8), 18=-28 (F=-8)-to-17=-30 (F=-10), 17=-30 (F=-10)-to-16=-32 (F=-12), 16=-32 (F=-12)-to-15=-33 (F=-13), 15=-33 (F=-13)-to-14=-35 (F=-15)


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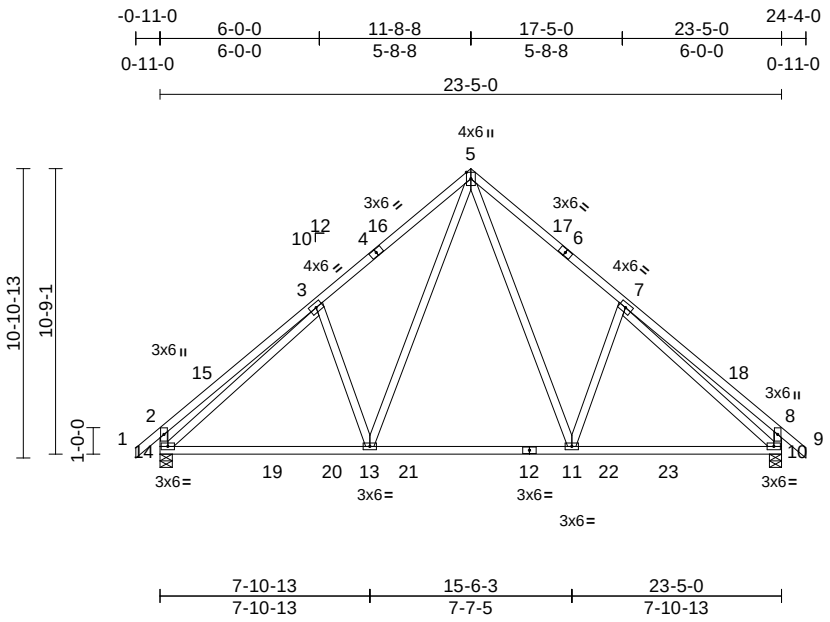
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A03 | Common | 3 | 1 | Job Reference (optional) | I73486201 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:02 Page: 1
ID:Etyd26XYvdriG3jt6zu3QXzwlzQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:86.8

| 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 | 0.43 | Vert(LL) | -0.11 | 11-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.62 | Vert(CT) | -0.18 | 13-14 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.90 | Horz(CT) | 0.03 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 158 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-4-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 10=0-5-8, 14=0-5-8
Max Horiz 14=226 (LC 13)
Max Uplift 10=-89 (LC 15), 14=-89 (LC 14)
Max Grav 10=1021 (LC 27), 14=1022 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-447/189, 3-5=-1057/227, 5-7=-1056/227, 7-8=-447/189, 8-9=0/45, 2-14=-447/167, 8-10=-447/167
BOT CHORD 13-14=-106/918, 11-13=0/629, 10-11=-17/815
WEBS 5-11=-161/566, 7-11=-267/213, 5-13=-161/569, 3-13=-267/213, 3-14=-829/9, 7-10=-827/9

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-8-8, Exterior (2) 11-8-8 to 14-8-8, Interior (1) 14-8-8 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 14 and 89 lb uplift at joint 10.

**LOAD CASE(S)** Standard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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A04 | Common | 4 | 1 | Job Reference (optional) | I73486202 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:03 Page: 1
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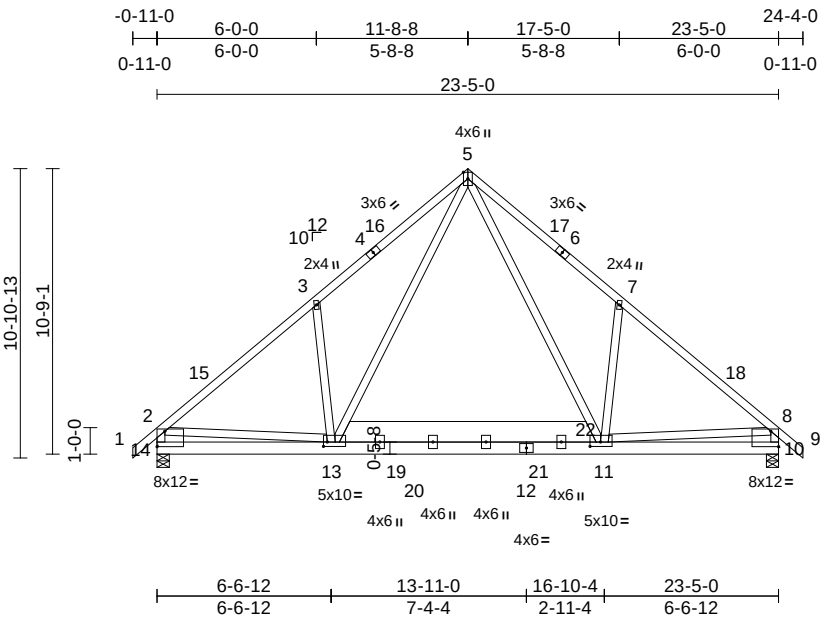


Scale = 1:86.8

Plate Offsets (X, Y): [10:Edge,0-7-0], [11:0-4-12,0-2-0], [13:0-1-12,0-2-0], [14:Edge,0-7-0]

| 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 | 0.48 | Vert(LL) | -0.05 | 11-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.23 | Vert(CT) | -0.11 | 11-13 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.52 | Horz(CT) | 0.01 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 211 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 13-11:2x10 SP DSS
WEBS 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-8-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 10=0-5-8, 14=0-5-8
Max Horiz 14=224 (LC 13)
Max Uplift 10=-119 (LC 15), 14=-115 (LC 14)
Max Grav 10=1184 (LC 2), 14=1160 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-1340/159, 3-5=-1328/312, 5-7=-1359/316, 7-8=-1373/163, 8-9=0/45, 2-14=-1097/157, 8-10=-1121/160
BOT CHORD 13-14=-210/424, 11-13=-1/704, 10-11=-95/305
WEBS 7-11=-362/230, 3-13=-363/230, 2-13=0/745, 8-11=-2/779, 5-13=-225/743, 5-11=-240/842

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-8-8, Exterior (2) 11-8-8 to 14-8-8, Interior (1) 14-8-8 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 14 and 119 lb uplift at joint 10.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 134 lb down and 19 lb up at 13-8-8, and 134 lb down and 19 lb up at 9-8-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) 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=-43, 2-5=-43, 5-8=-43, 8-9=-43, 10-14=-20, 5-22=-20 (F)
Concentrated Loads (lb)
Vert: 12=-100 (F), 20=-100 (F)


May 15,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A05 | Common | 1 | 1 | Job Reference (optional) | I73486203 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:03 Page: 1
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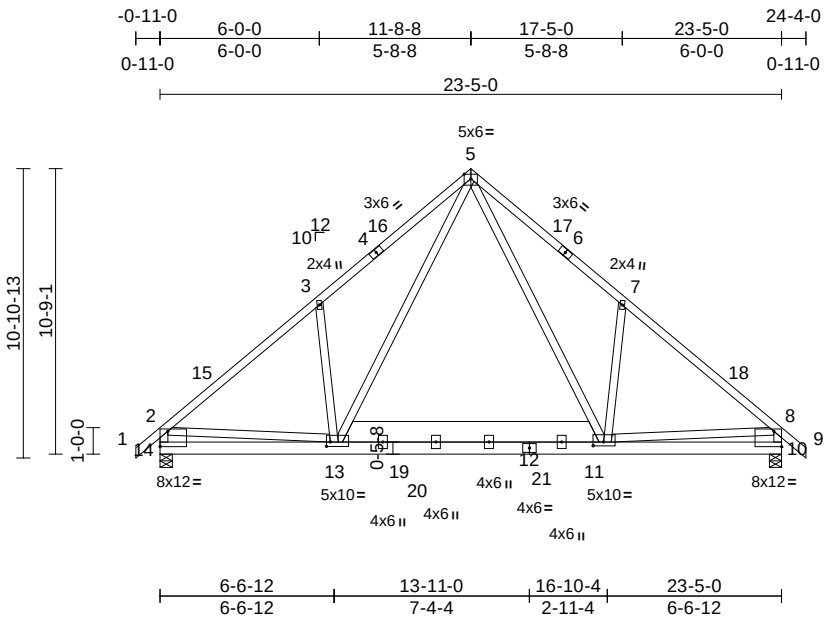


Scale = 1:86.8

Plate Offsets (X, Y): [10:Edge,0-7-0], [11:0-4-12,0-1-12], [13:0-1-12,0-2-0], [14:Edge,0-7-0]

| Loading | (psf) | Spacing | 2-3-8 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.56 | Vert(LL) | -0.05 | 11-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.25 | Vert(CT) | -0.10 | 11-13 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.60 | Horz(CT) | 0.01 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 210 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 13-11:2x10 SP DSS
WEBS 2x4 SP No.2

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

**REACTIONS** (size) 10=0-5-8, 14=0-5-8
Max Horiz 14=256 (LC 13)
Max Uplift 10=-121 (LC 15), 14=-121 (LC 14)
Max Grav 10=1261 (LC 2), 14=1259 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-1434/169, 3-5=-1422/342, 5-7=-1458/315, 7-8=-1522/172, 8-9=0/52, 2-14=-1183/171, 8-10=-1198/177
BOT CHORD 13-14=-241/484, 11-13=0/780, 10-11=-104/361
WEBS 7-11=-392/249, 3-13=-417/264, 2-13=0/779, 8-11=0/840, 5-13=-258/785, 5-11=-227/899

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-8-8, Exterior (2) 11-8-8 to 14-8-8, Interior (1) 14-8-8 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 14 and 121 lb uplift at joint 10.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 134 lb down and 19 lb up at 13-8-8, and 134 lb down and 19 lb up at 9-8-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) 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=-49, 2-5=-49, 5-8=-49, 8-9=-49, 10-14=-23
Concentrated Loads (lb)
Vert: 12=-100 (F), 20=-100 (F)


May 15,2025



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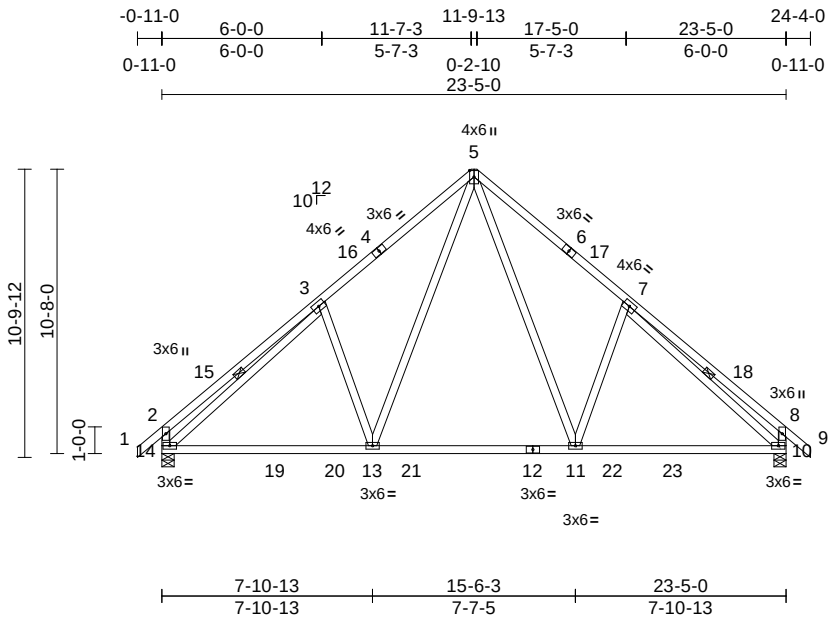
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A06 | Hip | 1 | 1 | Job Reference (optional) | I73486204 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:03
ID:3Dkccj_JWoA5M8mEz0bW52zwm_7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:86.4

| Loading | (psf) | Spacing | 2-3-8 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.56 | Vert(LL) | -0.13 | 11-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.78 | Vert(CT) | -0.20 | 10-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.40 | Horz(CT) | 0.03 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 158 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-0-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-14, 7-10

**REACTIONS** (size) 10=0-5-8, 14=0-5-8
Max Horiz 14=258 (LC 13)
Max Uplift 10=-102 (LC 15), 14=-102 (LC 14)
Max Grav 10=1171 (LC 27), 14=1172 (LC 26)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-516/218, 3-5=-1209/264, 5-7=-1208/264, 7-8=-516/218, 8-9=0/52, 2-14=-515/192, 8-10=-515/192
BOT CHORD 13-14=-121/1050, 11-13=0/723, 10-11=-18/933
WEBS 5-11=-183/643, 7-11=-301/242, 5-13=-183/646, 3-13=-301/242, 3-14=-945/9, 7-10=-943/9

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 11-8-8, Exterior (2) 11-8-8 to 15-11-7, Interior (1) 15-11-7 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 14 and 102 lb uplift at joint 10.

**LOAD CASE(S)** Standard


May 15,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A07 | Hip | 1 | 1 | Job Reference (optional) | I73486205 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:04
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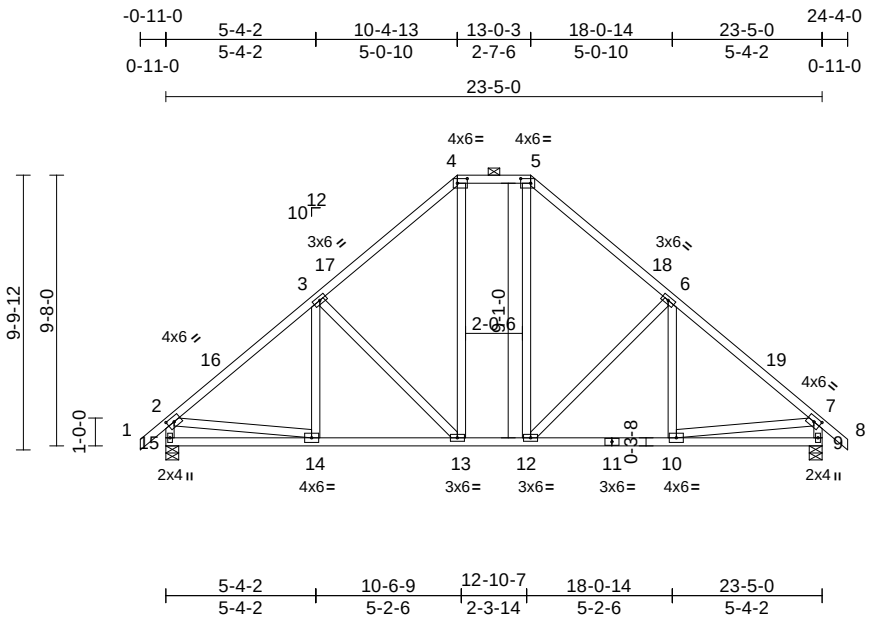


Scale = 1:82.2

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [4:0-4-4,0-2-0], [5:0-4-4,0-2-0], [7:0-2-14,0-2-0]

| 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 | 0.34 | Vert(LL) | -0.08 | 13-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.38 | Vert(CT) | -0.11 | 13-14 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.29 | Horz(CT) | 0.02 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 162 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-5-11 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 9=0-5-8, 15=0-5-8
Max Horiz 15=206 (LC 13)
Max Uplift 9=-85 (LC 15), 15=-85 (LC 14)
Max Grav 9=989 (LC 2), 15=989 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-1085/140, 3-4=-848/193, 4-5=-569/180, 5-6=-848/193, 6-7=-1085/140, 7-8=0/45, 2-15=-939/143, 7-9=-939/144
BOT CHORD 14-15=-187/291, 13-14=-93/815, 12-13=-15/591, 10-12=-9/759, 9-10=-52/190
WEBS 3-14=-7/157, 3-13=-320/171, 4-13=-63/292, 5-12=-63/292, 6-12=-320/171, 6-10=-8/157, 2-14=0/614, 7-10=0/614

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 10-4-13, Exterior (2) 10-4-13 to 17-3-2, Interior (1) 17-3-2 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 15 and 85 lb uplift at joint 9.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A08 | Hip | 1 | 1 | Job Reference (optional) | I73486206 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:04 Page: 1
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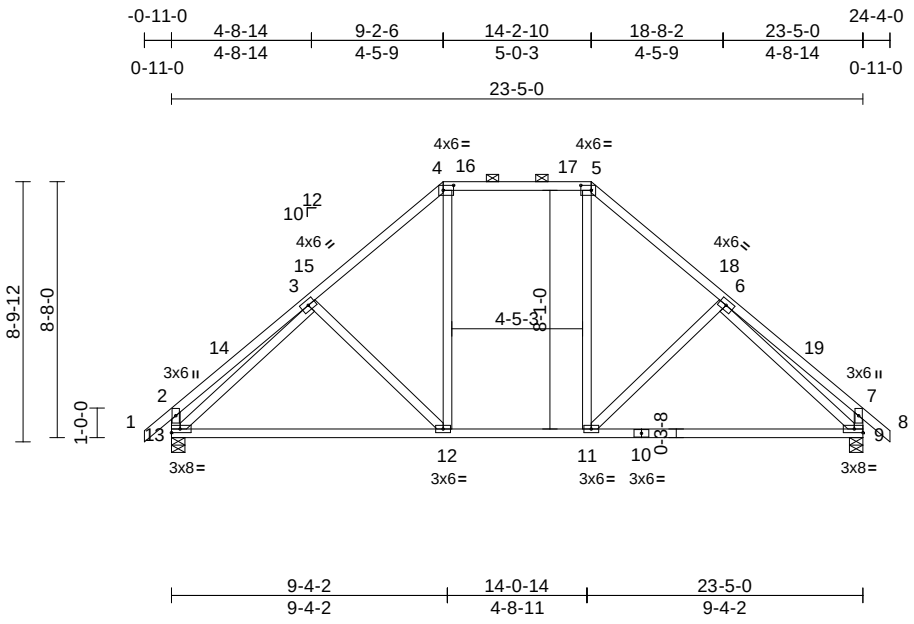



Scale = 1:78

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.38 | Vert(LL) | -0.23 | 12-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.74 | Vert(CT) | -0.41 | 12-13 | >682 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.52 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 144 lb | FT = 20% |

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

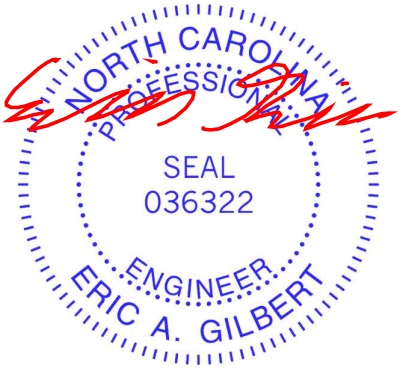
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-11-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 9=0-5-8, 13=0-5-8
Max Horiz 13=186 (LC 13)
Max Uplift 9=-81 (LC 15), 13=-81 (LC 14)
Max Grav 9=989 (LC 2), 13=989 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-375/126, 3-4=-907/189, 4-5=-631/175, 5-6=-907/189, 6-7=-375/126, 7-8=0/45, 2-13=-379/118, 7-9=-379/118
BOT CHORD 12-13=-98/790, 11-12=-30/655, 9-11=-33/729
WEBS 3-12=-193/170, 4-12=-37/310, 5-11=-37/310, 6-11=-193/170, 3-13=-747/69, 6-9=-746/69

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 9-2-6, Exterior (2) 9-2-6 to 13-5-5, Interior (1) 13-5-5 to 14-2-10, Exterior (2) 14-2-10 to 18-5-8, Interior (1) 18-5-8 to 24-4-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 13 and 81 lb uplift at joint 9.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard




May 15,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A09 | Hip | 1 | 1 | Job Reference (optional) | I73486207 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:04 Page: 1
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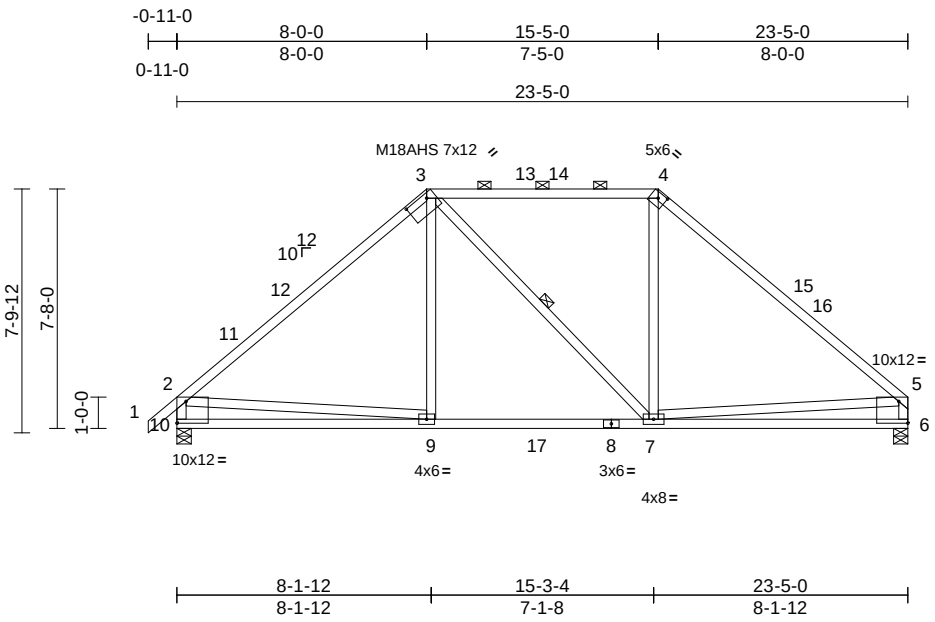



Scale = 1:73.8

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

| 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 | 0.89 | Vert(LL) | -0.11 | 6-7 | >999 | 240 | M18AHS | 186/179 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.52 | Vert(CT) | -0.22 | 6-7 | >999 | 180 | MT20 | 244/190 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.18 | Horz(CT) | 0.02 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 140 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 4-5:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

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

**REACTIONS** (size) 6=0-5-8, 10=0-5-8
Max Horiz 10=161 (LC 13)
Max Uplift 6=-61 (LC 15), 10=-76 (LC 14)
Max Grav 6=924 (LC 2), 10=990 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-1056/159, 3-4=-692/179, 4-5=-1049/157, 2-10=-915/161, 5-6=-847/132
BOT CHORD 9-10=-333/594, 7-9=-84/686, 6-7=-150/342
WEBS 3-9=0/287, 3-7=-88/95, 4-7=0/282, 2-9=-160/456, 5-7=-120/461

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 8-0-0, Exterior (2) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 15-5-0, Exterior (2) 15-5-0 to 19-7-15, Interior (1) 19-7-15 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 10 and 61 lb uplift at joint 6.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



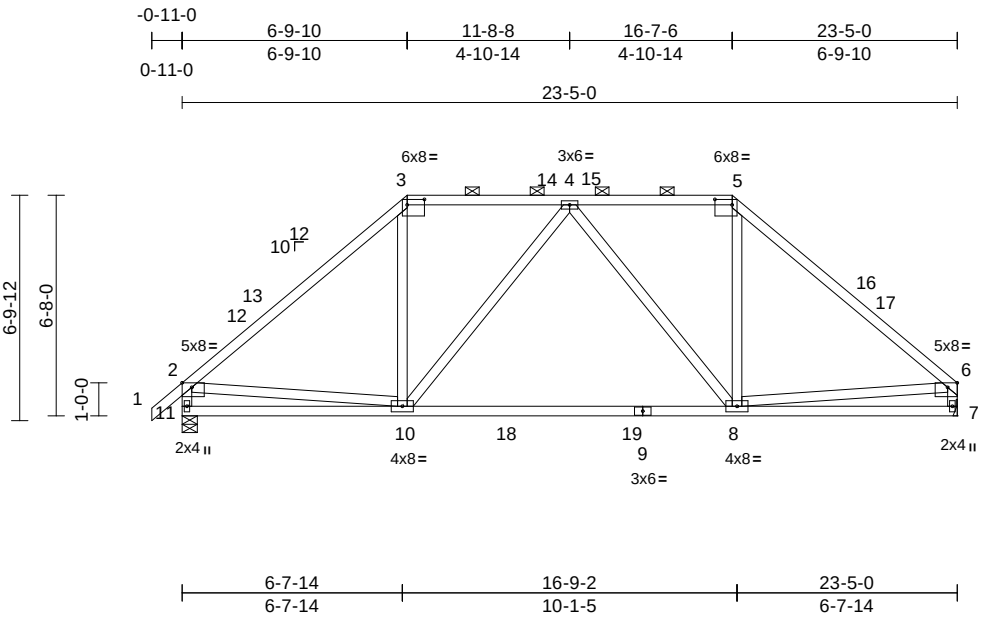
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A10 | Hip | 1 | 1 | Job Reference (optional) | I73486208 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:04
ID:hl?A5xk0Gx2SqhlsBxpHe0zwm6C-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:69.6

Plate Offsets (X, Y): [2:0-3-8,Edge], [3:0-6-4,0-2-0], [5:0-6-4,0-2-0], [6:0-3-8,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 | 0.75 | Vert(LL) | -0.31 | 8-10 | >902 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.51 | 8-10 | >545 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.30 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 140 lb | FT = 20% |

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

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

**REACTIONS** (size) 7= Mechanical, 11=0-5-8
Max Horiz 11=142 (LC 11)
Max Uplift 7=-54 (LC 15), 11=-69 (LC 14)
Max Grav 7=924 (LC 2), 11=990 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-1085/153, 3-4=-719/168, 4-5=-725/168, 5-6=-1080/152, 2-11=-941/155, 6-7=-874/125
BOT CHORD 10-11=-249/393, 8-10=-108/838, 7-8=-115/224
WEBS 3-10=-24/369, 4-10=-258/118, 4-8=-254/120, 5-8=-29/362, 2-10=-110/570, 6-8=-86/596

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 6-9-10, Exterior (2) 6-9-10 to 11-0-8, Interior (1) 11-0-8 to 16-7-6, Exterior (2) 16-7-6 to 20-10-5, Interior (1) 20-10-5 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 11 and 54 lb uplift at joint 7.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025

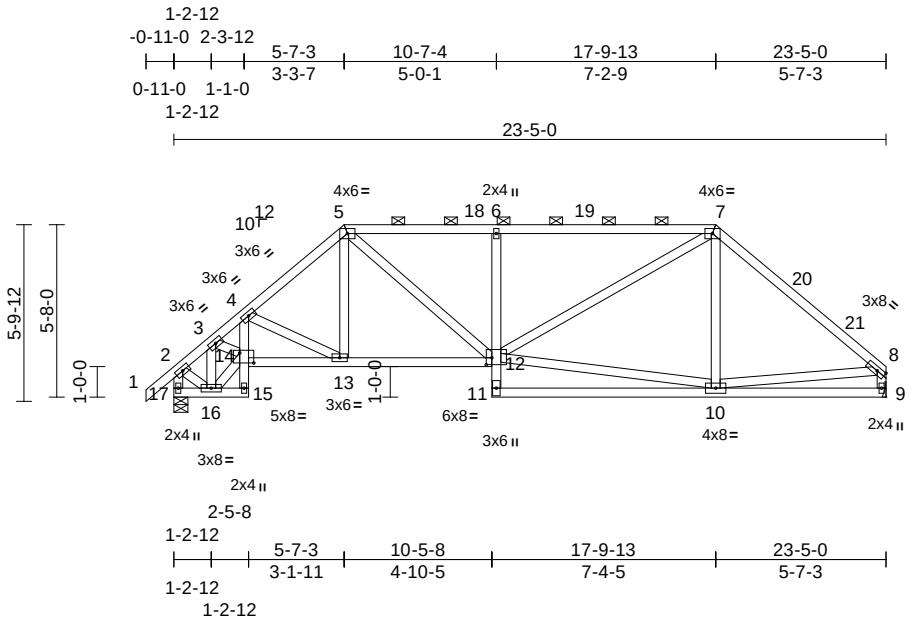


ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A11 | Hip | 1 | 1 | Job Reference (optional) | I73486209 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:05 Page: 1
ID:pSio7xHBDGFrHsrZzy8M5?zwm6o-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:75.8

Plate Offsets (X, Y): [12:0-2-4,0-2-12], [14:0-5-8,0-4-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.69 | Vert(LL) | -0.08 | 10-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | -0.18 | 10-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.21 | Horz(CT) | 0.06 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 155 lb | FT = 20% |

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

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

**REACTIONS** (size) 9= Mechanical, 17=0-5-8
Max Horiz 17=122 (LC 11)
Max Uplift 9=-46 (LC 15), 17=-61 (LC 14)
Max Grav 9=924 (LC 2), 17=990 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-739/105, 3-4=-1666/234, 4-5=-1239/186, 5-6=-1257/215, 6-7=-1262/219, 7-8=-1089/153, 2-17=-945/144, 8-9=-879/125
BOT CHORD 16-17=-116/123, 15-16=-14/75, 14-15=-3/48, 4-14=-90/349, 13-14=-255/1341, 12-13=-141/902, 11-12=0/133, 6-12=-428/135, 10-11=0/96, 9-10=-79/157
WEBS 4-13=-489/146, 5-13=-25/283, 5-12=-125/517, 10-12=-63/690, 7-12=-149/629, 7-10=-42/152, 2-16=-40/579, 8-10=-94/616, 3-16=-893/144, 14-16=-166/666, 3-14=-130/839

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-3-12, Interior (1) 2-3-12 to 5-7-13, Exterior (2) 5-7-13 to 9-10-12, Interior (1) 9-10-12 to 17-9-3, Exterior (2) 17-9-3 to 22-0-1, Interior (1) 22-0-1 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 17 and 46 lb uplift at joint 9.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



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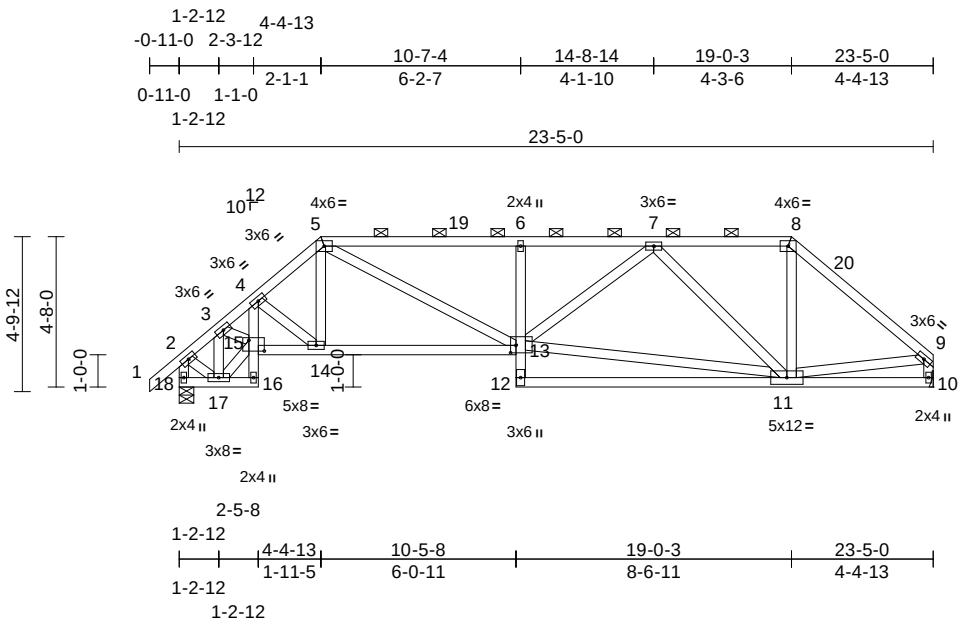
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A12 | Hip | 1 | 1 | Job Reference (optional) | I73486210 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:05 Page: 1
ID:sWXBZerbhCjxyJ5esOUweQzwm7M-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:71.5

Plate Offsets (X, Y): [13:0-2-0,0-2-12], [15:0-5-12,0-4-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.51 | Vert(LL) | -0.13 | 11-12 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.50 | Vert(CT) | -0.28 | 11-12 | >983 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.46 | Horz(CT) | 0.07 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 152 lb | FT = 20% |

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

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

**REACTIONS** (size) 10= Mechanical, 18=0-5-8
Max Horiz 18=103 (LC 11)
Max Uplift 10=-70 (LC 10), 18=-70 (LC 11)
Max Grav 10=924 (LC 2), 18=990 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-739/107, 3-4=-1649/243, 4-5=-1304/186, 5-6=-1622/241, 6-7=-1576/235, 7-8=-797/147, 8-9=-1094/147, 2-18=-945/146, 9-10=-896/121
BOT CHORD 17-18=-97/101, 16-17=-12/79, 15-16=-3/49, 4-15=-109/370, 14-15=-248/1282, 13-14=-166/998, 12-13=0/153, 6-13=-339/105, 11-12=-11/162, 10-11=-52/94
WEBS 4-14=-348/104, 5-14=-15/296, 5-13=-153/745, 11-13=-170/1104, 7-13=-66/423, 7-11=-705/166, 8-11=-40/424, 2-17=-45/588, 9-11=-82/693, 3-17=-901/157, 15-17=-165/668, 3-15=-129/802

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-3-12, Interior (1) 2-3-12 to 4-5-7, Exterior (2) 4-5-7 to 8-8-6, Interior (1) 8-8-6 to 18-11-9, Exterior (2) 18-11-9 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint 18 and 70 lb uplift at joint 10.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



ENGINEERING BY TRENCO
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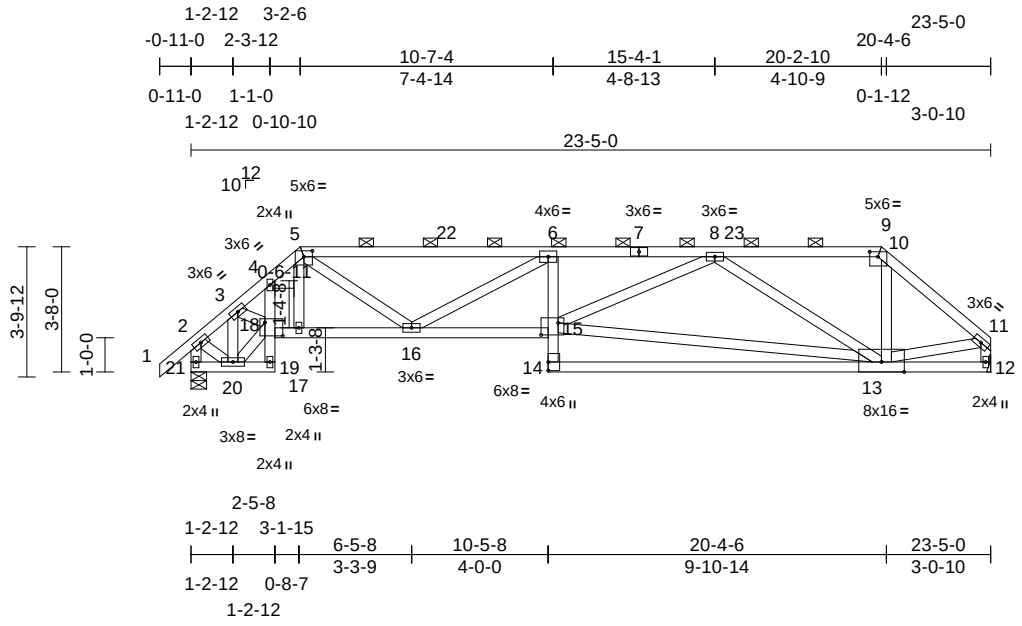
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A13 | Hip | 1 | 1 | Job Reference (optional) | I73486211 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:06
ID:fzcB8ZskJp3DH6Y7FyYT?qzwm9w-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:67.5

Plate Offsets (X, Y): [5:0-3-0,0-2-1], [9:0-2-14,0-1-12], [15:0-6-0,0-4-4], [18:0-6-4,0-4-12]

| 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) | -0.22 | 13-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.70 | Vert(CT) | -0.48 | 13-14 | >579 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.67 | Horz(CT) | 0.11 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 145 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-5-7 oc purlins, except end verticals, and 2-0-0 oc purlins (3-1-9 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
9-5-0 oc bracing: 15-16
6-0-0 oc bracing: 12-13.

**REACTIONS** (size) 12= Mechanical, 21=0-5-8
Max Horiz 21=84 (LC 11)
Max Uplift 12=-92 (LC 10), 21=-93 (LC 11)
Max Grav 12=924 (LC 2), 21=990 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-738/106, 3-4=-1591/252, 4-5=-1295/196, 5-6=-1700/242, 6-8=-2359/354, 8-9=-833/135, 9-10=-740/133, 10-11=-1082/135, 2-21=-943/148, 11-12=-929/112
BOT CHORD 20-21=-78/76, 19-20=-22/118, 18-19=-5/56, 4-18=-84/335, 17-18=-202/1093, 16-17=-207/1118, 15-16=-398/2492, 14-15=0/175, 6-15=0/158, 13-14=-16/257, 12-13=-34/45
WEBS 13-15=-252/1413, 8-15=-113/778, 8-13=-1035/232, 10-13=-32/460, 2-20=-48/605, 11-13=-75/754, 3-20=-885/156, 18-20=-145/621, 3-18=-109/701, 5-17=-41/93, 5-16=-107/744, 6-16=-922/188

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-2-10, Interior (1) 2-2-10 to 3-3-1, Exterior (2) 3-3-1 to 7-5-15, Interior (1) 7-5-15 to 20-1-15, Exterior (2) 20-1-15 to 23-3-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 21 and 92 lb uplift at joint 12.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



ENGINEERING BY TRENCO
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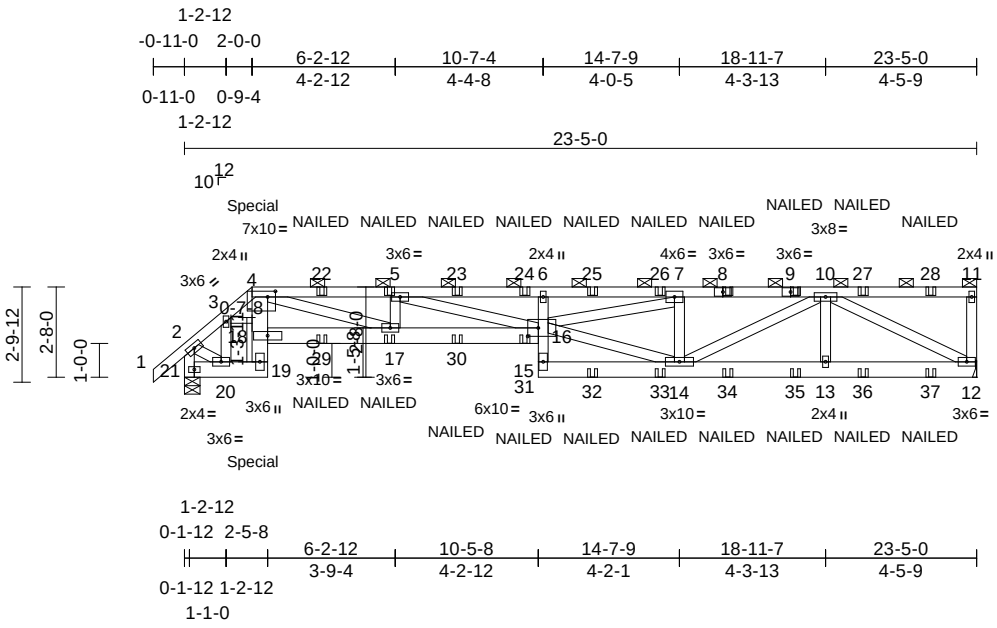
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | A14G | Half Hip Girder | 1 | 2 | Job Reference (optional) | I73486212 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:06 Page: 1
ID:WoAJQXs6_kn?UXW51dBSiRzwmKF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f







Scale = 1:68.1

Plate Offsets (X, Y): [4:0-2-12,0-2-0], [16:0-3-12,0-3-0]

| 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 | 0.34 | Vert(LL) | -0.18 | 15 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.36 | 16-17 | >765 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.34 | Horz(CT) | 0.11 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 300 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 6-15:2x4 SP No.2
WEBS 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-11-8 max.): 4-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 20-21.

**REACTIONS** (size) 12= Mechanical, 21=0-5-8
Max Horiz 21=63 (LC 10)
Max Uplift 12=-321 (LC 7), 21=-308 (LC 7)
Max Grav 12=1329 (LC 28), 21=1384 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-1259/318, 3-4=-1606/423, 4-5=-4599/1143, 5-6=-5735/1413, 6-7=-5491/1357, 7-10=-3197/780, 10-11=0/0, 2-21=-1479/337
BOT CHORD 20-21=-60/33, 19-20=-273/1009, 18-19=-34/125, 4-18=-78/379, 17-18=-510/1936, 16-17=-1143/4598, 15-16=-10/135, 6-16=-264/98, 14-15=-172/707, 13-14=-516/2120, 12-13=-516/2120
WEBS 11-12=-136/49, 5-17=-615/179, 5-16=-289/1190, 7-14=-1110/320, 14-16=-626/2565, 7-16=-606/2409, 10-13=0/270, 10-12=-2400/584, 10-14=-299/1219, 4-17=-667/2784, 3-20=-574/152, 2-20=-296/1174

**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, 2x4 - 1 row 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 7-10; Vult=115mph (3-second gust) Vasd=91mph; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Provide adequate drainage to prevent water ponding.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Refer to girder(s) for truss to truss connections.
12) Bearing at joint(s) 21 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 308 lb uplift at joint 21 and 321 lb uplift at joint 12.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 92 lb down and 74 lb up at 2-0-0 on top chord, and 59 lb down and 5 lb up at 2-2-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)


May 15,2025

Continued on page 2



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818 Soundside Road
Edenton, NC 27932

Vert: 1-2=-43, 2-4=-43, 4-11=-53, 19-21=-20, 16-18=-20, 12-15=-20

Concentrated Loads (lb)

Vert: 4=-32 (F), 8=-22 (F), 19=-33 (F), 9=-22 (F), 5=-14 (F), 17=-39 (F), 22=-14 (F), 23=-14 (F), 24=-14 (F), 25=-22 (F), 26=-22 (F), 27=-22 (F), 28=-22 (F), 29=-39 (F), 30=-39 (F), 31=-39 (F), 32=-25 (F), 33=-25 (F), 34=-25 (F), 35=-25 (F), 36=-25 (F), 37=-25 (F)

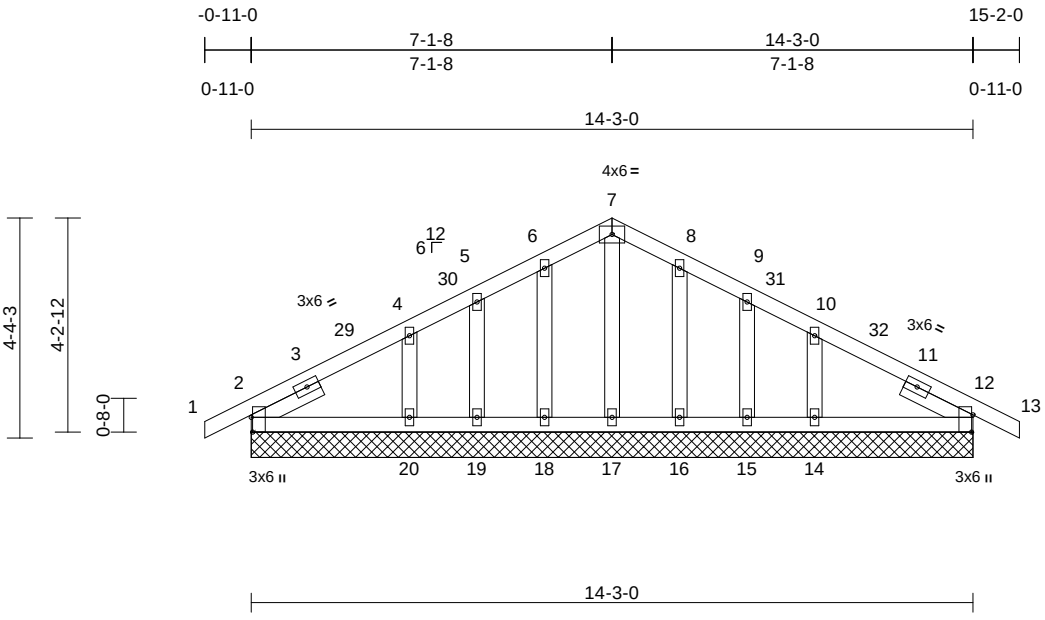

May 15,2025




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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | B1E | Common Supported Gable | 1 | 1 | Job Reference (optional) | I73486213 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:07 Page: 1
ID:QV3LpxsblJkVVRBOFJnj6qzwlrF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:45.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.08 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 79 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=14-3-0, 12=14-3-0, 14=14-3-0, 15=14-3-0, 16=14-3-0, 17=14-3-0, 18=14-3-0, 19=14-3-0, 20=14-3-0
Max Horiz 2=53 (LC 16)
Max Uplift 2=-19 (LC 17), 12=-24 (LC 17), 14=-66 (LC 17), 15=-10 (LC 17), 16=-27 (LC 17), 18=-28 (LC 16), 19=-8 (LC 16), 20=-71 (LC 16)
Max Grav 2=205 (LC 2), 12=205 (LC 2), 14=228 (LC 35), 15=56 (LC 2), 16=121 (LC 35), 17=65 (LC 33), 18=121 (LC 34), 19=56 (LC 2), 20=228 (LC 34)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-81/55, 4-5=-92/107, 5-6=-80/124, 6-7=-84/149, 7-8=-84/151, 8-9=-80/127, 9-10=-92/109, 10-12=-81/58, 12-13=0/27
BOT CHORD 2-20=0/69, 19-20=0/69, 18-19=0/69, 17-18=0/69, 16-17=0/69, 15-16=0/69, 14-15=0/69, 12-14=0/69
WEBS 7-17=-80/25, 6-18=-88/75, 5-19=-53/55, 4-20=-153/99, 8-16=-88/75, 9-15=-53/55, 10-14=-153/98

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-11-0 to 2-1-0, Exterior (2) 2-1-0 to 7-1-8, Corner (3) 7-1-8 to 10-1-8, Exterior (2) 10-1-8 to 15-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 2, 24 lb uplift at joint 12, 28 lb uplift at joint 18, 8 lb uplift at joint 19, 71 lb uplift at joint 20, 27 lb uplift at joint 16, 10 lb uplift at joint 15, 66 lb uplift at joint 14, 19 lb uplift at joint 2 and 24 lb uplift at joint 12.

**LOAD CASE(S)** Standard


May 15,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | B02 | Common | 2 | 1 | Job Reference (optional) | I73486214 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:07 Page: 1
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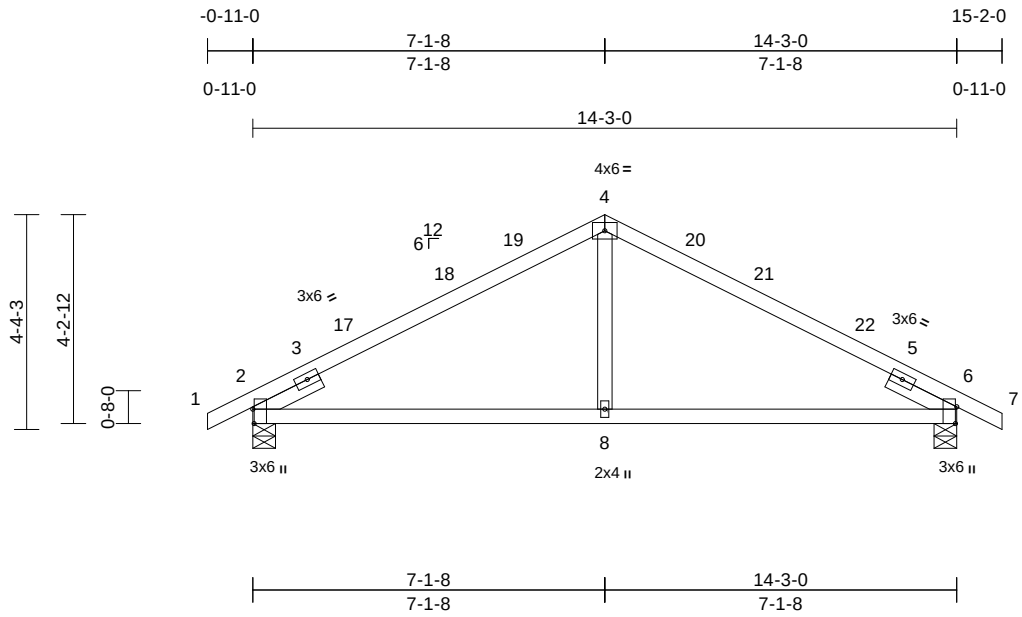


Scale = 1:46.6

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.61 | Vert(LL) | -0.07 | 8-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.49 | Vert(CT) | -0.12 | 8-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.03 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 58 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 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 5-9-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=53 (LC 16)
Max Uplift 2=-70 (LC 16), 6=-70 (LC 17)
Max Grav 2=625 (LC 2), 6=625 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-732/124, 4-6=-732/124, 6-7=0/27
BOT CHORD 2-8=-150/588, 6-8=-109/588
WEBS 4-8=0/309

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 7-1-8, Exterior (2) 7-1-8 to 10-1-8, Interior (1) 10-1-8 to 15-2-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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 70 lb uplift at joint 2 and 70 lb uplift at joint 6.

**LOAD CASE(S)** Standard


May 15,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | B03G | Common Girder | 1 | 2 | Job Reference (optional) | I73486215 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:07 Page: 1
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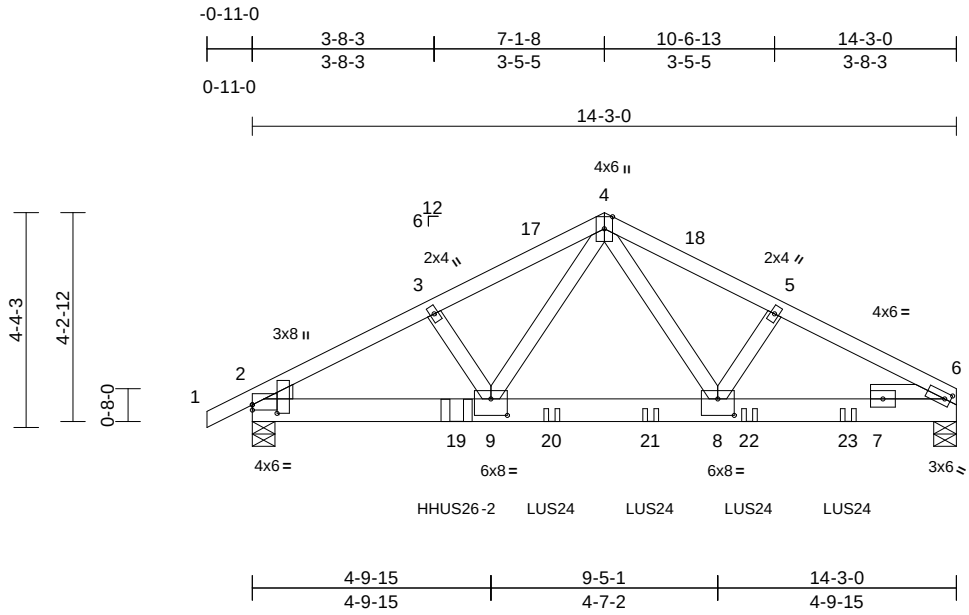


Scale = 1:46.6

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.45 | Vert(LL) | -0.07 | 8-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.70 | Vert(CT) | -0.14 | 8-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.30 | Horz(CT) | 0.02 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 161 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
WEDGE Left: 2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 1-6-0

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-1-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=60 (LC 36)
Max Uplift 2=-411 (LC 12), 6=-327 (LC 13)
Max Grav 2=2819 (LC 2), 6=3281 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-3=-5021/713, 3-4=-4937/727, 4-5=-4909/550, 5-6=-4998/536
BOT CHORD 2-9=-643/4403, 8-9=-365/3168, 6-8=-441/4407
WEBS 4-8=-169/2369, 5-8=-77/120, 4-9=-478/2418, 3-9=-22/150

**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 7-10; Vult=115mph (3-second gust) Vasd=91mph; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 327 lb uplift at joint 6 and 411 lb uplift at joint 2.
12) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 4-1-10 from the left end to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie LUS24 (4-SD9112 Girder, 2-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-0-12 from the left end to 12-0-12 to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-43, 4-6=-43, 10-14=-20
Concentrated Loads (lb)
Vert: 19=-1102 (B), 20=-793 (B), 21=-781 (B), 22=-769 (B), 23=-758 (B)

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT
May 15,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | CJ01 | Diagonal Hip Girder | 2 | 1 | I73486216 Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:08 Page: 1
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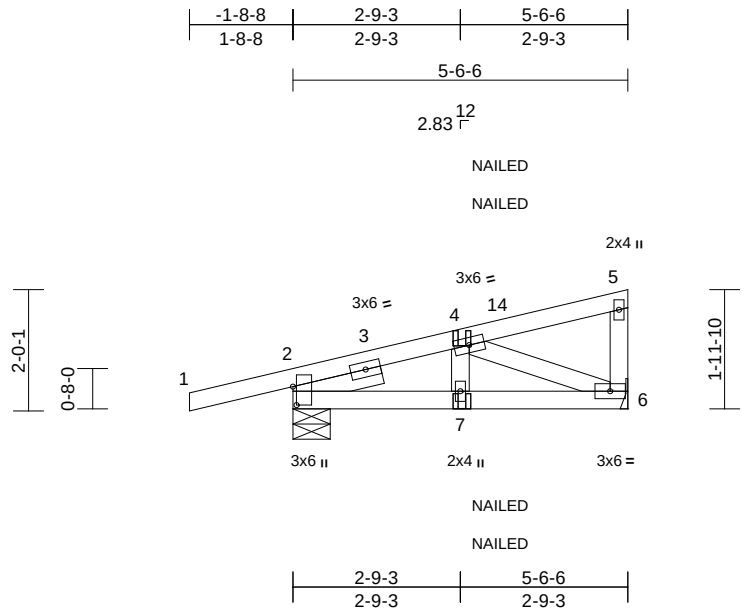


Scale = 1:38.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.25 | Vert(LL) | 0.00 | 6-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | -0.01 | 6-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.03 | Horz(CT) | 0.00 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 28 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-7-6, 6= Mechanical
Max Horiz 2=54 (LC 11)
Max Uplift 2=-90 (LC 8), 6=-30 (LC 12)
Max Grav 2=356 (LC 2), 6=181 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-211/124, 4-5=-28/14, 5-6=-75/21
BOT CHORD 2-7=-25/190, 6-7=-25/190
WEBS 4-7=0/86, 4-6=-203/40

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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 90 lb uplift at joint 2 and 30 lb uplift at joint 6.
11) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) 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: 1-5=-43, 6-8=-20
Concentrated Loads (lb)
Vert: 7=-2 (F=-1, B=-1)


May 15,2025



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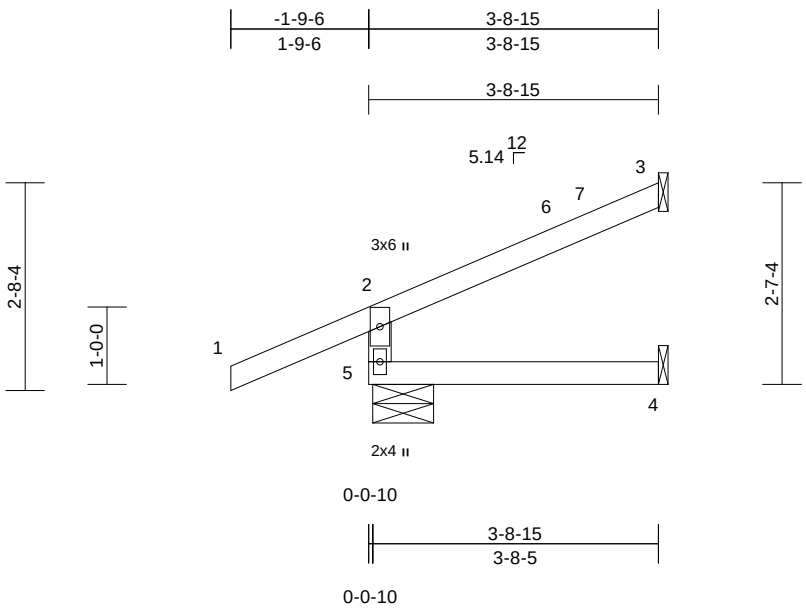
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | CJ02 | Jack-Open | 1 | 1 | Job Reference (optional) | I73486217 |






Scale = 1:29.8

| 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 | 0.29 | Vert(LL) | -0.01 | 4-5 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | -0.01 | 4-5 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| 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.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4= Mechanical, 5=0-9-7
Max Horiz 5=59 (LC 16)
Max Uplift 3=-38 (LC 16), 5=-35 (LC 16)
Max Grav 3=80 (LC 2), 4=64 (LC 7), 5=289 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-248/250, 1-2=0/50, 2-3=-54/23
BOT CHORD 4-5=0/0

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-9-6 to 2-5-9, Exterior (2) 2-5-9 to 3-8-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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 35 lb uplift at joint 5 and 38 lb uplift at joint 3.

**LOAD CASE(S)** Standard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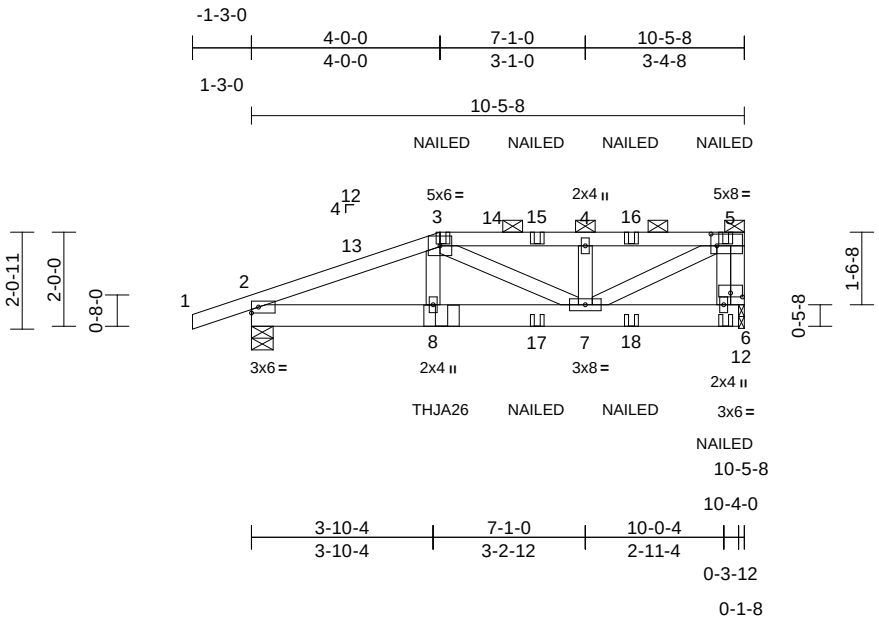
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | G01G | Half Hip Girder | 1 | 1 | Job Reference (optional) | I73486218 |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:08 Page: 1

ID:R??vG?3mAdFrw6KoFqznsozwljF-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:48.9

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.29 | Vert(LL) | -0.02 | 7-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.04 | 7-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.22 | Horz(CT) | 0.01 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 59 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x6 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.2 |

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-4-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |

**REACTIONS** (size) 2=0-5-8, 12=0-1-8
Max Horiz 2=57 (LC 8)
Max Uplift 2=-132 (LC 8), 12=-105 (LC 8)
Max Grav 2=676 (LC 2), 12=663 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/28, 2-3=-1112/178, 3-4=-914/150, 4-5=-914/150, 5-6=0/117 |
| BOT CHORD | 2-8=-179/1014, 7-8=-179/999, 6-7=-22/128 |
| WEBS | 3-8=-5/201, 3-7=-135/49, 4-7=-265/87, 5-7=-145/889, 5-12=-671/106 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 12.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 2 and 105 lb uplift at joint 12.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Use Simpson Strong-Tie THJA26 (THJA26 on 1 ply, Left Hand Hip) or equivalent at 4-0-6 from the left end to connect truss(es) to front face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.
16) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
17) 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=-43, 3-5=-53, 6-9=-20
   Concentrated Loads (lb)
   Vert: 8=-154 (F), 3=-26 (F), 5=-45 (F), 6=-33 (F), 15=-21 (F), 16=-21 (F), 17=-24 (F), 18=-24 (F)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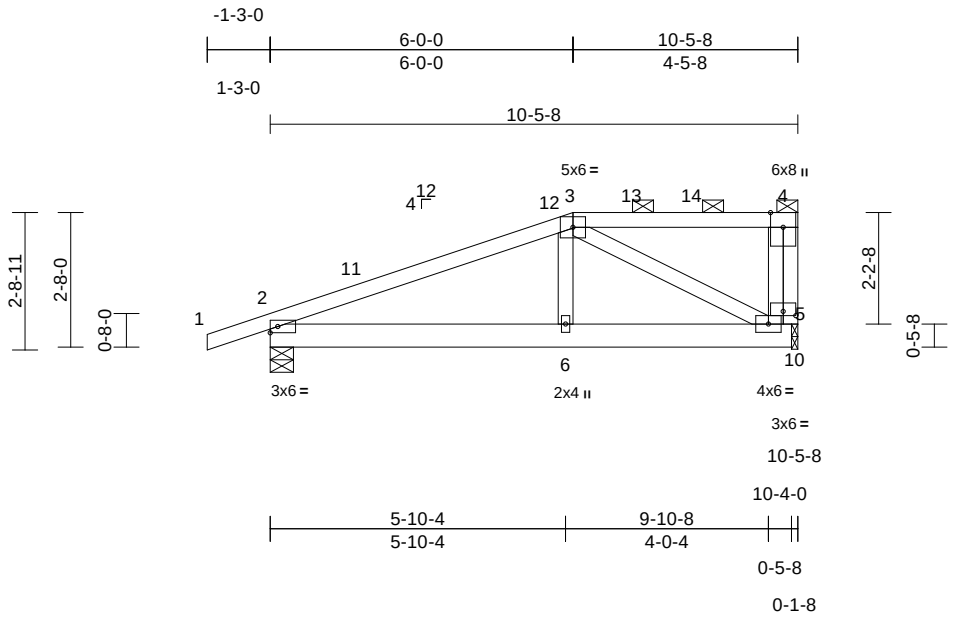
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | G02 | Half Hip | 1 | 1 | Job Reference (optional) | I73486219 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:08 Page: 1
ID:i2T7F5T0?yf_8lJoCLWgl2zwles-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f




Scale = 1:45.7

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.44 | Vert(LL) | -0.01 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | -0.03 | 6-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.19 | Horz(CT) | 0.01 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 57 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x6 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.2 |

**BRACING**

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

**REACTIONS** (size) 2=0-5-8, 10=0-1-8
Max Horiz 2=78 (LC 12)
Max Uplift 2=-93 (LC 12), 10=-66 (LC 12)
Max Grav 2=519 (LC 36), 10=393 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/28, 2-3=-599/117, 3-4=-69/18, 4-5=-52/275 |
| BOT CHORD | 2-6=-133/511, 5-6=-134/503 |
| WEBS | 3-6=0/228, 3-5=-501/133, 4-10=-396/101 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 6-0-0, Exterior (2) 6-0-0 to 10-2-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 10.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 2 and 66 lb uplift at joint 10.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



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| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | G03 | Half Hip | 1 | 1 | Job Reference (optional) | I73486220 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:09
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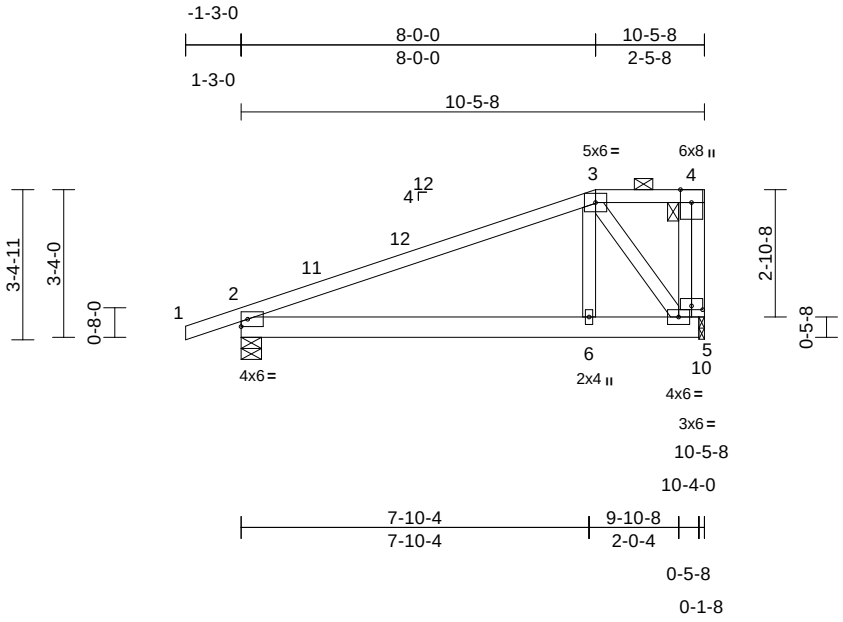


Scale = 1:52

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.81 | Vert(LL) | -0.04 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.40 | Vert(CT) | -0.08 | 6-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.14 | Horz(CT) | 0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 59 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x6 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.2 |

**BRACING**

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

**REACTIONS** (size) 2=0-5-8, 10=0-1-8
Max Horiz 2=98 (LC 12)
Max Uplift 2=-88 (LC 12), 10=-71 (LC 12)
Max Grav 2=547 (LC 36), 10=393 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/28, 2-3=-504/332, 3-4=-27/7, 4-5=-107/410 |
| BOT CHORD | 2-6=-127/390, 5-6=-96/377 |
| WEBS | 3-6=0/336, 3-5=-603/152, 4-10=-394/107 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 8-0-0, Exterior (2) 8-0-0 to 10-2-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 10.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 2 and 71 lb uplift at joint 10.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


May 15,2025



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| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | G04 | Half Hip | 1 | 1 | I73486221 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:09 Page: 1
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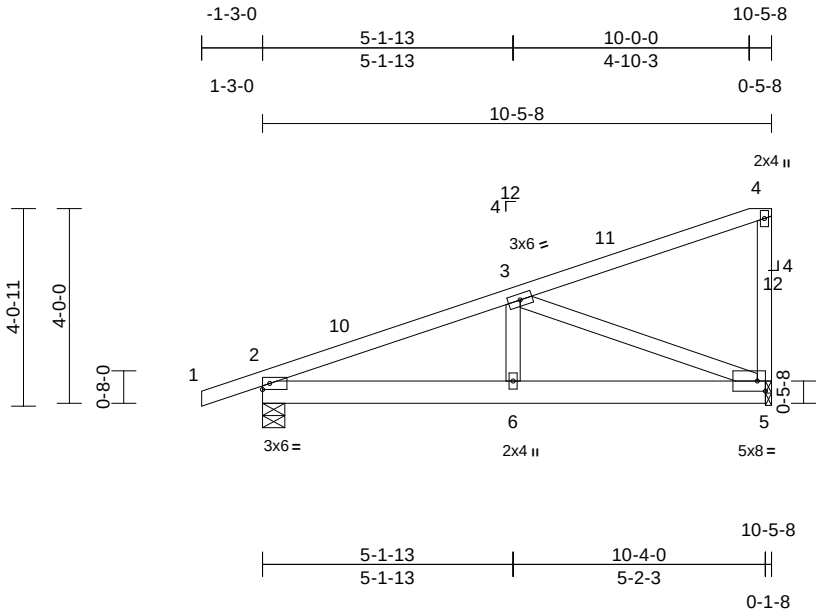


Scale = 1:47.3

| 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 | 0.30 | Vert(LL) | -0.01 | 6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | -0.02 | 5-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.32 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 58 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

**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=0-5-8, 5=0-1-8
Max Horiz 2=126 (LC 15)
Max Uplift 2=-91 (LC 12), 5=-72 (LC 16)
Max Grav 2=492 (LC 2), 5=408 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-666/87, 3-4=-96/49, 4-5=-130/74
BOT CHORD 2-6=-141/591, 5-6=-139/591
WEBS 3-6=0/211, 3-5=-613/129

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-3-12 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 2 and 72 lb uplift at joint 5.

**LOAD CASE(S)** Standard


May 15,2025



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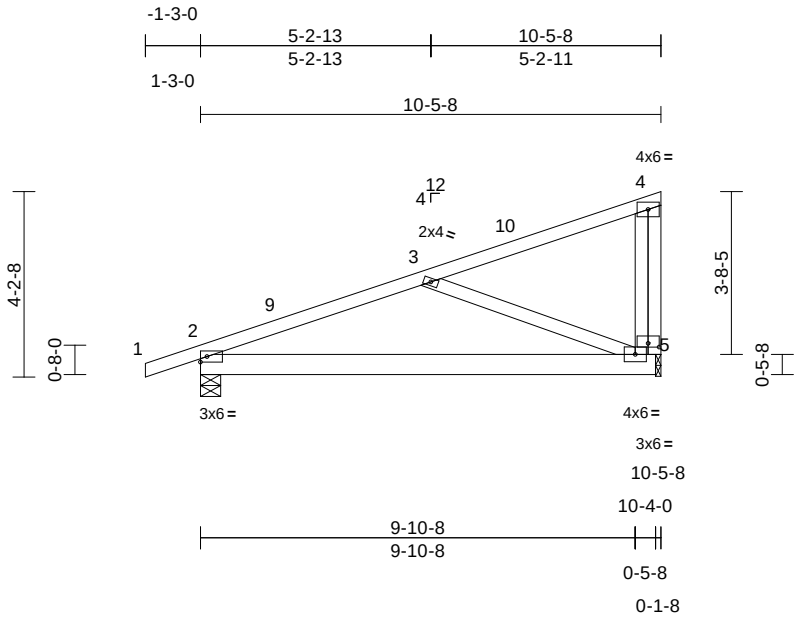
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | G05 | Monopitch | 6 | 1 | I73486222 Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:09 Page: 1
ID:txE9gbcQzFgf4wJnriqA8_zwlmQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:52.3

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.32 | Vert(LL) | -0.09 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | -0.18 | 5-8 | >685 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.24 | Horz(CT) | 0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 60 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
OTHERS 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) 2=0-5-8, 5=0-1-8
Max Horiz 2=125 (LC 15)
Max Uplift 2=-90 (LC 12), 5=-71 (LC 16)
Max Grav 2=486 (LC 2), 5=402 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-3=-581/116, 3-4=-121/39, 4-5=-124/81
BOT CHORD 2-5=-166/516
WEBS 3-5=-506/161

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 10-2-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 2 and 71 lb uplift at joint 5.

**LOAD CASE(S)** Standard


May 15,2025



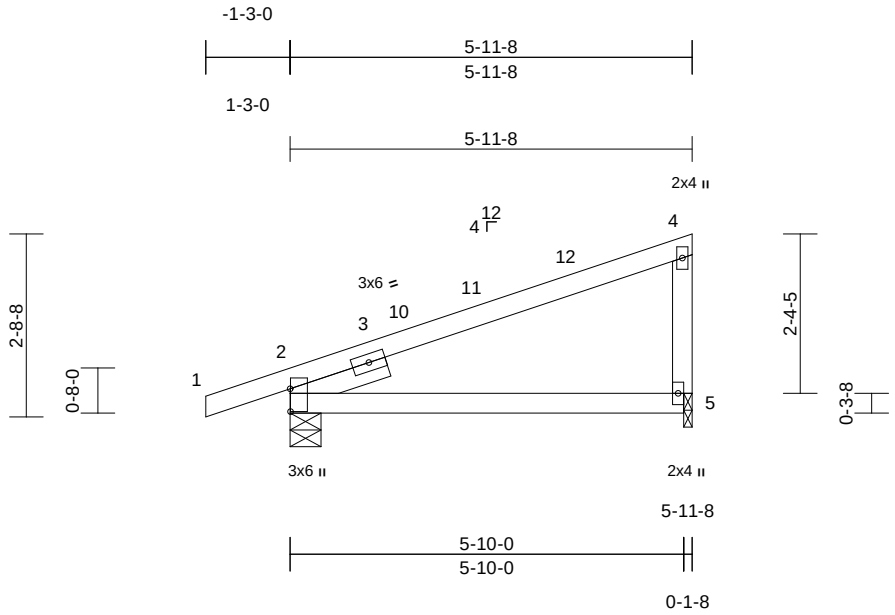
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | G06 | Monopitch | 3 | 1 | Job Reference (optional) | I73486223 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:10
ID:gtLjn5LFUaA_E7gbnPn0XkzwlcR-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f






Scale = 1:34.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.49 | Vert(LL) | -0.05 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.37 | Vert(CT) | -0.11 | 5-8 | >624 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.02 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 25 lb | FT = 20% |

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

**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) 2=0-5-8, 5=0-1-8
Max Horiz 2=78 (LC 15)
Max Uplift 2=-68 (LC 12), 5=-41 (LC 16)
Max Grav 2=316 (LC 2), 5=224 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-242/55, 4-5=-150/89
BOT CHORD 2-5=-152/151

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 to 5-9-12 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 2 and 41 lb uplift at joint 5.

**LOAD CASE(S)** Standard


May 15,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | G07G | Half Hip Girder | 1 | 1 | Job Reference (optional) | I73486224 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:10 Page: 1
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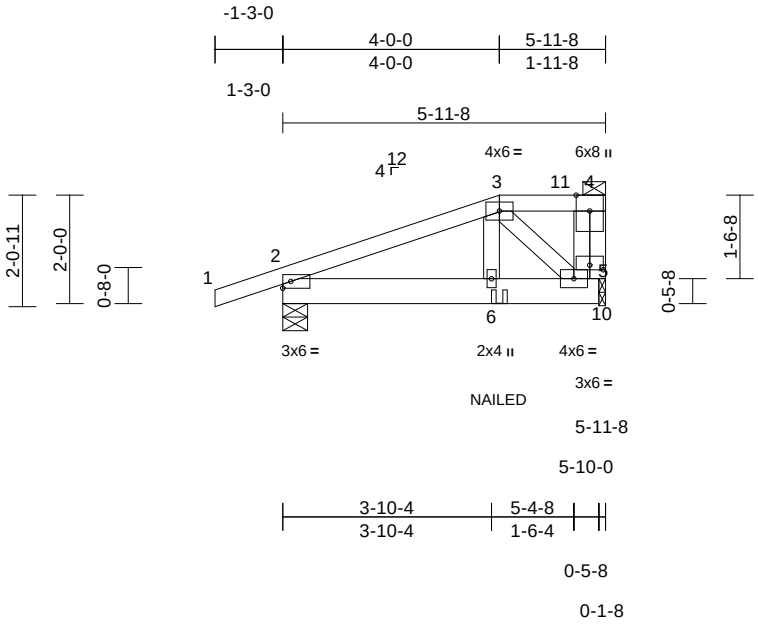



Scale = 1:42.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.24 | Vert(LL) | 0.00 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 16.5/15.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | -0.01 | 6-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.05 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 33 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-11-8 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) 2=0-5-8, 10=0-1-8
Max Horiz 2=57 (LC 49)
Max Uplift 2=-82 (LC 8), 10=-61 (LC 8)
Max Grav 2=393 (LC 32), 10=310 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-367/64, 3-4=-44/9, 4-5=-46/260
BOT CHORD 2-6=-60/307, 5-6=-58/289
WEBS 3-6=-29/210, 3-5=-343/69, 4-10=-313/62

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 10.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 2 and 61 lb uplift at joint 10.
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 2-12d (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=-43, 3-4=-53, 5-7=-20
Concentrated Loads (lb)
Vert: 6=-130 (B)

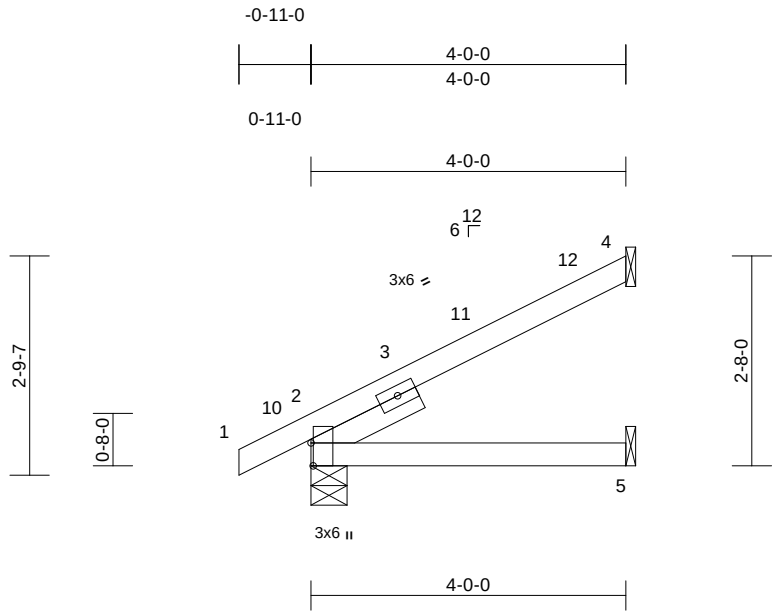

May 15,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J01 | Jack-Open | 7 | 1 | I73486225 |
| | | | | | Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:10 Page: 1
ID:T0wDY0aVB_n34b2Y5bYWZJzwmdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:29.3

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 | 0.21 | Vert(LL) | 0.01 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | -0.02 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 17 lb | FT = 20% |

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

**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, 4= Mechanical, 5= Mechanical
Max Horiz 2=71 (LC 16)
Max Uplift 2=-18 (LC 16), 4=-42 (LC 16), 5=-1 (LC 16)
Max Grav 2=219 (LC 2), 4=101 (LC 2), 5=71 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-129/36
BOT CHORD 2-5=-115/74

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-1-0, Interior (1) 2-1-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 4, 18 lb uplift at joint 2 and 1 lb uplift at joint 5.

**LOAD CASE(S)** Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

May 15,2025



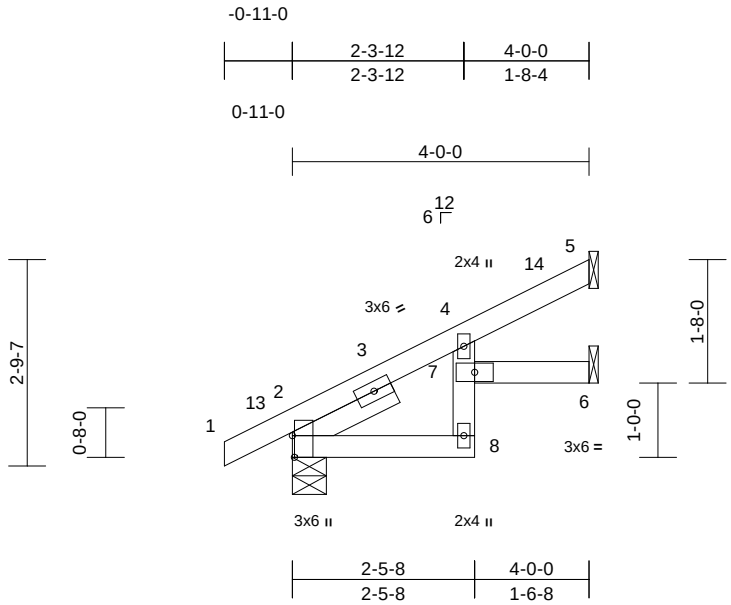
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J02 | Jack-Open | 4 | 1 | I73486226 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:10
ID:T0wDY0aVB_n34b2Y5bYWZJzwmdz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:31.1

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 | 0.12 | Vert(LL) | 0.01 | 6-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | -0.01 | 6-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.01 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 18 lb | FT = 20% |

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

**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, 5= Mechanical, 6= Mechanical
Max Horiz 2=71 (LC 16)
Max Uplift 2=-18 (LC 16), 5=-29 (LC 16), 6=-14 (LC 16)
Max Grav 2=219 (LC 2), 5=80 (LC 2), 6=71 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-115/19, 4-5=-32/31
BOT CHORD 2-8=-86/103, 7-8=-19/55, 4-7=-8/37, 6-7=0/0

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-11-0 to 2-2-15, Interior (1) 2-2-15 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 29 lb uplift at joint 5, 18 lb uplift at joint 2 and 14 lb uplift at joint 6.

**LOAD CASE(S)** Standard


May 15,2025



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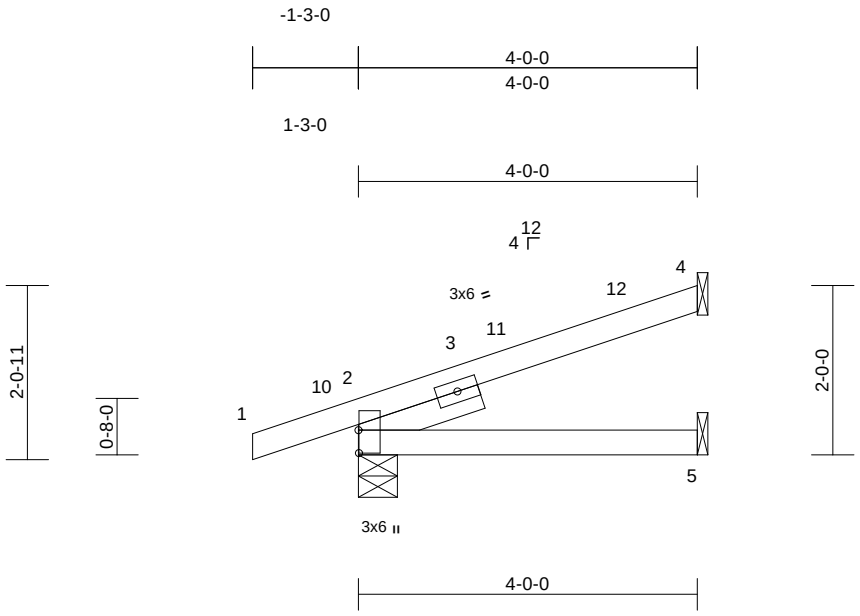
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J03 | Jack-Open | 4 | 1 | I73486227 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11 Page: 1
ID:Benxz2j8JWGb63LTE0TlsOzwll_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:27.2

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | 0.01 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.15 | Vert(CT) | -0.02 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 17 lb | FT = 20% |

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

**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, 4= Mechanical, 5= Mechanical
Max Horiz 2=56 (LC 12)
Max Uplift 2=-54 (LC 12), 4=-33 (LC 16)
Max Grav 2=244 (LC 2), 4=97 (LC 2), 5=69 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-127/25
BOT CHORD 2-5=-87/71

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 33 lb uplift at joint 4 and 54 lb uplift at joint 2.

**LOAD CASE(S)** Standard


May 15,2025



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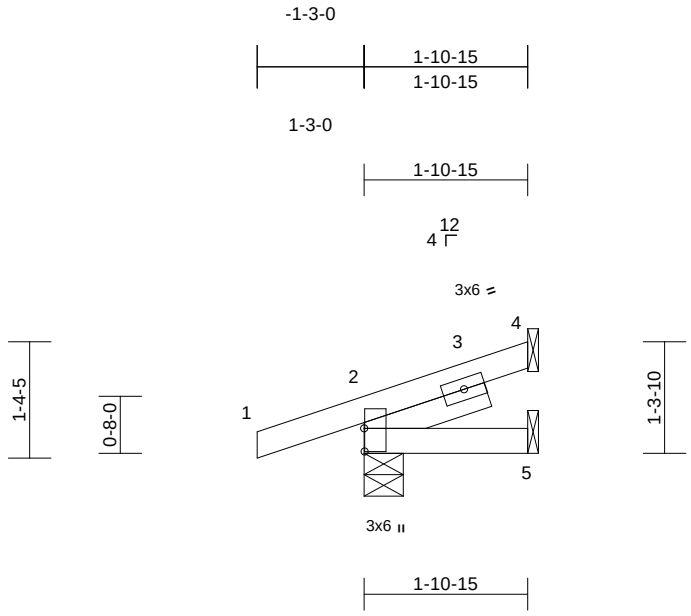
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J04 | Jack-Open | 2 | 1 | I73486228 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11
ID:LgXWGJdUHSJD?w4tXsweaYzHCbl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:26.9

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.11 | Vert(LL) | 0.00 | 8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 5-8 | >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 | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 10 lb | FT = 20% |

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

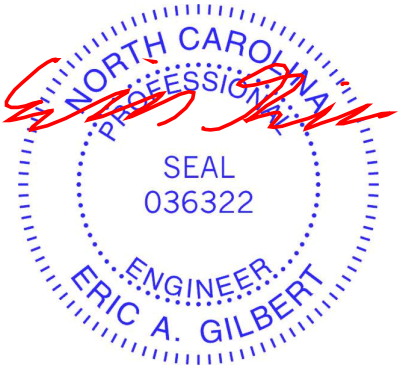
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=36 (LC 12)
Max Uplift 2=-50 (LC 12), 4=-14 (LC 16)
Max Grav 2=176 (LC 2), 4=35 (LC 2), 5=27 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-37/36
BOT CHORD 2-5=-30/18

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 50 lb uplift at joint 2 and 14 lb uplift at joint 4.

**LOAD CASE(S)** Standard




May 15,2025

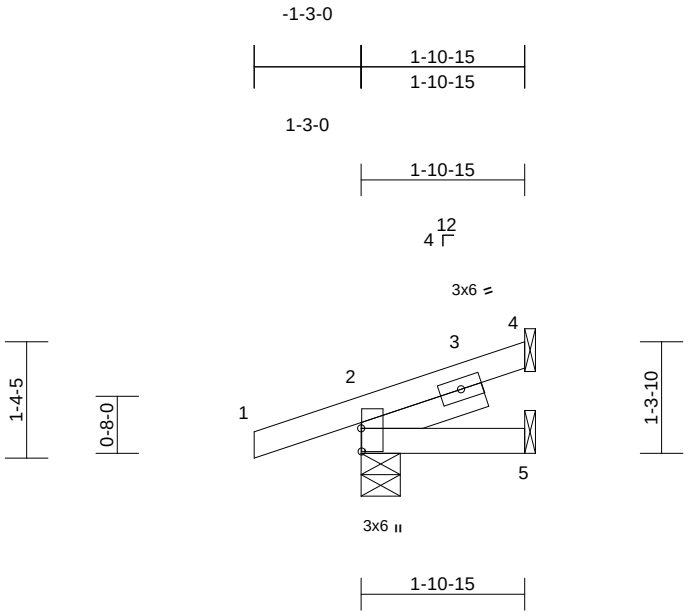


ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J05 | Jack-Open | 1 | 1 | I73486229 |
| | | | | | Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11 Page: 1
ID:NKhUGuTygZyGkVdQVyYbrBzHCRA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:26.9

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.11 | Vert(LL) | 0.00 | 8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 5-8 | >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 | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 10 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-10-15 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=36 (LC 12)
Max Uplift 2=-50 (LC 12), 4=-14 (LC 16)
Max Grav 2=176 (LC 2), 4=35 (LC 2), 5=27 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-37/36
BOT CHORD 2-5=-30/18

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 50 lb uplift at joint 2 and 14 lb uplift at joint 4.

**LOAD CASE(S)** Standard


May 15,2025



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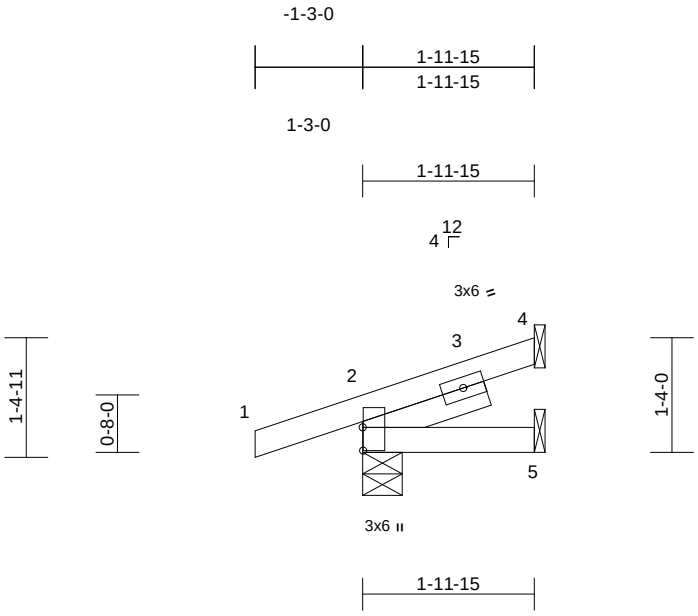
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J06 | Jack-Open | 1 | 1 | I73486230 Job Reference (optional) |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11
ID:V6VqZ8qmcnk0K6wBFF4d3WzHCQi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:26.8

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.11 | Vert(LL) | 0.00 | 8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 5-8 | >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 | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 10 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-11-15 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=37 (LC 12)
Max Uplift 2=-50 (LC 12), 4=-15 (LC 16)
Max Grav 2=178 (LC 2), 4=38 (LC 2), 5=29 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-39/35
BOT CHORD 2-5=-30/20

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 50 lb uplift at joint 2 and 15 lb uplift at joint 4.

**LOAD CASE(S)** Standard


May 15,2025



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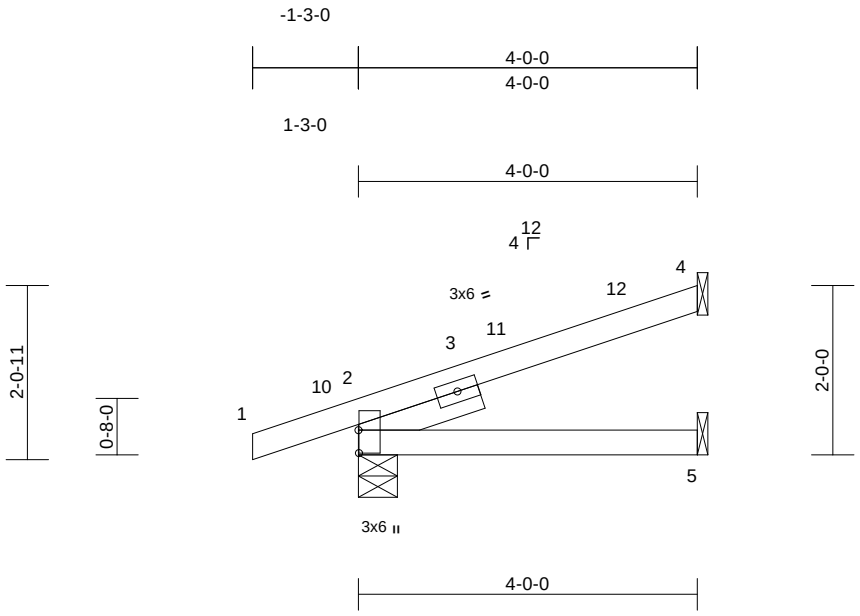
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | J07 | Jack-Open | 1 | 1 | I73486231 Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11 Page: 1
ID:ln3Uk47ovJqwsl1vhnrKrJzGcFX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:27.2

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | 0.01 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.15 | Vert(CT) | -0.02 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 17 lb | FT = 20% |

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

**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, 4= Mechanical, 5= Mechanical
Max Horiz 2=56 (LC 12)
Max Uplift 2=-54 (LC 12), 4=-33 (LC 16)
Max Grav 2=244 (LC 2), 4=97 (LC 2), 5=69 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/26, 2-4=-127/25
BOT CHORD 2-5=-87/71

**NOTES**
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-3-0 to 1-9-0, Interior (1) 1-9-0 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 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 33 lb uplift at joint 4 and 54 lb uplift at joint 2.

**LOAD CASE(S)** Standard


May 15,2025



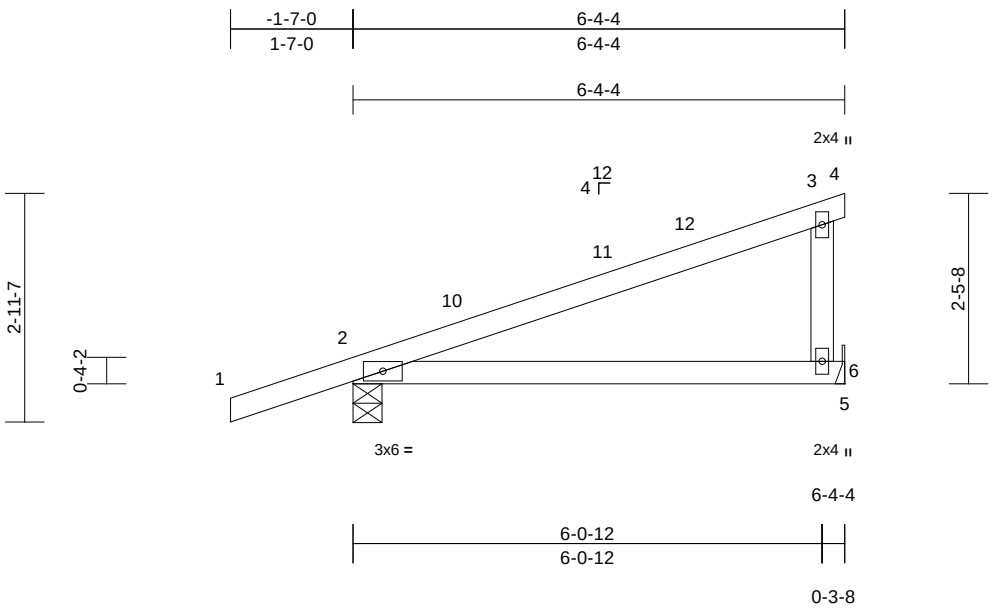
ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | P01 | Monopitch | 5 | 1 | Job Reference (optional) | I73486232 |

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

Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:11
ID:DTHCc_pbqn1fJA?LBdAT8nzwlok-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:29.8

| 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 | 0.52 | Vert(LL) | -0.05 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.39 | Vert(CT) | -0.13 | 6-9 | >576 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 25 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.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) 2=0-4-8, 6= Mechanical
Max Horiz 2=78 (LC 15)
Max Uplift 2=-83 (LC 12), 6=-42 (LC 16)
Max Grav 2=350 (LC 2), 6=242 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-92/53, 3-4=-5/0, 3-6=-160/93
BOT CHORD 2-6=-45/70, 5-6=0/0

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -0-6-11 to 2-5-5, Interior (1) 2-5-5 to 7-4-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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 42 lb uplift at joint 6 and 83 lb uplift at joint 2.

**LOAD CASE(S)** Standard


May 15,2025



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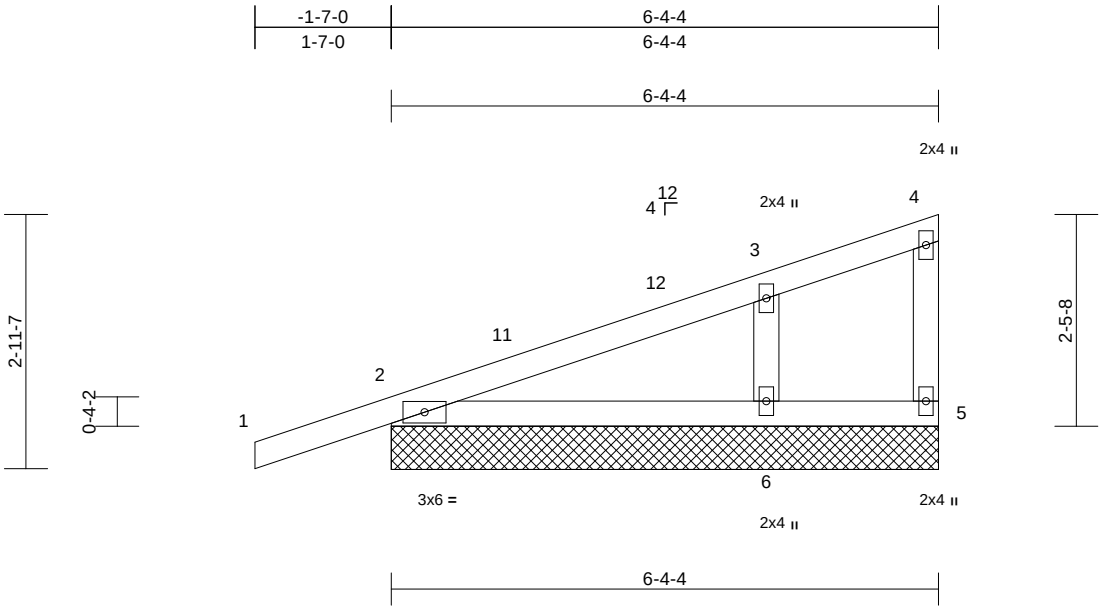
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | P01E | Monopitch Supported Gable | 1 | 1 | Job Reference (optional) | I73486233 |






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 | 0.22 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.39 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 27 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 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) 2=6-4-4, 5=6-4-4, 6=6-4-4
Max Horiz 2=78 (LC 15)
Max Uplift 2=-68 (LC 12), 6=-50 (LC 16)
Max Grav 2=269 (LC 2), 5=117 (LC 7), 6=328 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-108/73, 3-4=-47/35, 4-5=-9/37
BOT CHORD 2-6=-65/95, 5-6=-30/39
WEBS 3-6=-245/179

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-6-11 to 2-5-5, Exterior (2) 2-5-5 to 7-2-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 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 68 lb uplift at joint 2, 50 lb uplift at joint 6 and 68 lb uplift at joint 2.

**LOAD CASE(S)** Standard


May 15,2025



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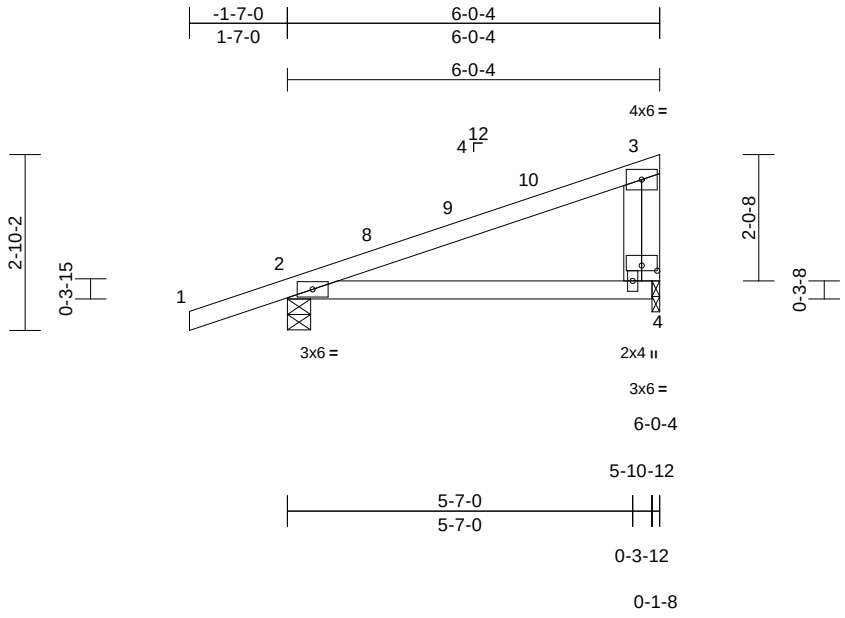
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | P02 | Monopitch | 5 | 1 | I73486234 Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:12 Page: 1
ID:HAG9SZc_H3LHEJ202UMxphzwlni-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f




Scale = 1:37.3

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.45 | Vert(LL) | -0.04 | 4-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.35 | Vert(CT) | -0.10 | 4-7 | >687 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/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.2
OTHERS 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) 2=0-4-8, 4=0-1-8
Max Horiz 2=72 (LC 15)
Max Uplift 2=-82 (LC 12), 4=-37 (LC 16)
Max Grav 2=337 (LC 2), 4=216 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-92/49, 3-4=-145/82
BOT CHORD 2-4=-39/70

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) -1-7-0 to 1-5-0, Interior (1) 1-5-0 to 5-8-12 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) 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) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 2 and 37 lb uplift at joint 4.

**LOAD CASE(S)** Standard


May 15,2025



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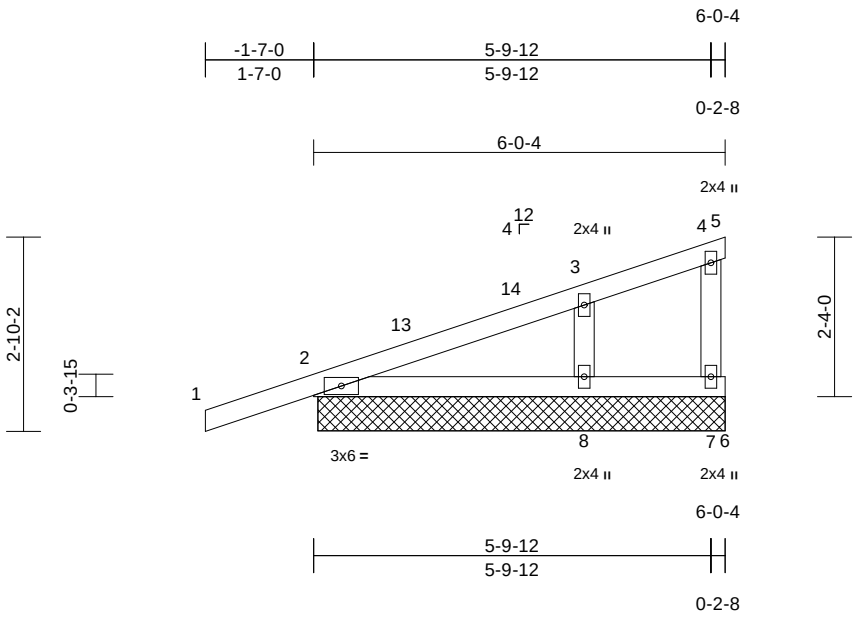
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity | |
|---|---|---|---|---|---|---|
| P02595-25452 | P02E | Monopitch Supported Gable | 1 | 1 | Job Reference (optional) | I73486235 |

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

Run: 8.83 E Feb 18 2025 Print: 8.830 E Feb 18 2025 MiTek Industries, Inc. Thu May 15 11:57:21 ID:HzsR9?E_Hkm2s9SqXhmvNSzwlmv-MoOQHRfg5AGUFo9nsdljbqVsS372xAn3PZeXXCzGQhE






Scale = 1:33.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 25 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| WEBS | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.2 |

**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** All bearings 5-11-8.

(lb) - Max Horiz 2=82 (LC 12)
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 5, 8 except 6=-486 (LC 7)
Max Grav All reactions 250 (lb) or less at joint (s) 5, 6 except 2=257 (LC 2), 7=619 (LC 7), 8=276 (LC 2)

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

**NOTES**

1) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-7-0 to 1-5-0, Exterior (2) 1-5-0 to 6-0-4 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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 2.00 times flat roof load of 11.5 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint (s) 2, 8, 2 except (jt=lb) 6=486.


May 15,2025



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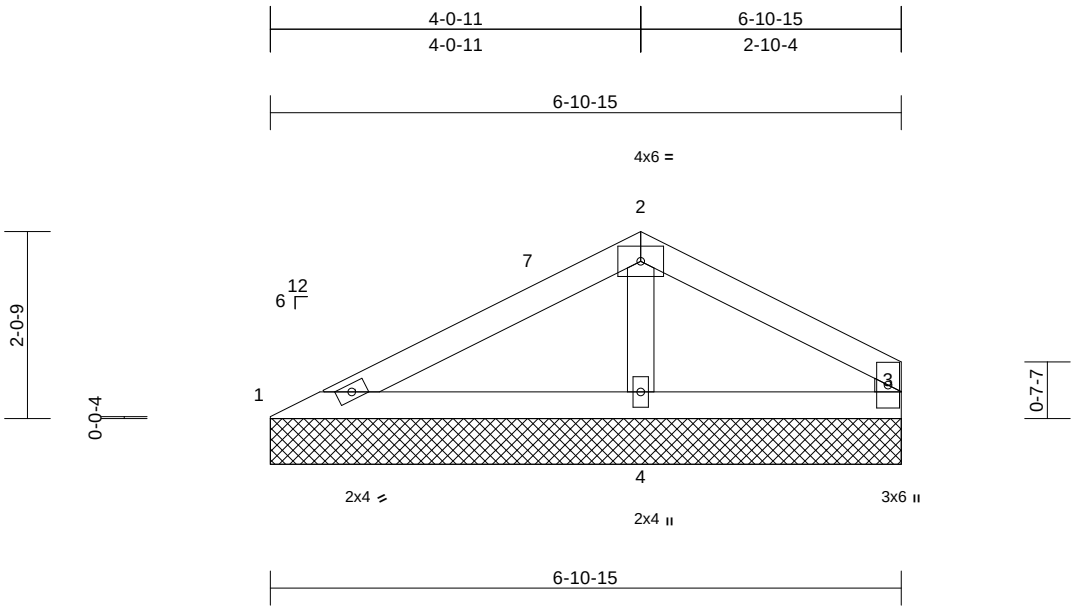
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1034 Serenity |
|---|---|---|---|---|---|
| P02595-25452 | V01B | Valley | 1 | 1 | I73486236 Job Reference (optional) |

84 Lumber-2383 (Dunn, NC), Dunn, NC - 28334, Run: 8.83 S Apr 24 2025 Print: 8.830 S Apr 24 2025 MiTek Industries, Inc. Wed May 14 11:19:12 Page: 1
ID:d6nywVIgtnDHo1gvDgUUa6zwhux-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:25.2

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 11.5/15.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.04 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 23 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 6-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=6-10-15, 3=6-10-15, 4=6-10-15
Max Horiz 1=27 (LC 16)
Max Uplift 1=-6 (LC 16), 3=-58 (LC 33), 4=-61 (LC 16)
Max Grav 1=89 (LC 2), 3=56 (LC 34), 4=452 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-107/193, 2-3=-63/200
BOT CHORD 1-4=-143/91, 3-4=-143/85
WEBS 2-4=-329/125

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 0-0-8 to 3-0-8, Interior (1) 3-0-8 to 4-1-3, Exterior (2) 4-1-3 to 6-9-11 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 7-10; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.5 psf (flat roof snow: Lum DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
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) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 1, 58 lb uplift at joint 3 and 61 lb uplift at joint 4.

**LOAD CASE(S)** Standard


May 15,2025



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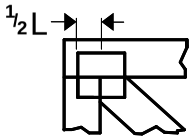
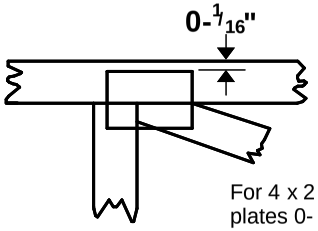
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION




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




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

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

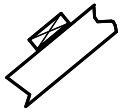
* Plate location details available in MiTek software or upon request.

## PLATE SIZE

4 x 4

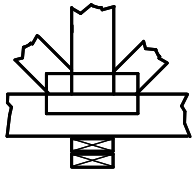
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

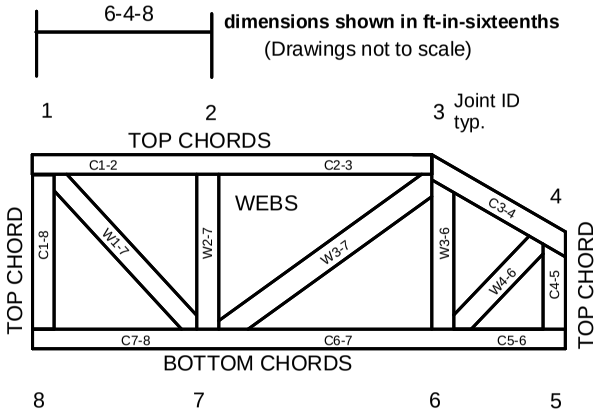


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

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

# Numbering System




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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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



MiTek®

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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.