ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 32379-32379A
50 SERENITY - roof

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I54792723 thru I54792761

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844


October 19,2022

Gilbert, Eric

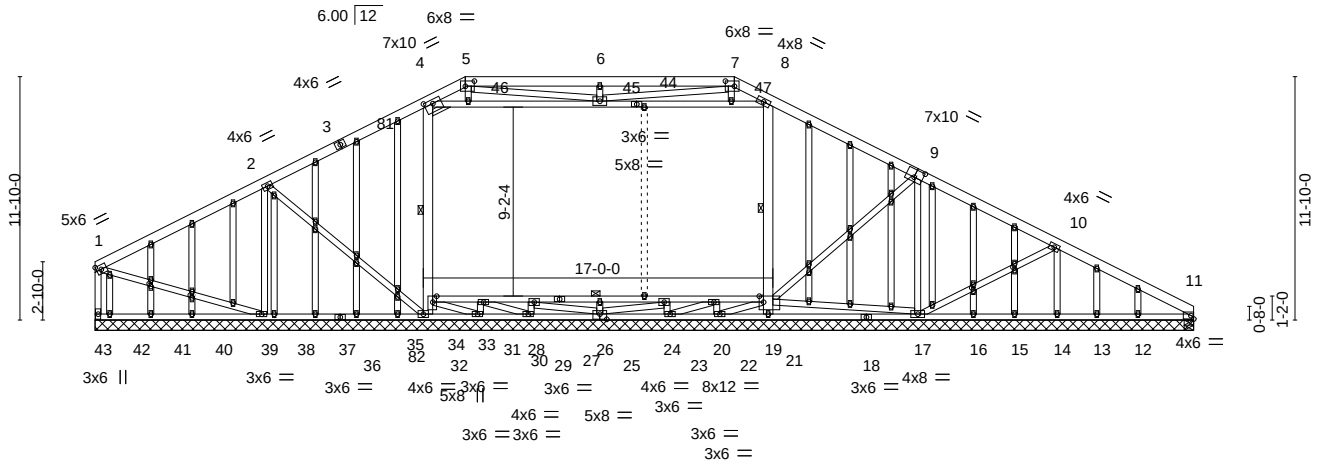
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A1E | ROOF TRUSS | 1 | 1 | I54792723<br>Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:43:54 2022 Page 1
ID:ED3wuaDFL2j3tbolojiMjZyqmu4-RvZusbZ7O5dZJPZVbKaGvSt61VWbIS9merlnZBySF6J

| 8-2-14 | 16-2-4 | 18-0-0 | 24-6-8 | 31-1-0 | 32-8-12 | 40-0-0 | 46-9-6 | 53-5-0 |
|---|---|---|---|---|---|---|---|---|
| 8-2-14 | 7-11-6 | 1-9-12 | 6-6-8 | 6-6-8 | 1-7-12 | 7-3-4 | 6-9-6 | 6-7-10 |

Scale = 1:112.0




NON-STRUCTURAL STUD(S) SHOWN DASHED FOR TRUSS HANDLING.
TO BE REMOVED AFTER TRUSS IS INSTALLED.

| 8-2-14 | 16-2-4 | 18-8-14 | 21-2-7 | 24-6-8 | 27-9-12 | 30-2-12 | 32-8-12 | 40-0-0 | 46-9-6 | 53-5-0 |
|---|---|---|---|---|---|---|---|---|---|---|
| 8-2-14 | 7-11-6 | 2-6-10 | 2-5-10 | 3-4-1 | 3-3-4 | 2-5-0 | 2-6-0 | 7-3-4 | 6-9-6 | 6-7-10 |

Plate Offsets (X,Y)-- [4:0-5-0,0-2-4], [5:0-5-4,0-3-0], [7:0-5-4,0-3-0], [9:0-5-0,0-4-8], [21:0-2-8,Edge], [26:0-4-0,0-3-0], [32:Edge,0-2-4], [57:0-1-10,0-1-0], [59:0-1-10,0-1-0], [74:0-1-15,0-1-0], [76:0-1-15,0-1-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.40 | Vert(LL) | -0.05 | 17-19 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.11 | 17-19 | >822 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.46 | Horz(CT) | 0.01 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 593 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* 4-33,8-19: 2x6 SP No.2, 1-43: 2x4 SP No.3 |
| OTHERS | 2x4 SP No.2 or 2x4 SPF No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 4-5-1 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. Except: 10-0-0 oc bracing: 21-32 |
| WEBS | 1 Row at midpt 4-32, 8-21 |

**REACTIONS.** All bearings 53-5-0.
(lb) - Max Horz 43=-210(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 43, 33, 17, 11, 14, 38, 42 except 39=-112(LC 10)
Max Grav All reactions 250 lb or less at joint(s) 11, 11, 34, 35, 37, 38, 40, 41, 42, 16, 15, 13, 12 except 43=449(LC 22), 39=637(LC 22), 33=771(LC 1), 19=791(LC 23), 17=586(LC 1), 26=439(LC 16), 28=379(LC 16), 24=385(LC 16), 31=349(LC 16), 20=294(LC 16), 14=579(LC 1)

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

| | |
|---|---|
| TOP CHORD | 1-2=-390/117, 2-4=-497/202, 4-5=-893/190, 5-6=-2190/473, 6-7=-2190/473, 7-8=-916/205, 8-9=-515/220, 9-10=-403/144, 10-11=-251/67, 1-43=-408/123 |
| BOT CHORD | 38-39=-51/303, 37-38=-51/303, 35-37=-51/303, 34-35=-51/303, 33-34=-51/303, 31-33=-10/262, 19-20=0/256 |
| WEBS | 2-39=-629/193, 32-33=-788/60, 32-81=-760/145, 4-81=-583/130, 19-21=-677/48, 8-21=-722/118, 9-17=-533/153, 25-26=-386/0, 28-29=-320/0, 23-24=-315/0, 4-46=-7/357, 45-46=-4/373, 45-47=-31/411, 8-47=-36/409, 6-45=-323/135, 30-31=-298/0, 20-22=-273/0, 5-45=-332/1539, 7-45=-307/1468, 10-14=-538/175 |

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Ceiling dead load (5.0 psf) on member(s). 4-46, 45-46, 45-47, 8-47; Wall dead load (5.0psf) on member(s).32-81, 4-81, 8-21
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 30-32, 29-30, 25-29, 23-25, 22-23, 21-22
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 43, 33, 17, 11, 14, 38, 42 except (jt=lb) 39=112.

Continued on page 2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**NOTES-**

10) Attic room checked for L/360 deflection.

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A2 | ROOF TRUSS | 6 | 1 | I54792724 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:43:57 2022 Page 1
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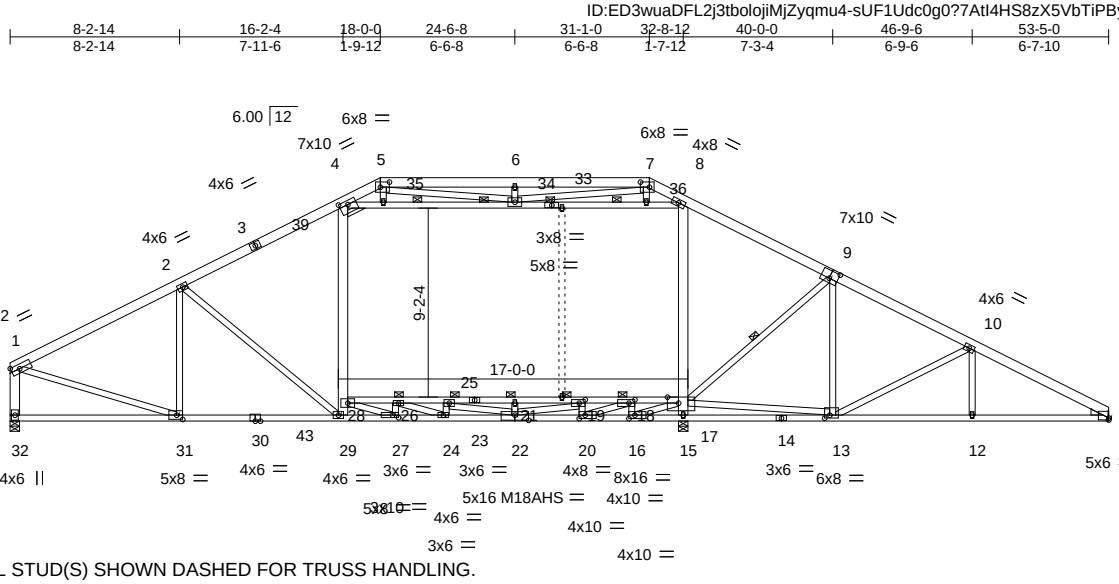


NON-STRUCTURAL STUD(S) SHOWN DASHED FOR TRUSS HANDLING.
TO BE REMOVED AFTER TRUSS IS INSTALLED.

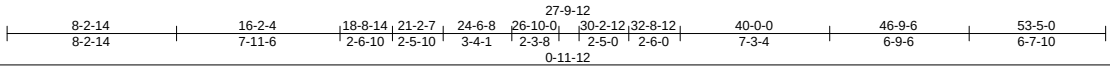


Plate Offsets (X,Y)-- [4:0-5-0,0-2-4], [5:0-5-4,0-3-0], [7:0-5-4,0-3-0], [9:0-5-0,0-4-8], [11:0-0-0,0-1-3], [13:0-3-0,0-1-12], [16:0-3-8,0-2-0], [17:0-6-8,Edge], [18:0-3-8,0-2-0], [19:0-3-8,0-2-0], [20:0-3-8,0-2-0], [22:0-8-0,0-3-0], [27:0-3-8,0-1-8], [31:0-3-8,0-2-8]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.58 | Vert(LL) | -0.35 | 21-25 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.94 | Vert(CT) | -0.66 | 24-27 | >589 | 180 | M18AHS | 142/136 |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.89 | Horz(CT) | 0.14 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | Attic | -0.25 | 17-28 | 776 | 360 | Weight: 467 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 *Except* |
| | 11-14,14-22: 2x4 SP No.1, 22-30: 2x4 SP DSS |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* |
| | 4-29,8-15,1-32: 2x6 SP No.2, 8-33,4-33,13-17: 2x4 SP No.1 |
| OTHERS | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEDGE | |
| Right: 2x4 SP No.3 | |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 3-2-9 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: |
| | 2-2-0 oc bracing: 29-31 |
| | 3-11-3 oc bracing: 15-16 |
| | 4-3-8 oc bracing: 13-15. |
| | 3-1-0 oc bracing: 17-28 |
| WEBS | 1 Row at midpt 9-17 |
| | 3-3-0 oc bracing: 4-8 |

**REACTIONS.** (size) 32=0-5-8, 15=0-5-8, 11=Mechanical
Max Horz 32=-202(LC 11)
Max Grav 32=2469(LC 24), 15=1382(LC 25), 11=1967(LC 2)

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

| | |
|---|---|
| TOP CHORD | 1-2=-3141/48, 2-4=-3319/40, 4-5=-1306/127, 5-6=-2218/456, 6-7=-2218/456, 7-8=-1575/157, 8-9=-3210/62, 9-10=-3310/155, 10-11=-3701/183, 1-32=-2398/77 |
| BOT CHORD | 29-31=0/2732, 27-29=0/2955, 24-27=0/4194, 22-24=0/5025, 20-22=0/3219, 16-20=0/964, 15-16=-1856/0, 13-15=-1662/0, 12-13=-90/3212, 11-12=-90/3212, 26-28=-1630/0, 25-26=-2626/0, 21-25=-2534/0, 19-21=-2534/0, 18-19=-820/670, 17-18=0/1939 |
| WEBS | 2-31=-595/81, 2-29=0/330, 28-39=0/846, 4-39=0/731, 15-17=-1102/75, 8-17=-13/861, 9-17=-445/287, 9-13=-275/102, 1-31=0/2771, 21-22=-381/0, 24-25=-280/3, 19-20=-755/0, 22-25=-297/40, 19-22=0/1774, 4-35=-1726/46, 34-35=-1699/48, 34-36=-1518/3, 8-36=-1615/0, 6-34=-313/136, 26-27=-639/0, 27-28=0/1699, 24-26=0/1056, 16-18=-1133/0, 18-20=0/2449, 16-17=0/2971, 7-36=0/489, 13-17=0/4290, 5-34=-433/1099, 7-34=-458/1060, 10-13=-464/170 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Ceiling dead load (5.0 psf) on member(s). 4-35, 34-35, 34-36, 8-36; Wall dead load (5.0psf) on member(s).28-39, 4-39, 8-17
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 26-28, 25-26, 21-25, 19-21, 19-20, 17-19


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**NOTES-**

10) Refer to girder(s) for truss to truss connections.
11) Attic room checked for L/360 deflection.

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A3 | ROOF TRUSS | 1 | 1 | I54792725 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:43:59 2022 Page 1
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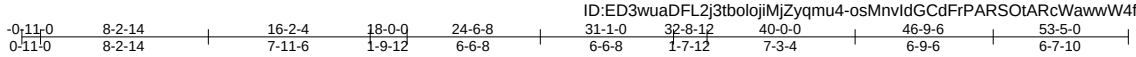


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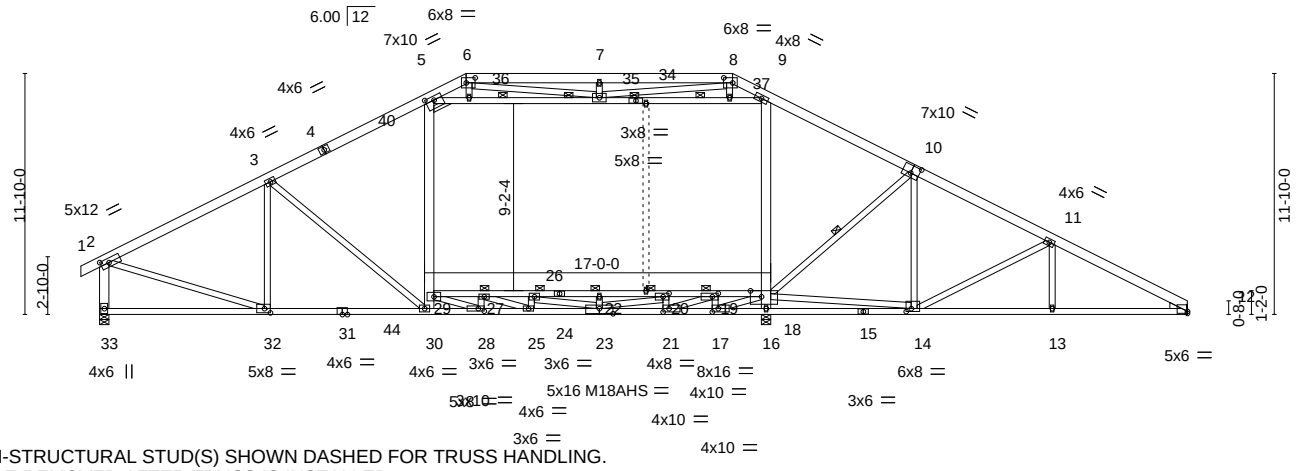


NON-STRUCTURAL STUD(S) SHOWN DASHED FOR TRUSS HANDLING.
TO BE REMOVED AFTER TRUSS IS INSTALLED.

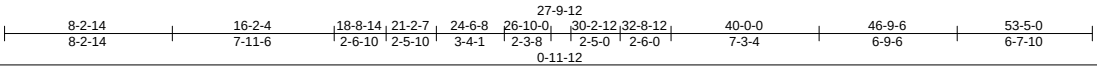


Plate Offsets (X,Y)-- [2:0-4-14,0-2-8], [5:0-5-0,0-2-4], [6:0-5-4,0-3-0], [8:0-5-4,0-3-0], [10:0-5-0,0-4-8], [12:0-0-0,0-1-3], [14:0-3-0,0-1-12], [17:0-3-8,0-2-0], [18:0-6-8,Edge], [19:0-3-8,0-2-0], [20:0-3-8,0-2-0], [21:0-3-8,0-2-0], [23:0-8-0,0-3-0], [28:0-3-8,0-1-8], [32:0-3-8,0-2-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.58 | Vert(LL) | -0.35 | 22-26 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.94 | Vert(CT) | -0.66 | 25-28 | >587 | 180 | M18AHS | 142/136 |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.90 | Horz(CT) | 0.14 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-MS | | Attic | -0.25 | 18-29 | 776 | 360 | Weight: 469 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 *Except* |
| | 12-15,15-23: 2x4 SP No.1, 23-31: 2x4 SP DSS |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* |
| | 5-30,9-16,2-33: 2x6 SP No.2, 9-34,5-34,14-18: 2x4 SP No.1 |
| OTHERS | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEDGE | |
| Right: 2x4 SP No.3 | |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 3-2-8 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: |
| | 2-2-0 oc bracing: 30-32 |
| | 3-11-2 oc bracing: 16-17 |
| | 4-3-8 oc bracing: 14-16. |
| | 3-2-0 oc bracing: 18-29 |
| WEBS | 1 Row at midpt 10-18 |
| | 3-3-0 oc bracing: 5-9 |

**REACTIONS.** (size) 33=0-5-8, 16=0-5-8, 12=Mechanical
Max Horz 33=-194(LC 11)
Max Grav 33=2530(LC 24), 16=1375(LC 25), 12=1971(LC 2)

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

| | |
|---|---|
| TOP CHORD | 2-3=-3144/57, 3-5=-3324/44, 5-6=-1270/124, 6-7=-2196/461, 7-8=-2196/461, 8-9=-1570/158, 9-10=-3221/67, 10-11=-3319/160, 11-12=-3710/187, 2-33=-2459/129 |
| BOT CHORD | 30-32=0/2730, 28-30=0/2964, 25-28=0/4201, 23-25=0/5030, 21-23=0/3220, 17-21=0/963, 16-17=-1858/0, 14-16=-1662/0, 13-14=-94/3219, 12-13=-94/3219, 27-29=-1629/0, 26-27=-2623/0, 22-26=-2529/0, 20-22=-2529/0, 19-20=-813/677, 18-19=0/1949 |
| WEBS | 3-32=-586/71, 3-30=0/339, 29-40=0/840, 5-40=0/725, 16-18=-1094/76, 9-18=-8/870, 10-18=-445/287, 10-14=-276/102, 2-32=0/2741, 22-23=-381/0, 25-26=-279/4, 20-21=-755/0, 23-26=-299/41, 20-23=0/1777, 5-36=-1787/54, 35-36=-1760/56, 35-37=-1531/7, 9-37=-1628/1, 7-35=-314/136, 27-28=-638/0, 28-29=0/1697, 25-27=0/1055, 17-19=-1133/0, 19-21=0/2450, 17-18=0/2973, 8-37=0/492, 14-18=0/4297, 6-35=-430/1111, 8-35=-461/1040, 11-14=-463/170 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Ceiling dead load (5.0 psf) on member(s). 5-36, 35-36, 35-37, 9-37; Wall dead load (5.0psf) on member(s).29-40, 5-40, 9-18
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 27-29, 26-27, 22-26, 20-22, 19-20, 18-19


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Continued on page 2



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**NOTES-**

10) Refer to girder(s) for truss to truss connections.
11) Attic room checked for L/360 deflection.

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A4G | ROOF TRUSS | 1 | 3 | I54792726 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:04 2022 Page 1
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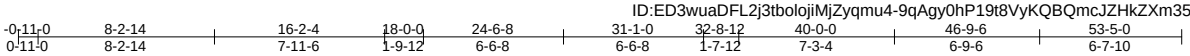


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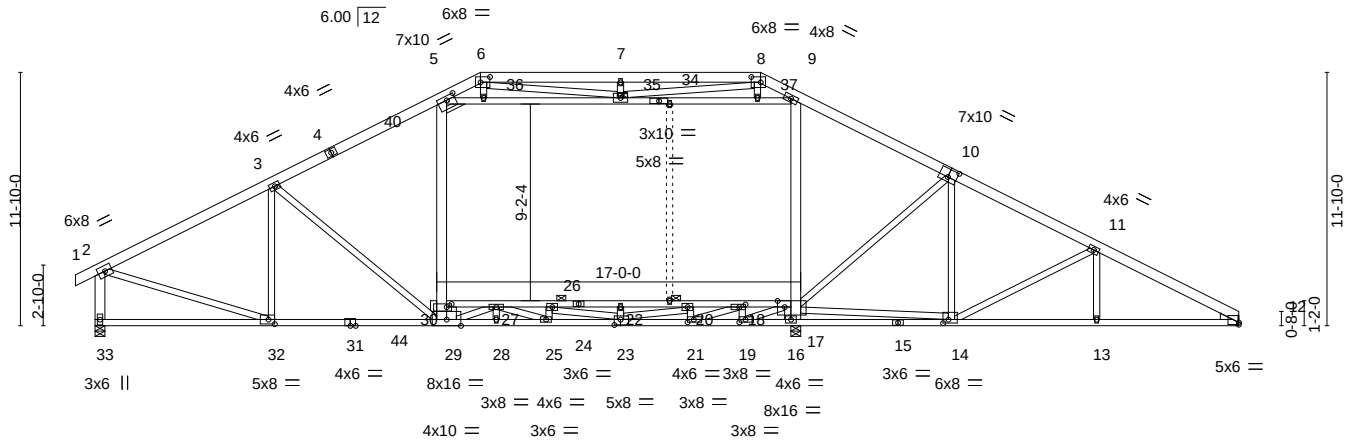


NON-STRUCTURAL STUD(S) SHOWN DASHED FOR TRUSS HANDLING.
TO BE REMOVED AFTER TRUSS IS INSTALLED.

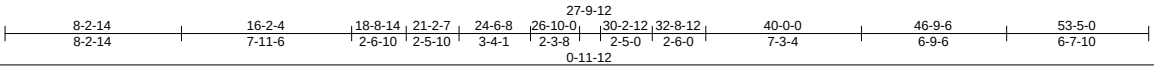


Plate Offsets (X,Y)-- [5:0-4-12,0-2-4], [6:0-5-4,0-3-0], [8:0-5-4,0-3-0], [10:0-5-0,0-4-8], [12:0-0-0,0-1-3], [14:0-3-0,0-2-0], [17:0-4-0,Edge], [18:0-3-8,0-1-8], [19:0-3-8,0-1-8], [21:0-3-8,0-1-8], [23:0-3-8,0-3-0], [30:0-2-12,0-1-12], [32:0-3-8,0-2-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.78 | Vert(LL) | -0.42 | 27-30 | >912 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.99 | Vert(CT) | -0.67 | 27-30 | >575 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.89 | Horz(CT) | 0.16 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | Attic | -0.21 | 17-30 | 899 | 360 | Weight: 1414 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except*
12-15,23-31: 2x4 SP No.1
WEBS 2x4 SP No.2 or 2x4 SPF No.2 *Except*
5-29: 2x6 SP DSS, 9-16,2-33,29-30: 2x6 SP No.2
9-34,5-34: 2x4 SP DSS
OTHERS 2x4 SP No.2 or 2x4 SPF No.2
WEDGE
Right: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 16-19,14-16.
6-0-0 oc bracing: 17-30
WEBS 1 Row at midpt 5-9

**REACTIONS.** (size) 33=0-5-8, 16=0-5-8, 12=Mechanical
Max Horz 33=-194(LC 9)
Max Uplift 33=-226(LC 8), 16=-1948(LC 22), 12=-95(LC 8)
Max Grav 33=7322(LC 16), 16=544(LC 8), 12=5290(LC 2)

PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED AT JOINT 29 FOR LOAD REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.25"x 4.5" SCREWS OR OTHER FASTENERS THAT PENETRATES ALL PLIES, PER HANGER MANUFACTURER SPECIFICATIONS.

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-9701/304, 3-5=-11520/370, 5-6=-2626/197, 6-7=-2243/467, 7-8=-2243/467, 8-9=-3669/248, 9-10=-11117/405, 10-11=-10418/334, 11-12=-10495/251, 2-33=-7249/269
BOT CHORD 32-33=-122/314, 29-32=-275/8689, 28-29=0/11799, 25-28=0/11799, 23-25=0/11195, 21-23=0/5425, 19-21=0/1982, 16-19=-2128/0, 14-16=-1164/0, 13-14=-175/9192, 12-13=-175/9192, 27-30=-2171/178, 26-27=-1611/0, 22-26=-813/1290, 20-22=-813/1290, 18-20=-647/4816, 17-18=-257/8259
WEBS 3-32=-2404/150, 3-29=-89/2324, 29-30=-166/4300, 30-40=-135/4397, 5-40=-46/3806, 16-17=-447/2232, 9-17=-246/4344, 10-17=-96/977, 10-14=-1160/98, 2-32=-161/8803, 22-23=-446/0, 25-26=-94/276, 20-21=-1235/0, 23-26=-1972/170, 20-23=0/4000, 5-36=-7523/392, 35-36=-7454/394, 35-37=-6871/310, 9-37=-7237/319, 7-35=-309/129, 27-29=-465/776, 25-27=-689/418, 18-19=-1628/0, 18-21=0/3751, 17-19=0/4247, 6-36=0/553, 8-37=-43/1807, 14-17=0/10252, 6-35=-1311/130, 8-35=-1833/116, 11-14=-181/335

**NOTES-**
1) n/a
2) 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-6-0 oc.
Web connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc,
2x6 - 2 rows staggered at 0-9-0 oc,
3) 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.
4) Unbalanced roof live loads have been considered for this design.

Continued on page 2


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**NOTES-**

5) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Ceiling dead load (5.0 psf) on member(s). 5-36, 35-36, 35-37, 9-37; Wall dead load (5.0psf) on member(s).30-40, 5-40, 9-17
11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 27-30, 26-27, 22-26, 20-22, 18-20, 17-18
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12 except (jt=lb) 33=226, 16=1948.
14) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 5494 lb down and 367 lb up at 16-5-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
16) Attic room checked for L/360 deflection.

**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-6=-60, 6-8=-60, 8-12=-60, 33-41=-20, 17-30=-30, 5-9=-10
   Drag: 5-30=-10, 9-17=-10
   Concentrated Loads (lb)
   Vert: 29=-3291(F)

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A5G | COMMON GIRDER | 1 | 2 | I54792727 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:06 2022 Page 1
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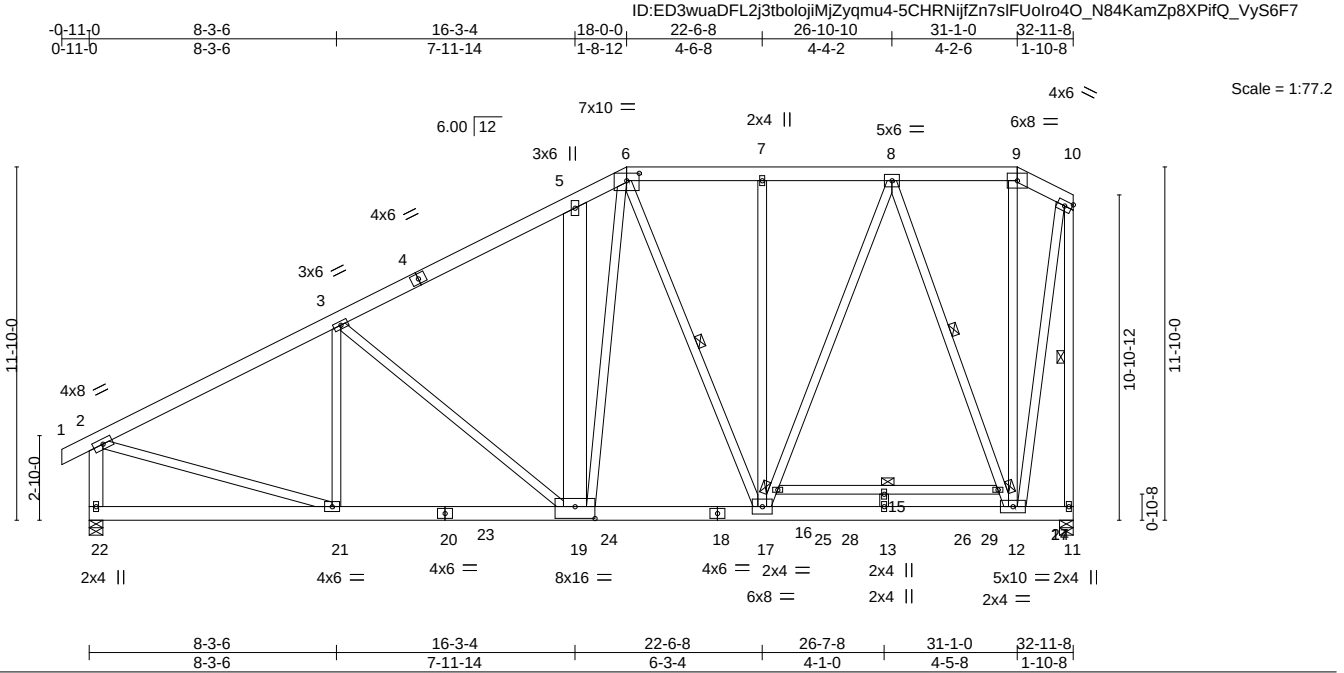


Plate Offsets (X,Y)-- [6:0-5-0,0-3-0], [19:0-8-0,0-4-12]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.45 | Vert(LL) | -0.08 | 19-21 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.46 | Vert(CT) | -0.17 | 19-21 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.72 | Horz(CT) | 0.03 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | Weight: 772 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x6 SP No.2 *Except* |
| | 14-16: 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* |
| | 5-19: 2x10 SP DSS, 2-22: 2x6 SP No.2, 8-12: 2x4 SP No.1 |

**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. Except: 6-0-0 oc bracing: 14-16 |
| WEBS | 1 Row at midpt 6-17, 10-11, 8-14 |

**REACTIONS.** (size) 22=0-5-8, 11=0-5-8
Max Horz 22=293(LC 8)
Max Uplift 22=-228(LC 8), 11=-186(LC 5)
Max Grav 22=3073(LC 1), 11=3047(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3896/307, 3-5=-4160/377, 5-6=-4032/463, 6-7=-2345/200, 7-8=-2345/200, 8-9=-494/31, 9-10=-587/33, 2-22=-2988/268, 10-11=-3040/133
BOT CHORD 21-22=-320/158, 19-21=-470/3390, 17-19=-312/3092, 13-17=-113/1455, 12-13=-113/1455
WEBS 3-21=-816/154, 3-19=-116/490, 6-19=-530/3440, 6-17=-2015/347, 2-21=-157/3380, 16-17=-254/2487, 8-16=-229/2539, 8-14=-2851/293, 12-14=-2893/267, 10-12=-128/2756

**NOTES-**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) except (jt=lb) 22=228, 11=186.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3291 lb down and 367 lb up at 16-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard


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Continued on page 2



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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-2=-60, 2-6=-60, 6-9=-60, 9-10=-60, 11-22=-20, 14-16=-20
   Concentrated Loads (lb)
   Vert: 19=-3291(F)

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A6 | Common | 1 | 1 | I54792728 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334,

8.610 s May 25 2022 MiTek Industries, Inc. Wed Oct 19 07:52:01 2022 Page 1
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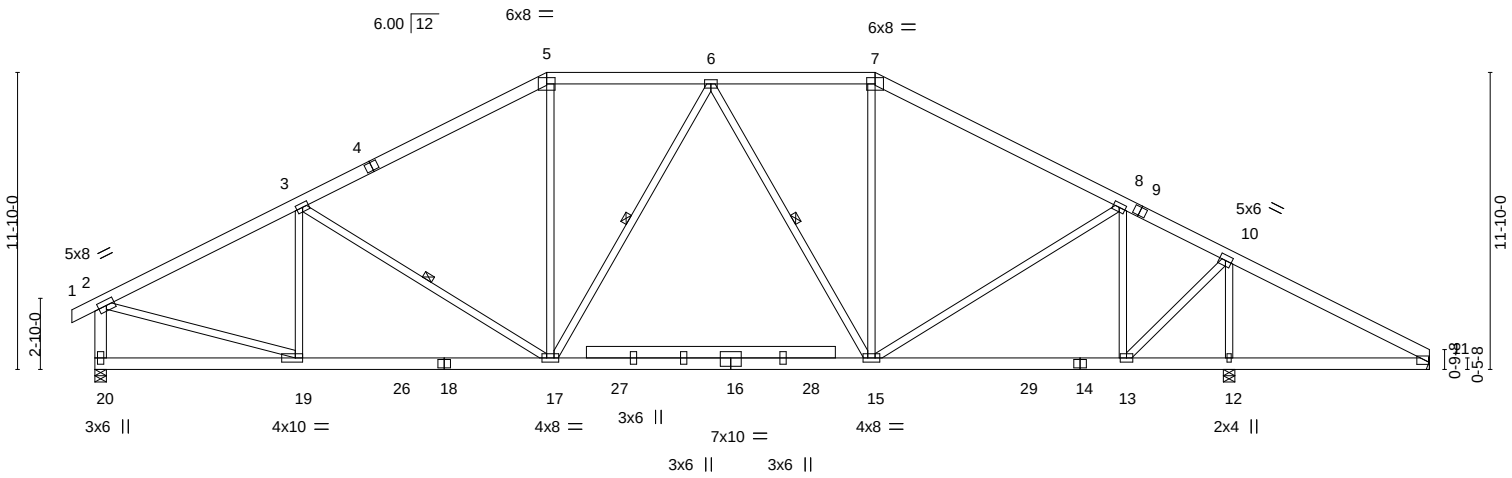
-0-11-0 8-1-9 18-0-0 24-6-8 31-1-0 40-11-7 45-2-4 53-2-0
0-11-0 8-1-9 9-10-7 6-6-8 6-6-8 9-10-7 4-2-13 7-11-12

Scale = 1:91.8




8-1-9 18-0-0 31-1-0 40-11-7 45-2-4 53-2-0
8-1-9 9-10-7 13-1-0 9-10-7 4-2-13 7-11-12

Plate Offsets (X,Y)-- [16:0-5-0,0-3-0], [19:0-3-8,0-2-0]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.66 | Vert(LL) | -0.30 | 15-17 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.85 | Vert(CT) | -0.49 | 15-17 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.71 | Horz(CT) | 0.05 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 438 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x6 SP No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* 2-20: 2x6 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 3-9-14 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing. |
| WEBS | 1 Row at midpt 3-17, 6-17, 6-15 |

**REACTIONS.** (size) 11=Mechanical, 12=0-5-8, 20=0-5-8
Max Horz 20=-190(LC 11)
Max Uplift 11=-64(LC 11), 12=-31(LC 11), 20=-84(LC 10)
Max Grav 11=264(LC 22), 12=2235(LC 2), 20=1852(LC 1)

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

| | |
|---|---|
| TOP CHORD | 2-3=-2212/380, 3-5=-2091/424, 5-6=-1768/439, 6-7=-1582/417, 7-8=-1882/398, 8-10=-1210/290, 10-11=-101/251, 2-20=-1773/355 |
| BOT CHORD | 17-19=-180/1910, 15-17=-60/1762, 13-15=-79/1045 |
| WEBS | 3-19=-391/176, 3-17=-253/199, 5-17=0/510, 6-15=-536/136, 7-15=0/441, 8-15=-23/698, 8-13=-1032/209, 10-13=-161/1633, 10-12=-2033/336, 2-19=-218/1898 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 4x6 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be User Defined crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 11, 31 lb uplift at joint 12 and 84 lb uplift at joint 20.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A6A | Common | 2 | 1 | I54792729 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334,

8.610 s May 25 2022 MiTek Industries, Inc. Wed Oct 19 07:52:38 2022 Page 1
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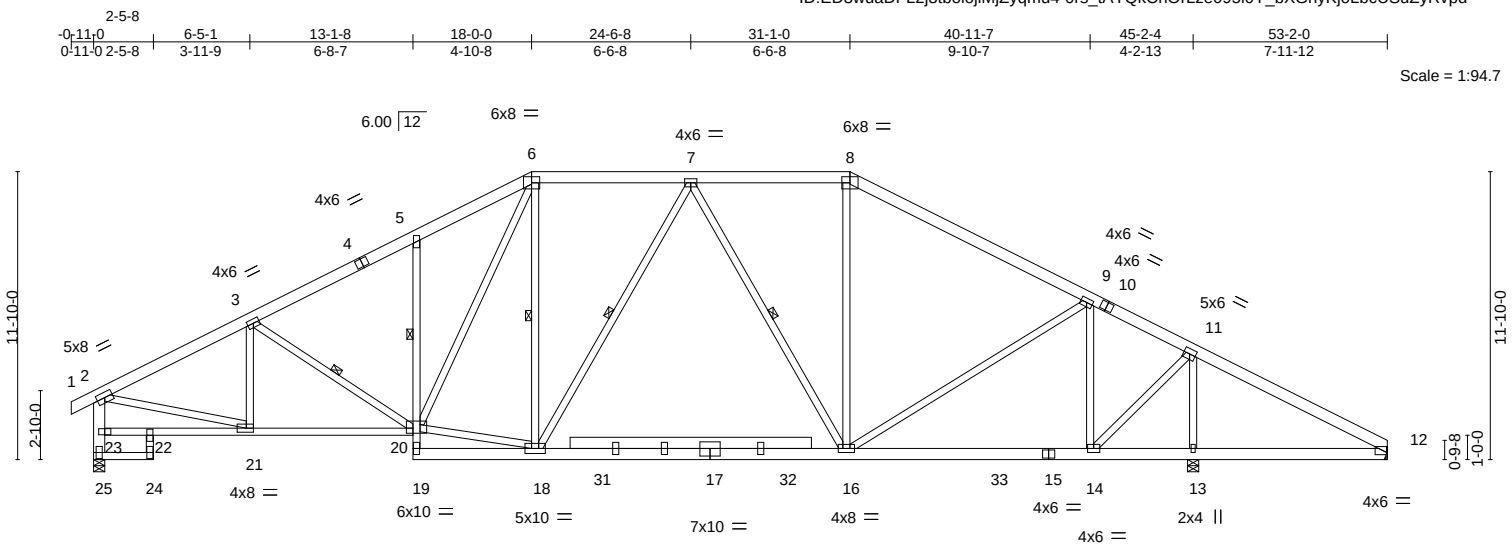


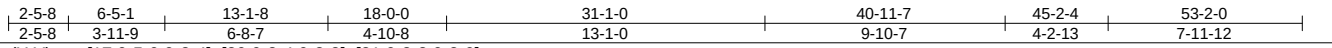


Plate Offsets (X,Y)-- [17:0-5-0,0-3-4], [20:0-3-4,0-2-8], [21:0-3-8,0-2-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.66 | Vert(LL) | -0.28 | 16-18 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.84 | Vert(CT) | -0.48 | 16-18 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.72 | Horz(CT) | 0.09 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 457 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x6 SP No.2 *Except* 24-25,22-24,20-23,5-19: 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* 2-25: 2x6 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 1 Row at midpt 5-20 |
| WEBS | 1 Row at midpt 3-20, 6-18, 7-18, 7-16 |

**REACTIONS.** (size) 25=0-5-8, 12=Mechanical, 13=0-5-8
Max Horz 25=-190(LC 11)
Max Uplift 25=-84(LC 10), 12=-69(LC 11), 13=-24(LC 11)
Max Grav 25=1845(LC 1), 12=236(LC 22), 13=2268(LC 1)

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

| | |
|---|---|
| TOP CHORD | 2-3=-2413/379, 3-5=-2383/445, 5-6=-2352/558, 6-7=-1692/432, 7-8=-1535/415, 8-9=-1834/396, 9-11=-1162/286, 11-12=-45/309, 23-25=-1799/331, 2-23=-1771/345 |
| BOT CHORD | 22-23=-130/387, 21-22=-160/358, 20-21=-192/2081, 5-20=-362/202, 16-18=-60/1719, 14-16=-75/1001 |
| WEBS | 2-21=-247/1931, 3-21=-344/151, 18-20=0/1702, 6-20=-225/835, 6-18=-105/265, 7-16=-548/138, 8-16=0/423, 9-16=-22/700, 9-14=-1061/211, 11-14=-165/1638, 11-13=-2048/340 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 3x6 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be User Defined crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 25, 69 lb uplift at joint 12 and 24 lb uplift at joint 13.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


October 19,2022




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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A7A | Common | 3 | 1 | I54792730 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334,

8.610 s May 25 2022 MiTek Industries, Inc. Wed Oct 19 07:53:11 2022 Page 1
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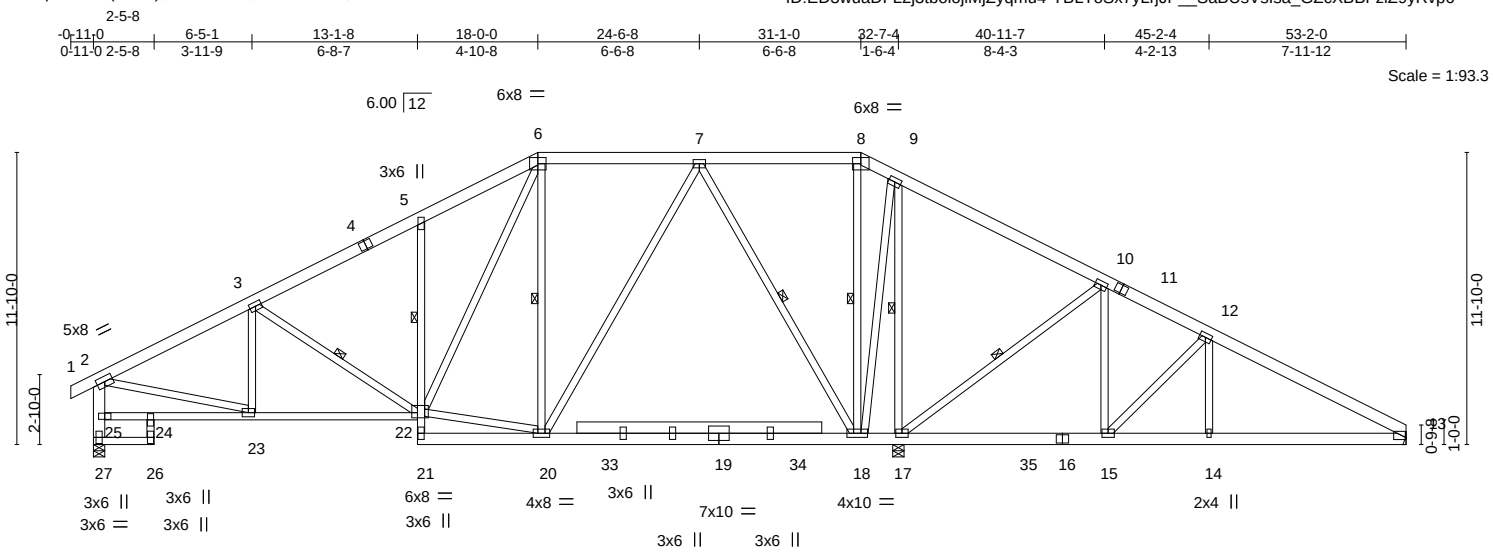


Plate Offsets (X,Y)-- [22:0-2-12,0-2-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.43 | Vert(LL) | -0.24 | 18-20 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.42 | 18-20 | >919 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.88 | Horz(CT) | 0.05 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 485 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.2 |
| BOT CHORD | 2x6 SP No.2 *Except* 26-27,24-26,22-25,5-21: 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* 2-27: 2x6 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-8-3 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 1 Row at midpt 5-22 |
| WEBS | 1 Row at midpt 3-22, 6-20, 7-18, 8-18, 10-17, 9-17 |

**REACTIONS.** (size) 27=0-5-8, 13=Mechanical, 17=0-5-8
Max Horz 27=-190(LC 11)
Max Uplift 27=-86(LC 10), 13=-63(LC 11), 17=-45(LC 11)
Max Grav 27=1317(LC 21), 13=712(LC 22), 17=2342(LC 1)

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

| | |
|---|---|
| TOP CHORD | 2-3=-1628/240, 3-5=-1430/276, 5-6=-1402/390, 6-7=-867/284, 9-10=0/349, 10-12=-590/139, 12-13=-998/142, 25-27=-1275/238, 2-25=-1248/253 |
| BOT CHORD | 24-25=-130/339, 23-24=-160/325, 22-23=-144/1382, 5-22=-362/202, 18-20=-45/635, 15-17=0/488, 14-15=-33/803, 13-14=-33/803 |
| WEBS | 2-23=-126/1249, 20-22=0/956, 6-22=-216/777, 6-20=-430/150, 7-20=-40/605, 7-18=-1125/226, 10-17=-779/219, 10-15=-9/474, 12-15=-490/143, 12-14=0/255, 9-17=-1741/208, 9-18=0/1216 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 4x6 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be User Defined crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 27, 63 lb uplift at joint 13 and 45 lb uplift at joint 17.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


October 19,2022



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A8 | Common | 5 | 1 | I54792731 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.610 s May 25 2022 MiTek Industries, Inc. Wed Oct 19 07:55:51 2022 Page 1
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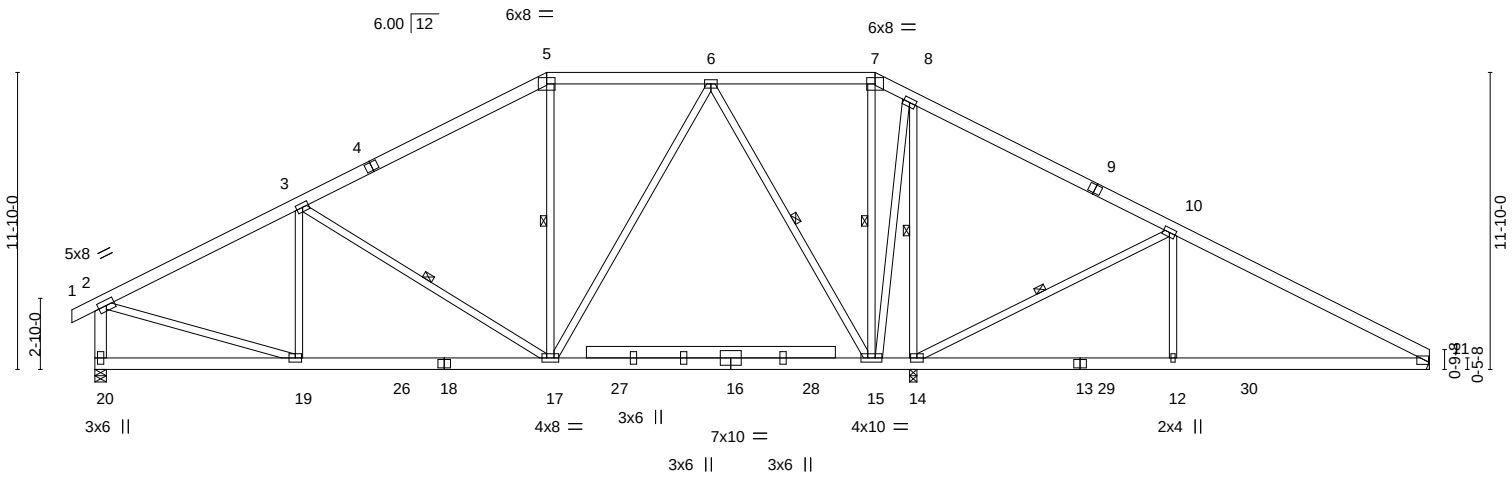
-0-11-0 8-1-9 18-0-0 24-6-8 31-1-0 32-7-4 42-11-7 53-2-0
0-11-0 8-1-9 9-10-7 6-6-8 6-6-8 1-6-4 10-4-3 10-2-9

Scale = 1:91.8




8-1-9 18-0-0 31-1-0 32-7-4 42-11-7 53-2-0
8-1-9 9-10-7 13-1-0 1-6-4 10-4-3 10-2-9

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.55 | Vert(LL) | -0.26 | 15-17 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.69 | Vert(CT) | -0.43 | 15-17 | >897 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.89 | Horz(CT) | 0.03 | 11 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 453 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 or 2x4 SPF No.2 *Except*
2-20: 2x6 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-5-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15.
WEBS 1 Row at midpt 3-17, 5-17, 6-15, 7-15, 8-14, 10-14

**REACTIONS.** (size) 20=0-5-8, 14=0-3-8, 11=Mechanical
Max Horz 20=-190(LC 11)
Max Uplift 20=-89(LC 10), 14=-43(LC 11), 11=-64(LC 11)
Max Grav 20=1352(LC 21), 14=2246(LC 2), 11=766(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1517/263, 3-5=-1195/275, 5-6=-962/304, 7-8=-275/251, 10-11=-1059/164, 2-20=-1275/270
BOT CHORD 17-19=-121/1283, 15-17=-42/709, 12-14=-34/861, 11-12=-34/861
WEBS 3-17=-426/205, 6-17=-49/640, 6-15=-1063/209, 8-15=0/1200, 8-14=-1753/236, 10-14=-1017/278, 10-12=0/431, 2-19=-111/1256

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 4x6 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) All bearings are assumed to be User Defined crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 20, 43 lb uplift at joint 14 and 64 lb uplift at joint 11.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.


October 19,2022



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | A9E | GABLE | 1 | 1 | I54792732 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:15 2022 Page 1
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0-11-0 18-0-0 13-1-0 22-1-0

Scale = 1:94.4

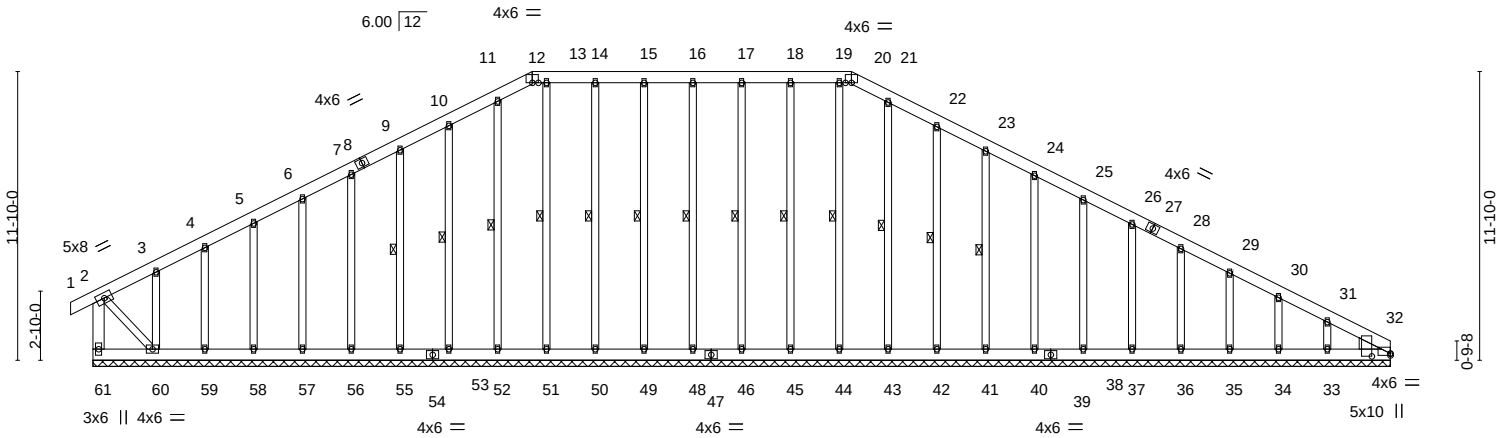


Plate Offsets (X,Y)-- [32:0-0-0,0-0-15], [32:0-1-6,0-9-2]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | 0.00 | 1 | n/r | 120 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | -0.00 | 1 | n/r | 90 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.01 | 32 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 552 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x6 SP No.2 *Except*
2-60: 2x4 SP No.3
OTHERS 2x4 SP No.2 or 2x4 SPF No.2
WEDGE
Right: 2x6 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 17-46, 16-48, 15-49, 14-50, 13-51, 11-52, 10-53, 9-55, 18-45, 19-44, 21-43, 22-42, 23-41

**REACTIONS.** All bearings 53-2-0.
(lb) - Max Horz 61=-200(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 61, 46, 48, 49, 50, 52, 53, 55, 56, 57, 58, 59, 45, 42, 41, 40, 38, 37, 36, 35, 34, 33 except 60=-190(LC 10)
Max Grav All reactions 250 lb or less at joint(s) 46, 48, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 45, 44, 43, 42, 41, 40, 38, 37, 36, 35, 34, 32, 33 except 61=250(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 11-12=-106/266, 12-13=-95/260, 13-14=-95/260, 14-15=-95/260, 15-16=-95/260, 16-17=-95/260, 17-18=-95/260, 18-19=-95/260, 19-20=-95/260, 20-21=-106/267

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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) 61, 46, 48, 49, 50, 52, 53, 55, 56, 57, 58, 59, 45, 42, 41, 40, 38, 37, 36, 35, 34, 33 except (jt=lb) 60=190.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | B1 | Monopitch | 5 | 1 | I54792733 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:16 2022 Page 1
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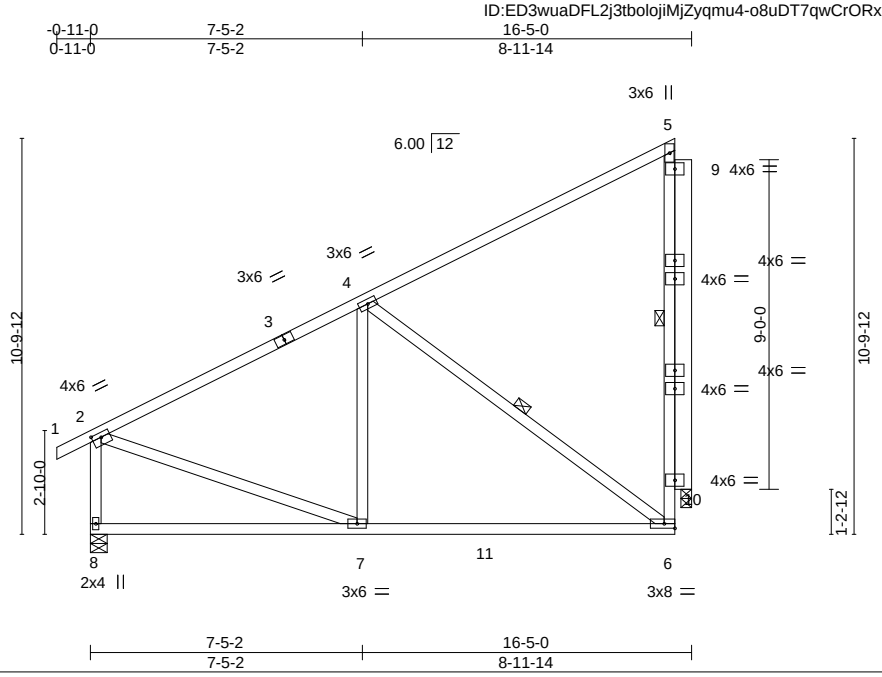


Plate Offsets (X,Y)-- [2:0-3-0,0-1-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.90 | Vert(LL) | -0.12 | 6-7 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.63 | Vert(CT) | -0.23 | 6-7 | >801 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.29 | Horz(CT) | -0.01 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 127 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-6, 4-6

**REACTIONS.** (size) 8=0-5-8, 10=0-3-8
Max Horz 8=273(LC 10)
Max Uplift 10=-179(LC 10)
Max Grav 8=693(LC 1), 10=625(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-611/0, 6-10=-103/428, 2-8=-632/61
BOT CHORD 7-8=-333/140, 6-7=-200/473
WEBS 4-6=-568/244, 2-7=0/453

**NOTES-**
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=179.


October 19,2022



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | B2 | MONOPITCH | 5 | 1 | I54792734 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:17 2022 Page 1
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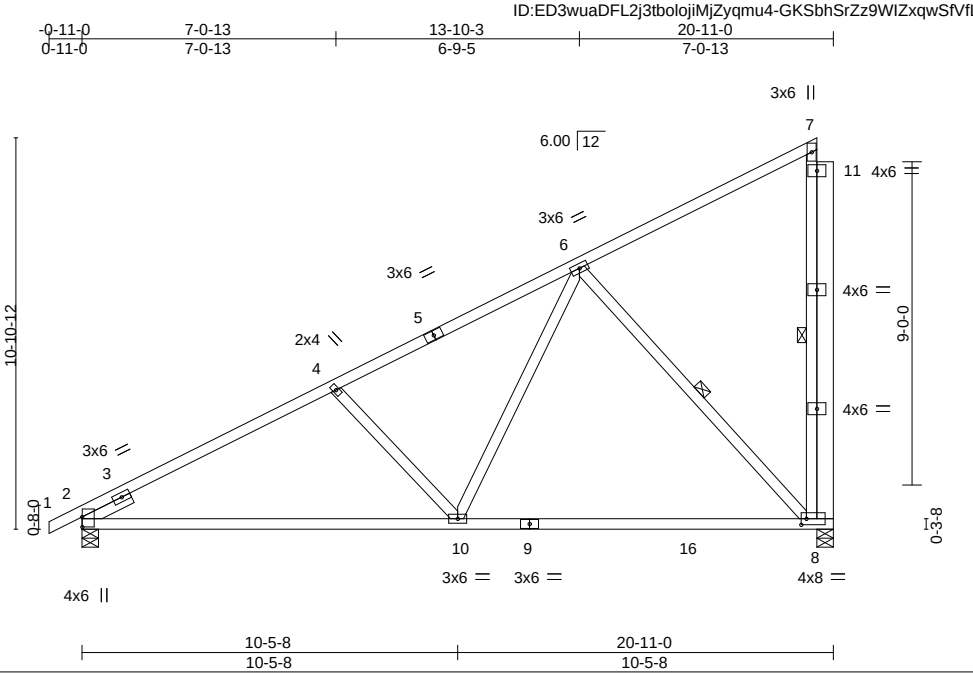


Plate Offsets (X,Y)-- [2:0-3-5,0-0-1], [8:0-1-12,0-2-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.55 | Vert(LL) | -0.39 | 8-10 | >624 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.98 | Vert(CT) | -0.60 | 8-10 | >410 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.34 | Horz(CT) | 0.03 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 140 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 *Except* 4-10: 2x4 SP No.3 |
| OTHERS | 2x6 SP No.2 |
| SLIDER | Left 2x4 SP No.3 1-6-0 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 4-10-4 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 2-2-0 oc bracing. |
| WEBS | 1 Row at midpt 7-8, 6-8 |

**REACTIONS.** (size) 2=0-5-8, 8=0-5-8
Max Horz 2=347(LC 10)
Max Uplift 2=-18(LC 10), 8=-177(LC 10)
Max Grav 2=875(LC 1), 8=808(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1202/38, 4-6=-943/18
BOT CHORD 2-10=-322/1018, 8-10=-166/528
WEBS 4-10=-379/211, 6-10=-34/613, 6-8=-763/248

**NOTES-**
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 8=177.


October 19,2022



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TRENCO
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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | C1 | QUEENPOST | 5 | 1 | I54792735 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:18 2022 Page 1
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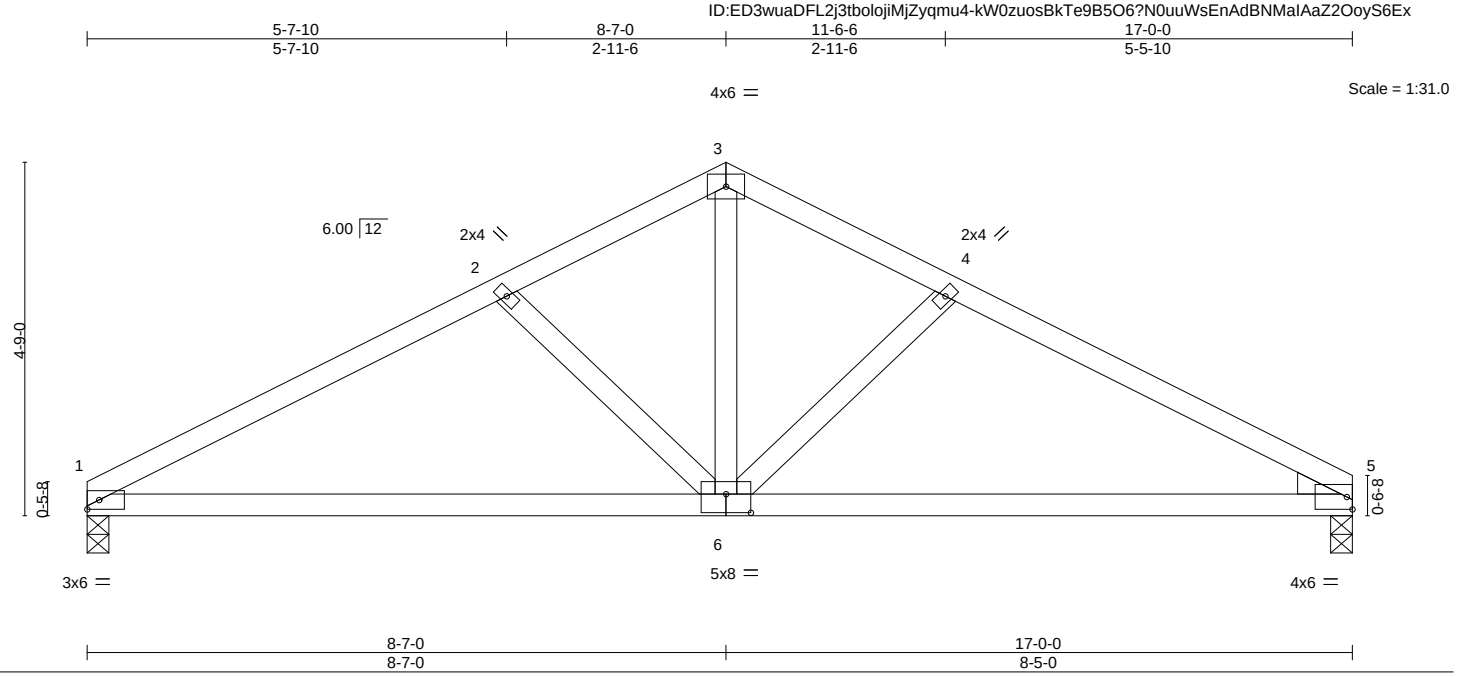


Plate Offsets (X,Y)-- [6:0-4-0,0-3-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.34 | Vert(LL) | -0.09 | 6-9 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.68 | Vert(CT) | -0.20 | 6-9 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.24 | Horz(CT) | 0.02 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 73 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
WEDGE
Right: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-1-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8
Max Horz 1=63(LC 10)
Max Uplift 1=-38(LC 10), 5=-37(LC 11)
Max Grav 1=680(LC 1), 5=680(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1063/207, 2-3=-824/174, 3-4=-821/173, 4-5=-1051/205
BOT CHORD 1-6=-121/896, 5-6=-118/878
WEBS 2-6=-301/146, 3-6=-99/575, 4-6=-280/142

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | D1E | GABLE | 1 | 1 | I54792736 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:19 2022 Page 1
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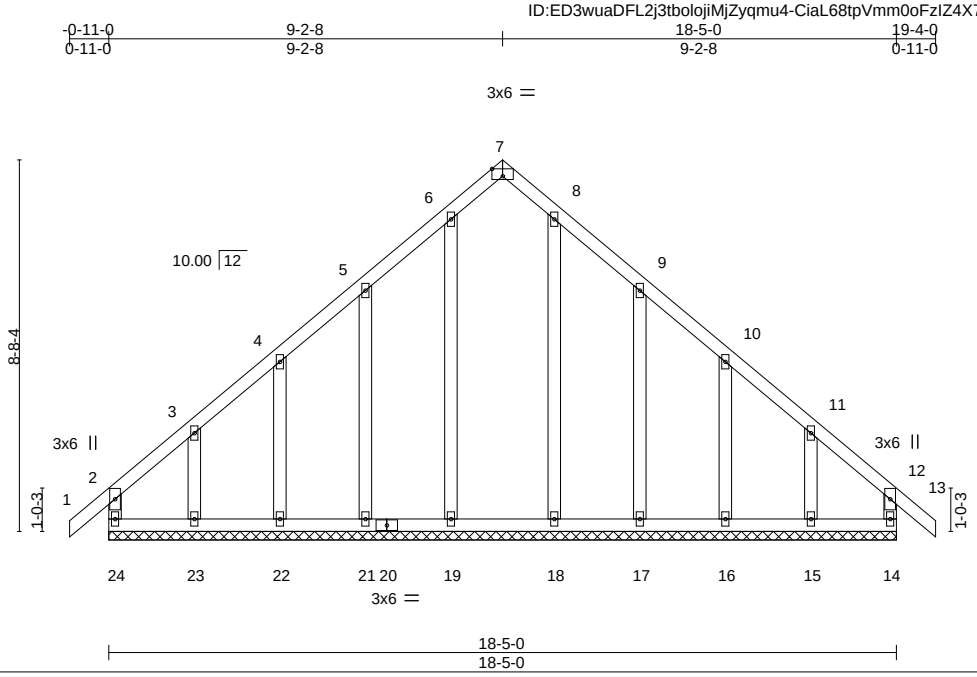


Plate Offsets (X,Y)-- [7:0-3-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | -0.00 | 13 | n/r | 120 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | -0.00 | 13 | n/r | 90 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.00 | 14 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-R | | | | | | | Weight: 124 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except*
6-19,8-18: 2x4 SP No.2 or 2x4 SPF 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.** All bearings 18-5-0.
(lb) - Max Horz 24=178(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 24, 14, 22, 16 except 21=-100(LC 10), 23=-163(LC 10), 17=-102(LC 11), 15=-158(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 24, 14, 19, 21, 22, 23, 18, 17, 16, 15

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 24, 14, 22, 16 except (jt=lb) 21=100, 23=163, 17=102, 15=158.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | D2G | COMMON GIRDER | 1 | 3 | I54792737 |
| | | | | | Job Reference (optional) |

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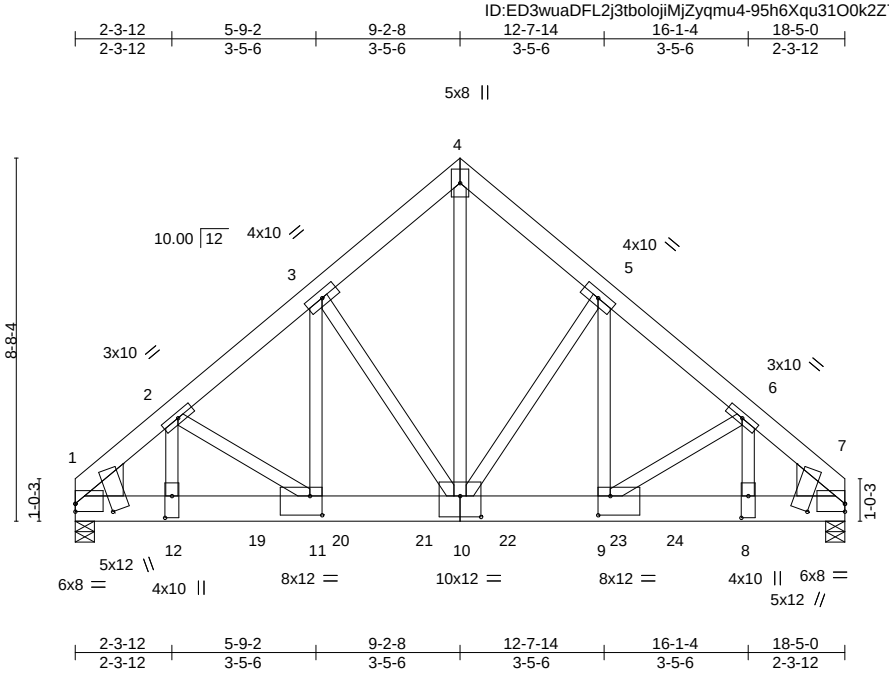


Plate Offsets (X,Y)-- [1:0-0-0,0-2-4], [1:0-5-13,0-9-6], [7:0-0-0,0-2-4], [7:0-5-13,0-9-6], [8:0-6-4,0-2-0], [9:0-3-8,0-5-8], [10:0-6-0,0-6-0], [11:0-3-8,0-5-8], [12:0-6-4,0-2-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.57 | Vert(LL) | -0.07 | 11 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.37 | Vert(CT) | -0.13 | 10-11 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.79 | Horz(CT) | 0.03 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 541 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SP No.2 or 2x4 SPF No.2
WEDGE
Left: 2x10 SP No.2 , Right: 2x10 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.

PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED AT JOINT 12 FOR LOAD REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.25"x 4.5" SCREWS OR OTHER FASTENERS THAT PENETRATES ALL PLIES, PER HANGER MANUFACTURER SPECIFICATIONS.

**REACTIONS.** (size) 1=0-5-8 (req. 0-5-14), 7=0-5-8
Max Horz 1=-162(LC 6)
Max Grav 1=11275(LC 2), 7=8917(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-13461/0, 2-3=-10780/0, 3-4=-7890/0, 4-5=-7882/0, 5-6=-10131/0, 6-7=-10881/0
BOT CHORD 1-12=0/9869, 11-12=0/9869, 10-11=0/8314, 9-10=0/7784, 8-9=0/7974, 7-8=0/7974
WEBS 4-10=0/9691, 5-10=-3091/0, 5-9=0/3878, 6-9=-280/0, 6-8=0/1005, 3-10=-4052/0, 3-11=0/5044, 2-11=-1896/384, 2-12=-224/3311

**NOTES-**
1) Special connection required to distribute web loads equally between all plies.
2) 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x8 - 4 rows staggered at 0-4-0 oc.
Web connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-4-0 oc,
3) 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.
4) Unbalanced roof live loads have been considered for this design.
5) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) WARNING: Required bearing size at joint(s) 1 greater than input bearing size.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 5270 lb down and 115 lb up at 2-3-12, 1951 lb down at 4-3-12, 1947 lb down at 6-3-12, 1947 lb down at 8-3-12, 1947 lb down at 10-3-12, 1947 lb down at 12-3-12, and 1947 lb down at 14-3-12, and 1947 lb down at 16-3-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

October 19,2022



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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-60, 4-7=-60, 13-16=-20
   Concentrated Loads (lb)
   Vert: 8=-1872(F) 12=-3914(F) 19=-1875(F) 20=-1872(F) 21=-1872(F) 22=-1872(F) 23=-1872(F) 24=-1872(F)

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | E1E | GABLE | 1 | 1 | I54792738 |
| | | | | | Job Reference (optional) |

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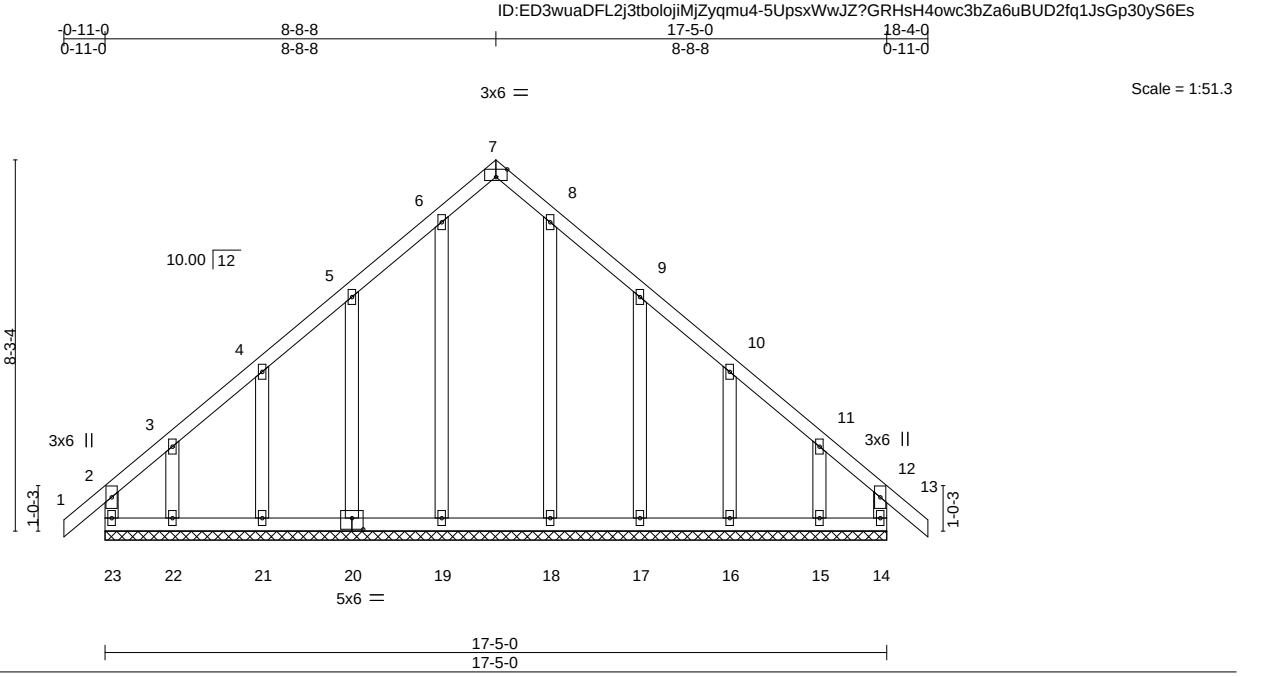


Plate Offsets (X,Y)-- [7:0-3-0,Edge], [20:0-3-0,0-3-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | -0.00 | 13 | n/r | 120 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | -0.01 | 13 | n/r | 90 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.00 | 14 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-R | | | | | | | Weight: 116 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except*
6-19,8-18: 2x4 SP No.2 or 2x4 SPF 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.** All bearings 17-5-0.
(lb) - Max Horz 23=169(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 23, 14, 20, 21, 17, 16 except 22=-173(LC 10), 15=-168(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 23, 14, 19, 20, 21, 22, 18, 17, 16, 15

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 23, 14, 20, 21, 17, 16 except (jt=lb) 22=173, 15=168.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | E2E | Common Structural Gable | 1 | 1 | I54792739 |
| | | | | | Job Reference (optional) |

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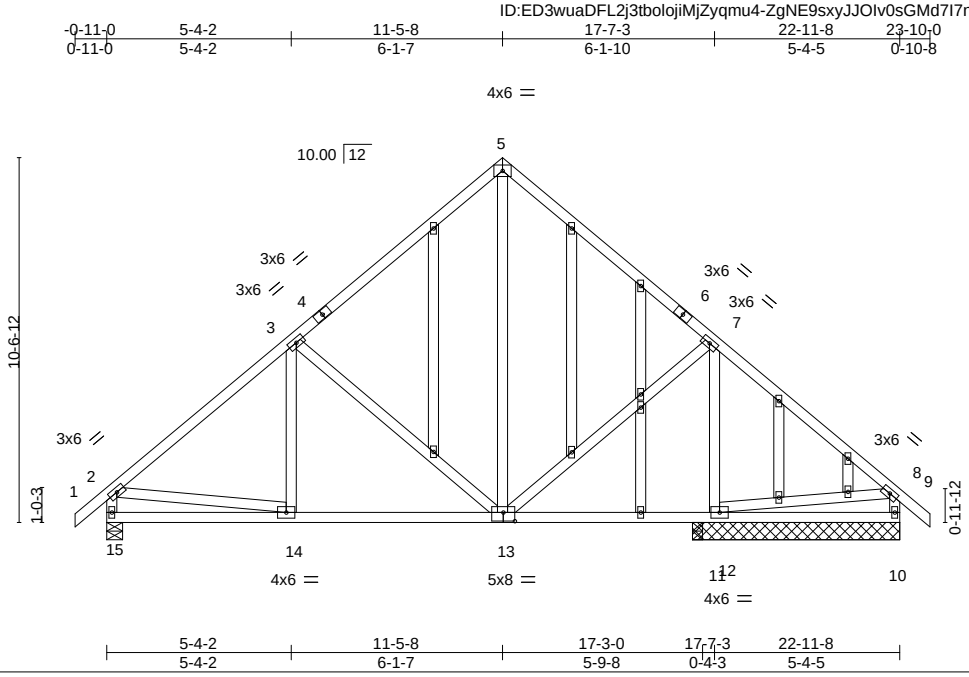


Plate Offsets (X,Y)-- [13:0-4-0,0-3-0]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.46 | Vert(LL) | -0.03 | 13-14 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.32 | Vert(CT) | -0.06 | 13-14 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.41 | Horz(CT) | 0.01 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 187 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.2 or 2x4 SPF No.2 *Except*
2-15,2-14,8-10,8-11: 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except*
16-17,18-19: 2x4 SP No.2 or 2x4 SPF 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.** All bearings 6-0-0 except (jt=length) 15=0-5-8, 12=0-3-8.
(lb) - Max Horz 15=217(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 15, 11, 10
Max Grav All reactions 250 lb or less at joint(s) 12 except 15=756(LC 1), 11=862(LC 1), 10=274(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-781/101, 3-5=-487/162, 5-7=-489/162, 2-15=-709/122
BOT CHORD 14-15=-199/289, 13-14=-81/611
WEBS 3-13=-373/174, 7-13=-0/364, 7-11=-791/153, 2-14=0/420

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15, 11, 10.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | E3G | Common Girder | 1 | 2 | I54792740 |
| | | | | | Job Reference (optional) |

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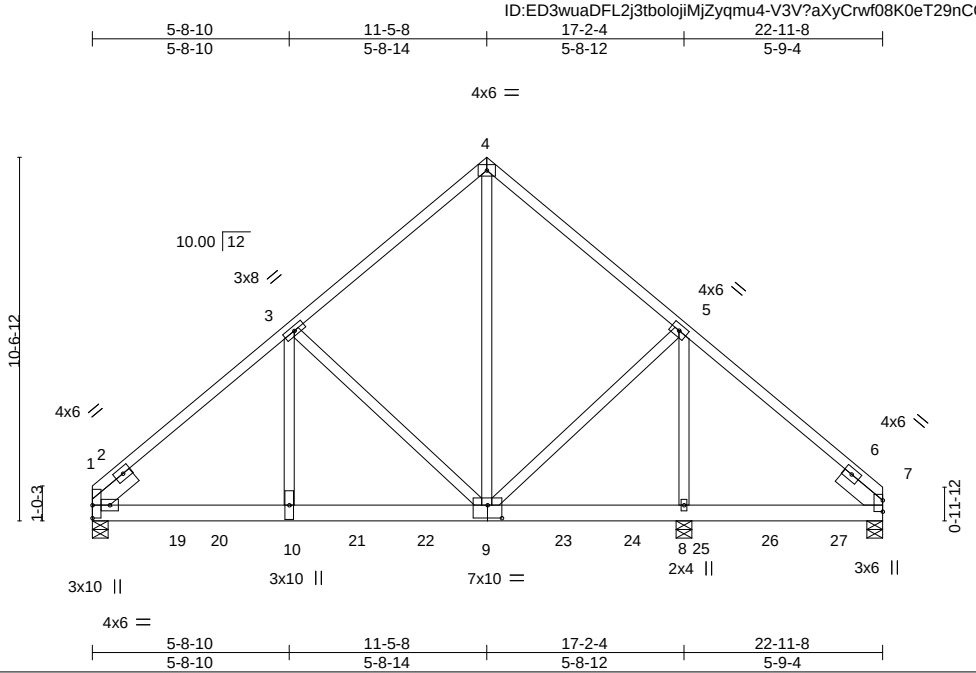


Plate Offsets (X,Y)-- [9:0-5-0,0-4-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.32 | Vert(LL) | -0.06 | 9-10 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.76 | Vert(CT) | -0.12 | 9-10 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.44 | Horz(CT) | 0.02 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-MS | | | | | | | Weight: 315 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 or 2x4 SPF No.2
SLIDER Left 2x6 SP No.2 1-6-0, Right 2x6 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 6-0-0 oc bracing.

**REACTIONS.** (size) 1=0-5-8, 7=0-5-8, 8=0-5-8
Max Horz 1=-202(LC 4)
Max Uplift 1=-333(LC 8), 7=-149(LC 9), 8=-443(LC 8)
Max Grav 1=3545(LC 1), 7=265(LC 20), 8=4520(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-3=-3785/409, 3-4=-1989/331, 4-5=-2002/322, 5-7=-174/312
BOT CHORD 1-10=-343/2833, 9-10=-343/2833
WEBS 3-10=-171/2143, 3-9=-1914/340, 4-9=-306/2082, 5-9=-173/2140, 5-8=-3098/251

**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.
Webs 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=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=333, 7=149, 8=443.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 746 lb down and 84 lb up at 1-7-4, 746 lb down and 84 lb up at 3-7-4, 746 lb down and 84 lb up at 5-7-4, 746 lb down and 84 lb up at 7-7-4, 746 lb down and 84 lb up at 9-7-4, 692 lb down and 83 lb up at 11-7-4, 692 lb down and 83 lb up at 13-7-4, 692 lb down and 83 lb up at 15-7-4, 216 lb down and 89 lb up at 17-7-4, and 216 lb down and 89 lb up at 19-7-4, and 244 lb down and 84 lb up at 21-7-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15


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Continued on page 2



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818 Soundside Road
Edenton, NC 27932

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-4=-60, 4-7=-60, 11-15=-20

Concentrated Loads (lb)

Vert: 10=-746(F) 9=-692(F) 19=-746(F) 20=-746(F) 21=-746(F) 22=-746(F) 23=-692(F) 24=-692(F) 25=-216(F) 26=-216(F) 27=-244(F)




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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | M1 | Monopitch | 5 | 1 | I54792741 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:27 2022 Page 1
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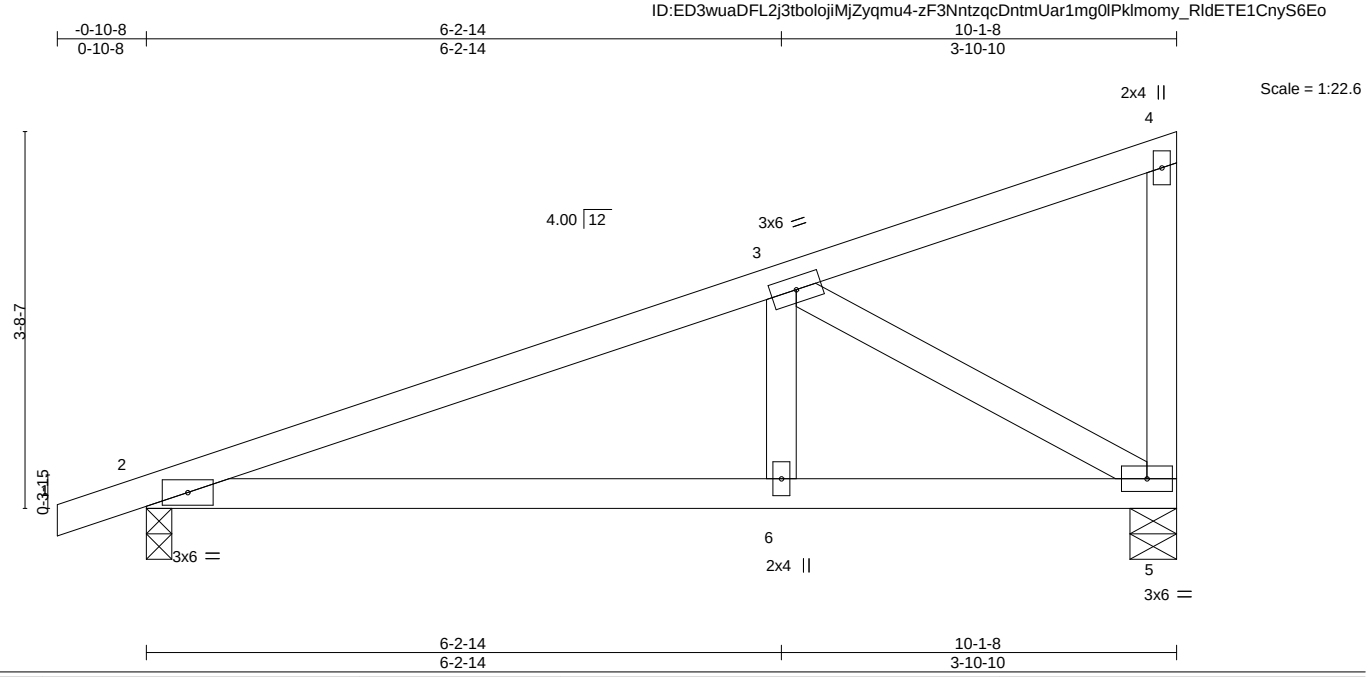


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.39 | Vert(LL) | -0.04 | 6-9 | >999 | 240 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.45 | Vert(CT) | -0.10 | 6-9 | >999 | 180 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.24 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | Weight: 46 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3

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

**REACTIONS.** (size) 2=0-3-0, 5=0-5-8
Max Horz 2=122(LC 6)
Max Uplift 2=-55(LC 6), 5=-62(LC 10)
Max Grav 2=454(LC 1), 5=397(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-623/81
BOT CHORD 2-6=-161/561, 5-6=-161/561
WEBS 3-5=-642/184

**NOTES-**
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | M2E | Monopitch Supported Gable | 2 | 1 | I54792742 |

Job Reference (optional)

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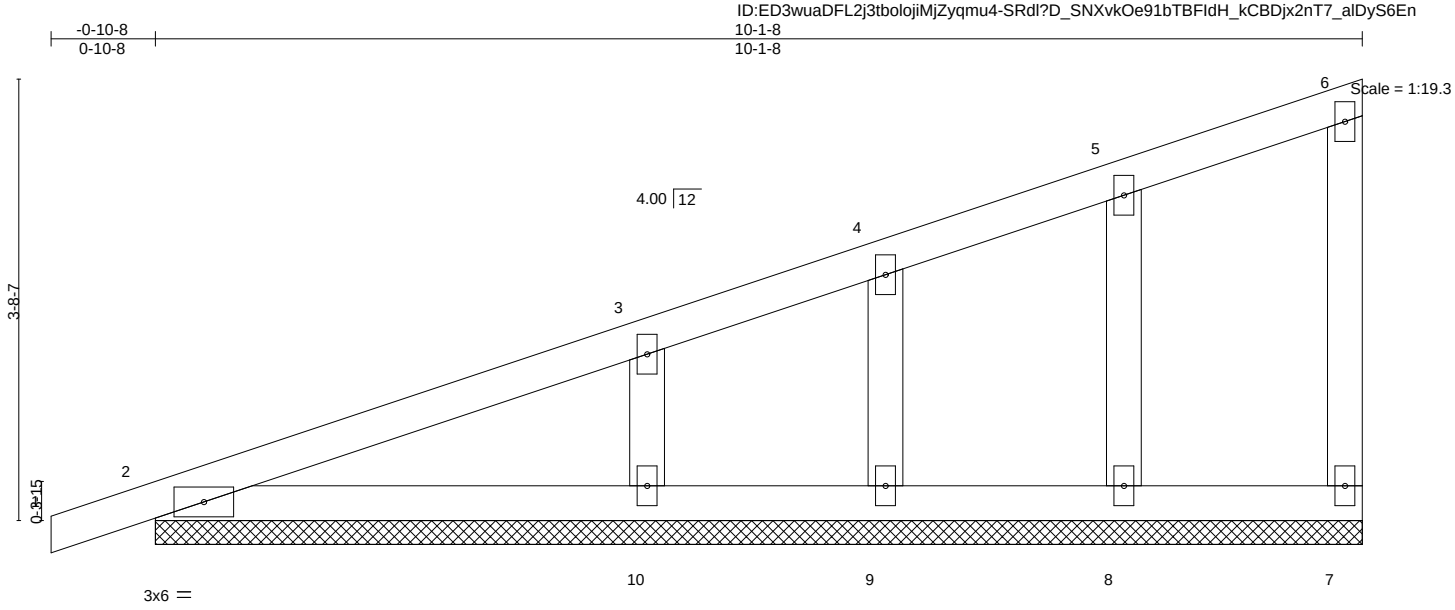


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | -0.00 | 1 | n/r | 120 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | 0.01 | 1 | n/r | 90 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 45 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.3 |
| OTHERS | 2x4 SP No.3 |

**BRACING-**

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

**REACTIONS.** All bearings 10-1-8.

(lb) - Max Horz 2=122(LC 6)

Max Uplift All uplift 100 lb or less at joint(s) 7, 2, 8, 9, 10

Max Grav All reactions 250 lb or less at joint(s) 7, 2, 8, 9 except 10=326(LC 1)

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

**NOTES-**

1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2, 8, 9, 10.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | M3E | Monopitch Supported Gable | 1 | 1 | I54792743 |
| | | | | | Job Reference (optional) |

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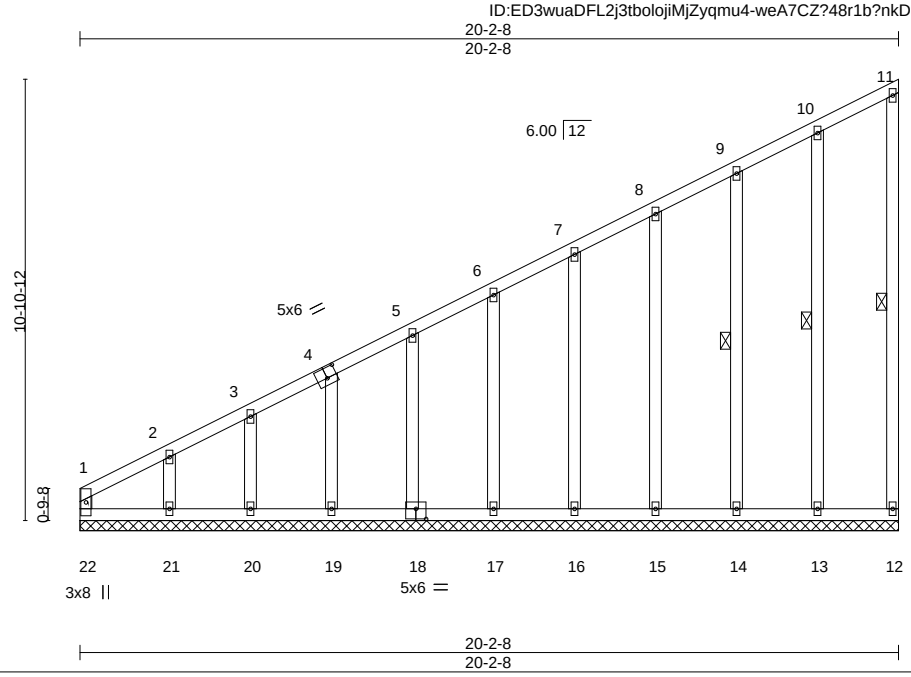


20-2-8
20-2-8

Plate Offsets (X,Y)-- [4:0-3-0,0-3-0], [18:0-3-0,0-3-0]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.17 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.00 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-R | | | | | | | Weight: 151 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| BOT CHORD | 2x4 SP No.2 or 2x4 SPF No.2 |
| WEBS | 2x4 SP No.2 or 2x4 SPF No.2 |
| OTHERS | 2x4 SP No.2 or 2x4 SPF 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 11-12, 10-13, 9-14 |

**REACTIONS.** All bearings 20-2-8.
(lb) - Max Horz 22=328(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 12, 13, 14, 15, 16, 17, 18, 19 except 21=-182(LC 10)
Max Grav All reactions 250 lb or less at joint(s) 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 except 22=258(LC 10)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-411/149, 2-3=-333/118, 3-4=-305/110, 4-5=-266/99

**NOTES-**
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 100 lb uplift at joint(s) 12, 13, 14, 15, 16, 17, 18, 19 except (jt=lb) 21=182.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | PB1E | GABLE | 2 | 1 | I54792744 |
| | | | | | Job Reference (optional) |

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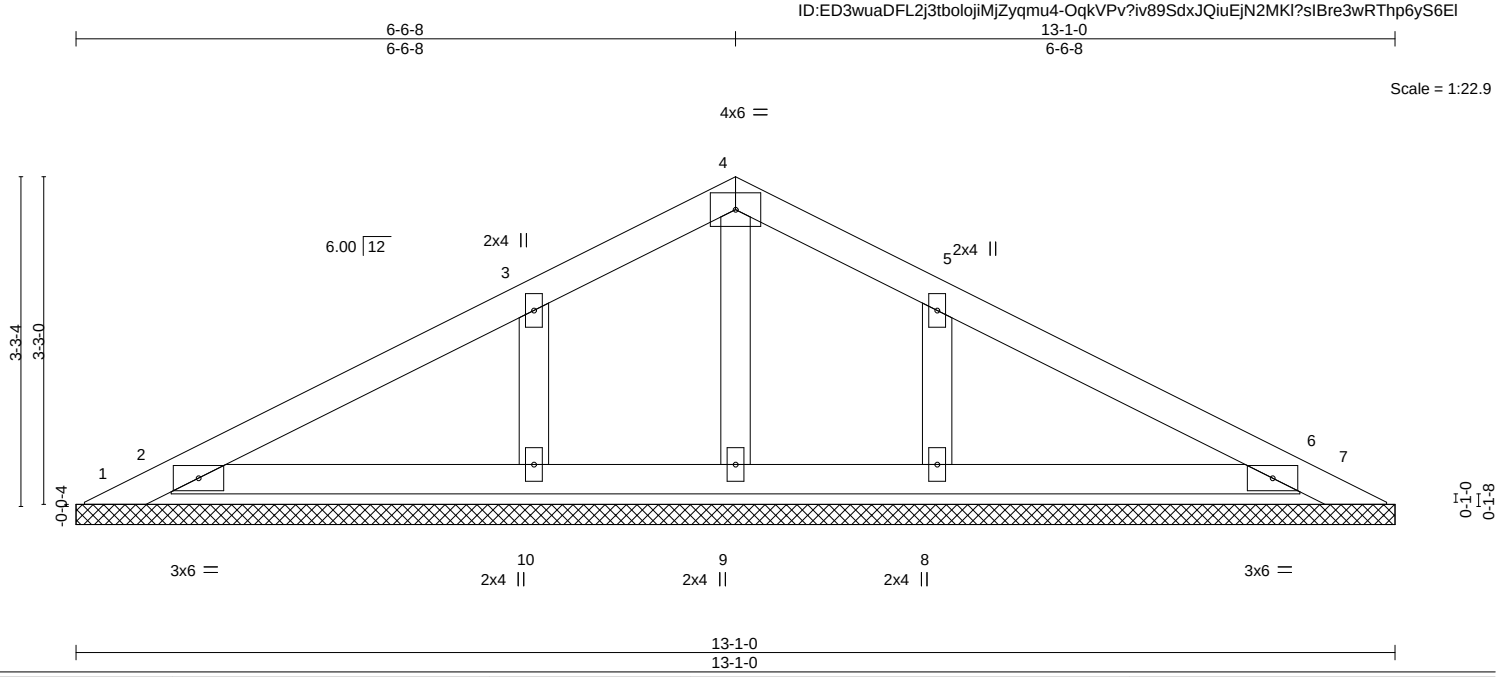


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.15 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.04 | Horz(CT) | 0.00 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 47 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 13-1-0.
(lb) - Max Horz 1=44(LC 14)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 2, 6, 10, 8
Max Grav All reactions 250 lb or less at joint(s) 1, 7, 9 except 2=289(LC 1), 6=289(LC 1), 10=263(LC 21), 8=263(LC 22)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 2, 6, 10, 8.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | PB2 | GABLE | 18 | 1 | I54792745 |
| | | | | | Job Reference (optional) |

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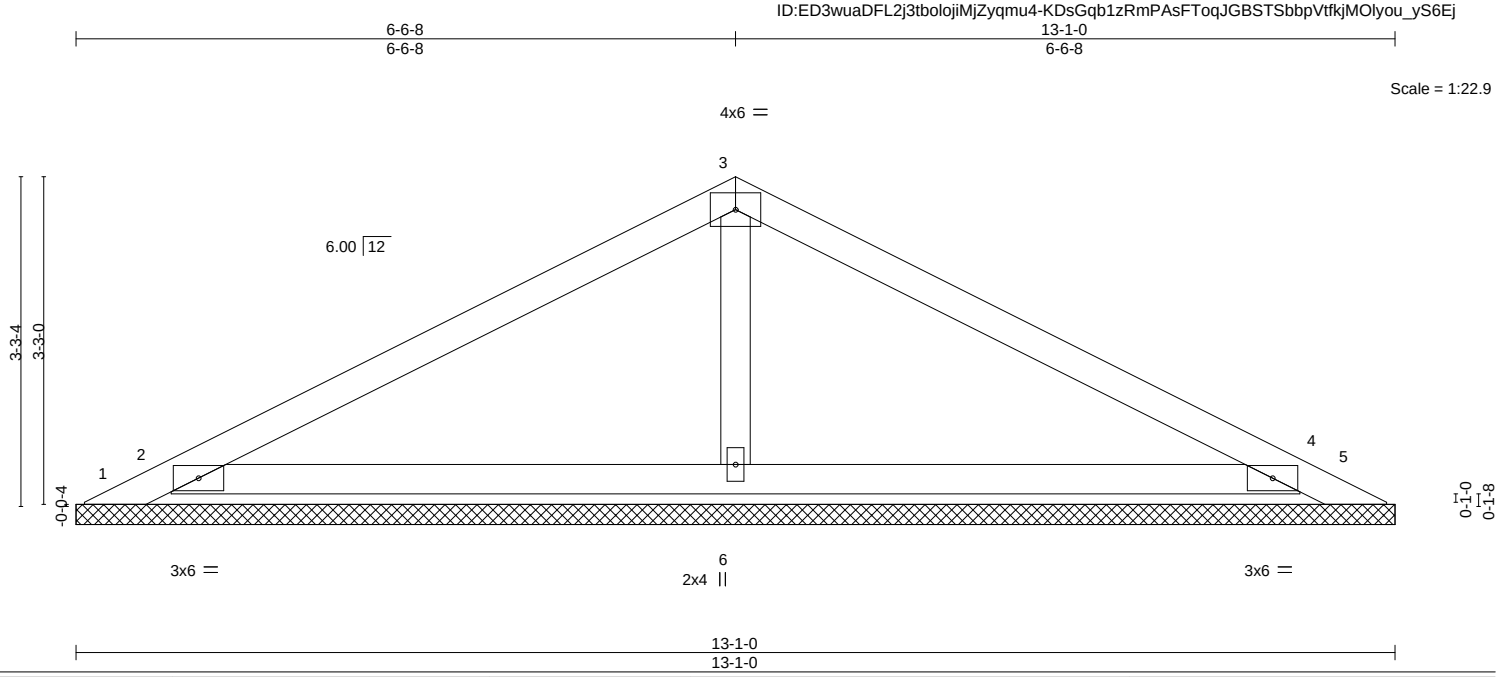


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.45 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.27 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 42 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 13-1-0.
(lb) - Max Horz 1=44(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) except 1=-338(LC 21), 5=-338(LC 22), 2=-193(LC 10), 4=-182(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 2=630(LC 21), 4=630(LC 22), 6=408(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-275/103

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 338 lb uplift at joint 1, 338 lb uplift at joint 5, 193 lb uplift at joint 2 and 182 lb uplift at joint 4.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | PB3 | GABLE | 2 | 2 | I54792746 |
| | | | | | Job Reference (optional) |

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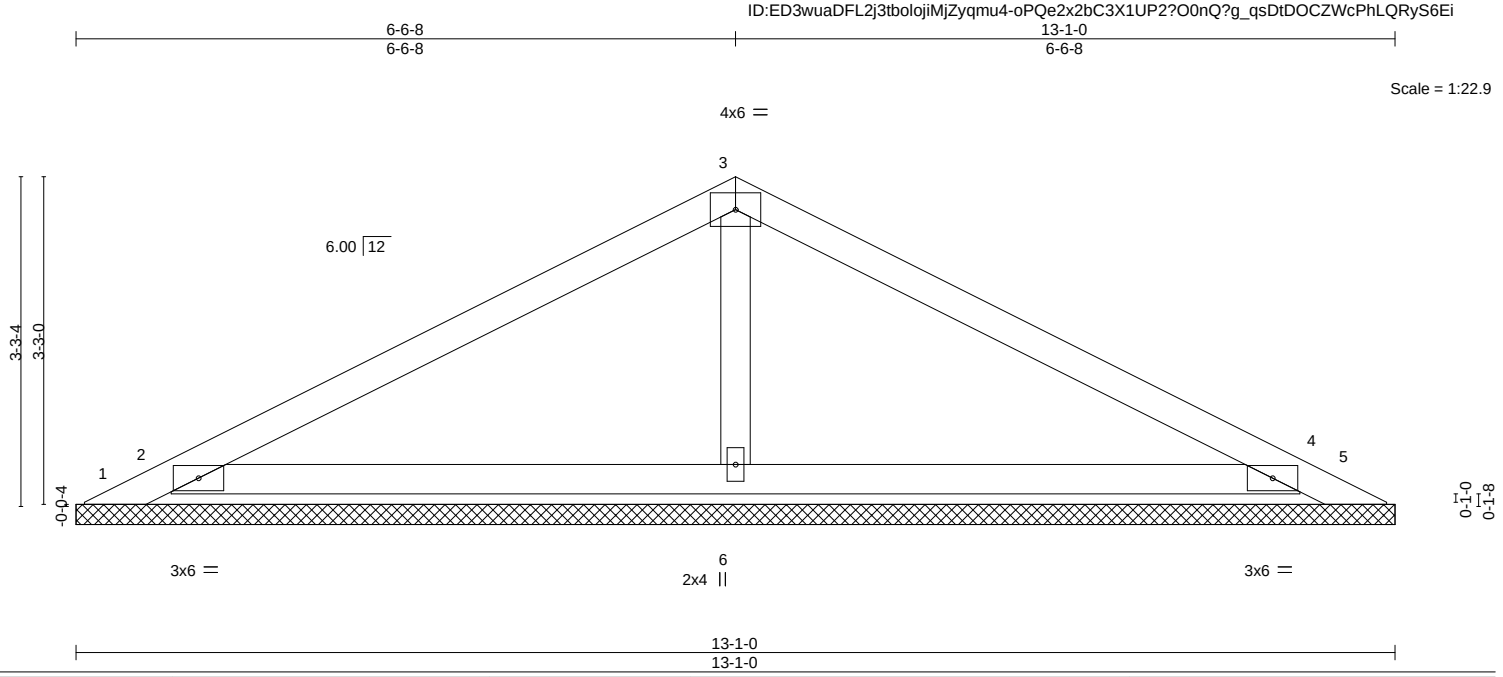


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.22 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.13 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 84 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 13-1-0.
(lb) - Max Horz 1=44(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) except 1=-338(LC 21), 5=-338(LC 22), 2=-193(LC 10), 4=-182(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 2=630(LC 21), 4=630(LC 22), 6=408(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-6=-275/103

**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: 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=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 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 338 lb uplift at joint 1, 338 lb uplift at joint 5, 193 lb uplift at joint 2 and 182 lb uplift at joint 4.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V1 | Valley | 1 | 1 | I54792747 |
| | | | | | Job Reference (optional) |

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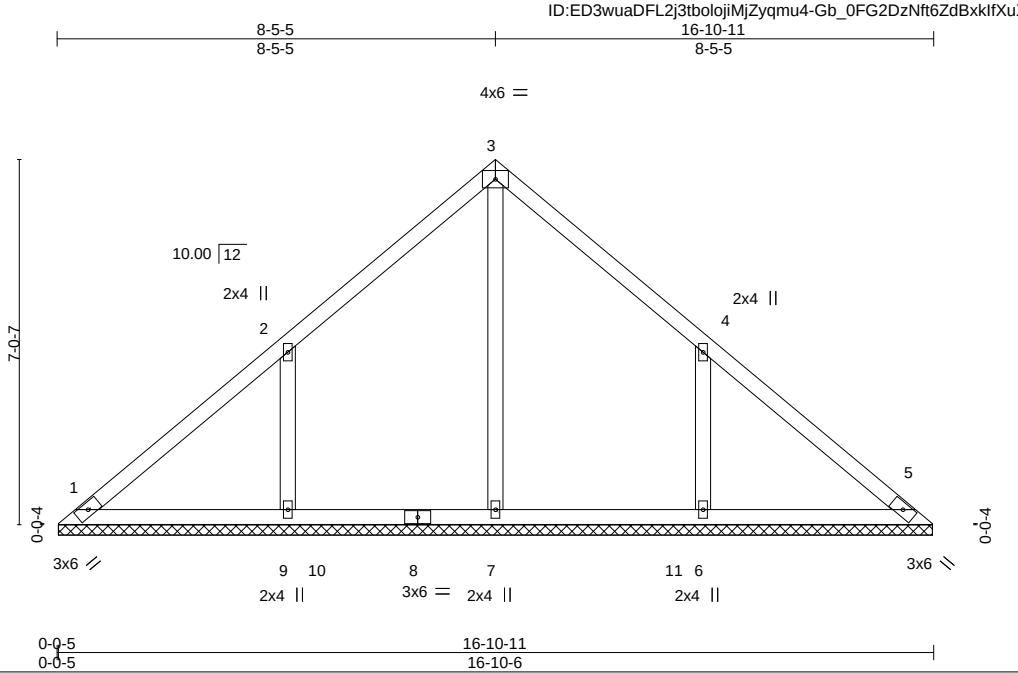


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 75 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2 or 2x4 SPF 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 16-10-1.
(lb) - Max Horz 1=-141(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-157(LC 10), 6=-157(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=359(LC 20), 9=447(LC 17), 6=447(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-306/204, 4-6=-306/204

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=157, 6=157.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V2 | Valley | 1 | 1 | I54792748 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:40 2022 Page 1
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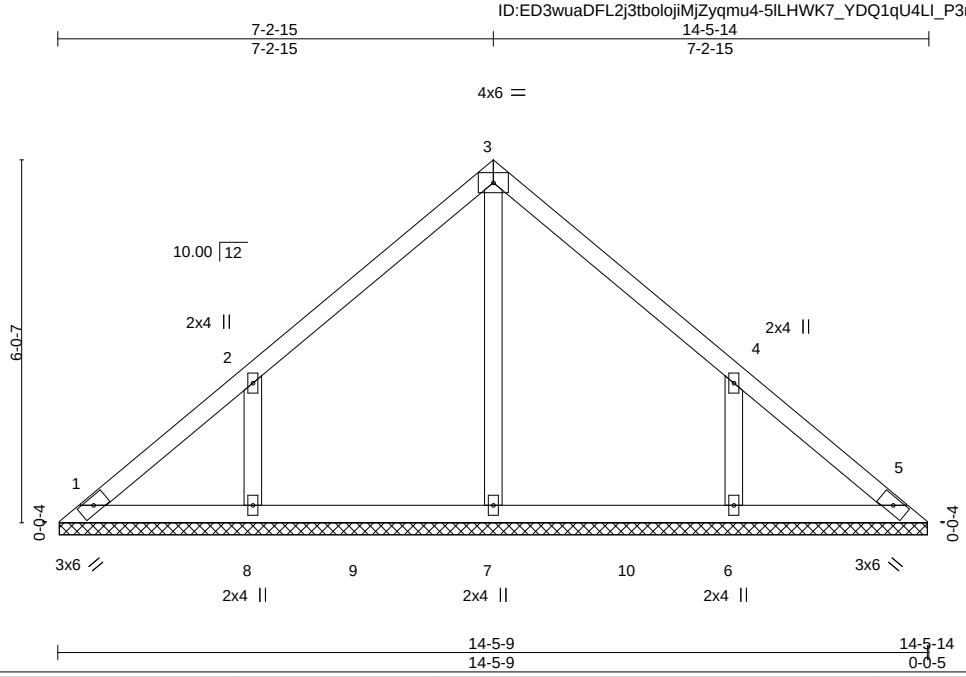


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.15 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.10 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 62 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 14-5-4.
(lb) - Max Horz 1=-120(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-135(LC 10), 6=-135(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=340(LC 17), 8=359(LC 17), 6=359(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-265/177, 4-6=-265/177

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=135, 6=135.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V3 | Valley | 1 | 1 | I54792749 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:41 2022 Page 1
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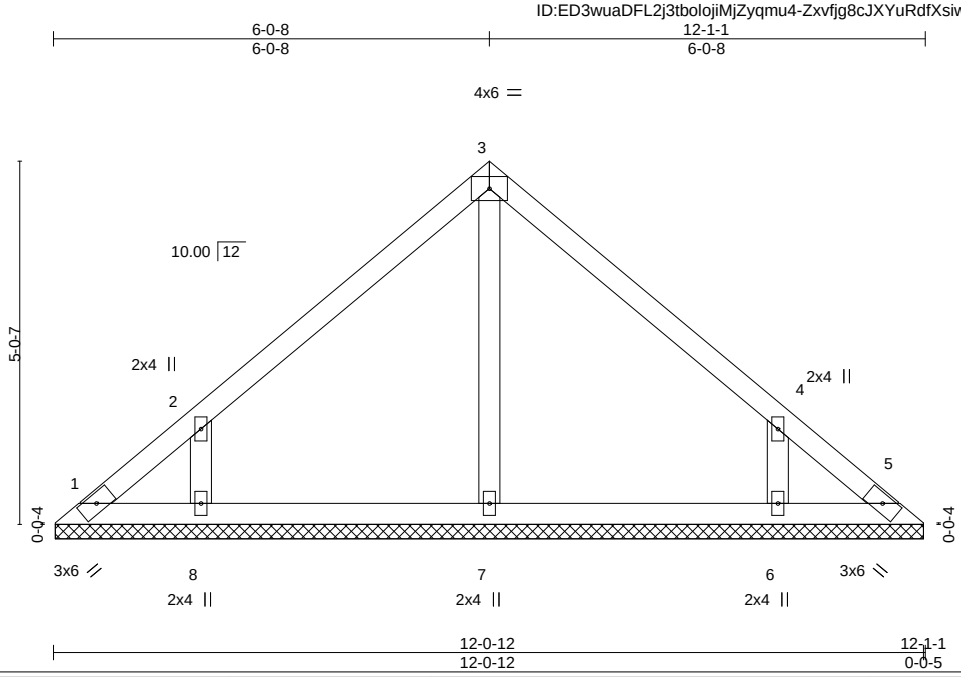


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 50 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 12-0-7.
(lb) - Max Horz 1=-99(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-126(LC 10), 6=-126(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=311(LC 17), 6=311(LC 18)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=126, 6=126.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V4 | Valley | 1 | 1 | I54792750 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:42 2022 Page 1
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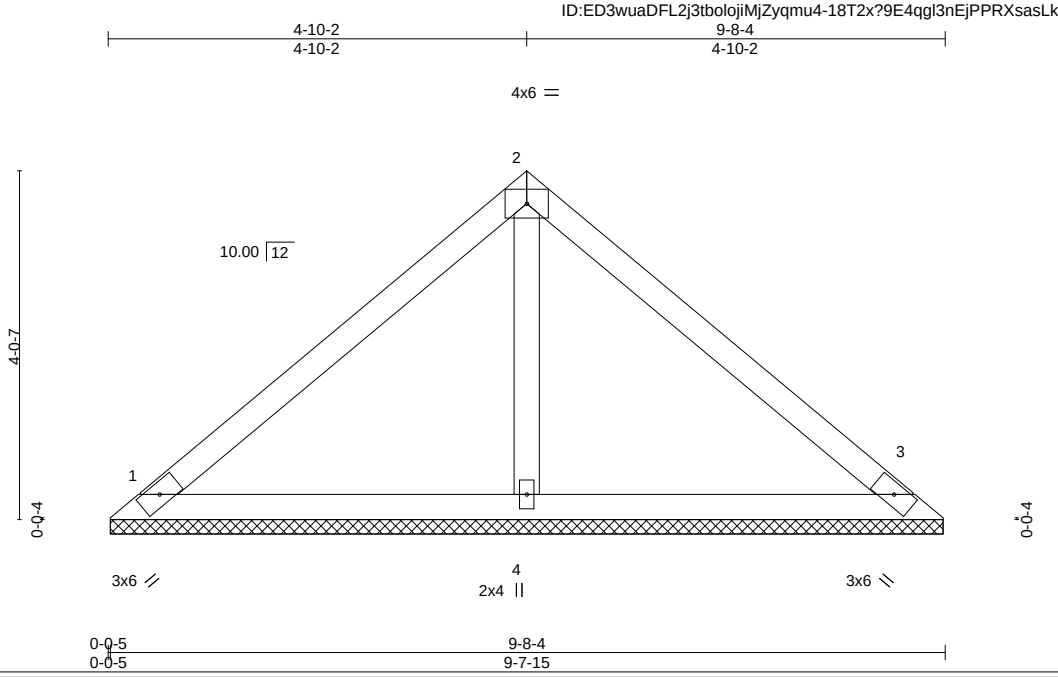


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.28 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 37 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** (size) 1=9-7-11, 3=9-7-11, 4=9-7-11
Max Horz 1=-78(LC 6)
Max Uplift 1=-19(LC 11), 3=-28(LC 11)
Max Grav 1=188(LC 1), 3=188(LC 1), 4=334(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V5 | Valley | 1 | 1 | I54792751 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:43 2022 Page 1
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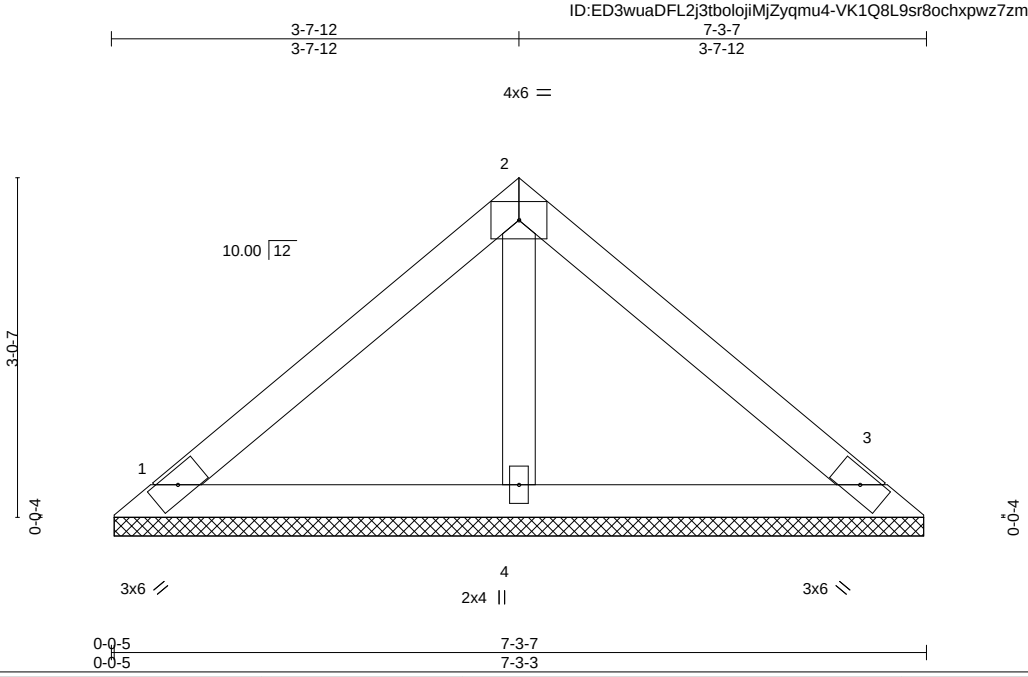


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 27 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** (size) 1=7-2-14, 3=7-2-14, 4=7-2-14
Max Horz 1=57(LC 7)
Max Uplift 1=-21(LC 11), 3=-28(LC 11)
Max Grav 1=149(LC 1), 3=149(LC 1), 4=221(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V6 | Valley | 1 | 1 | I54792752 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:44 2022 Page 1
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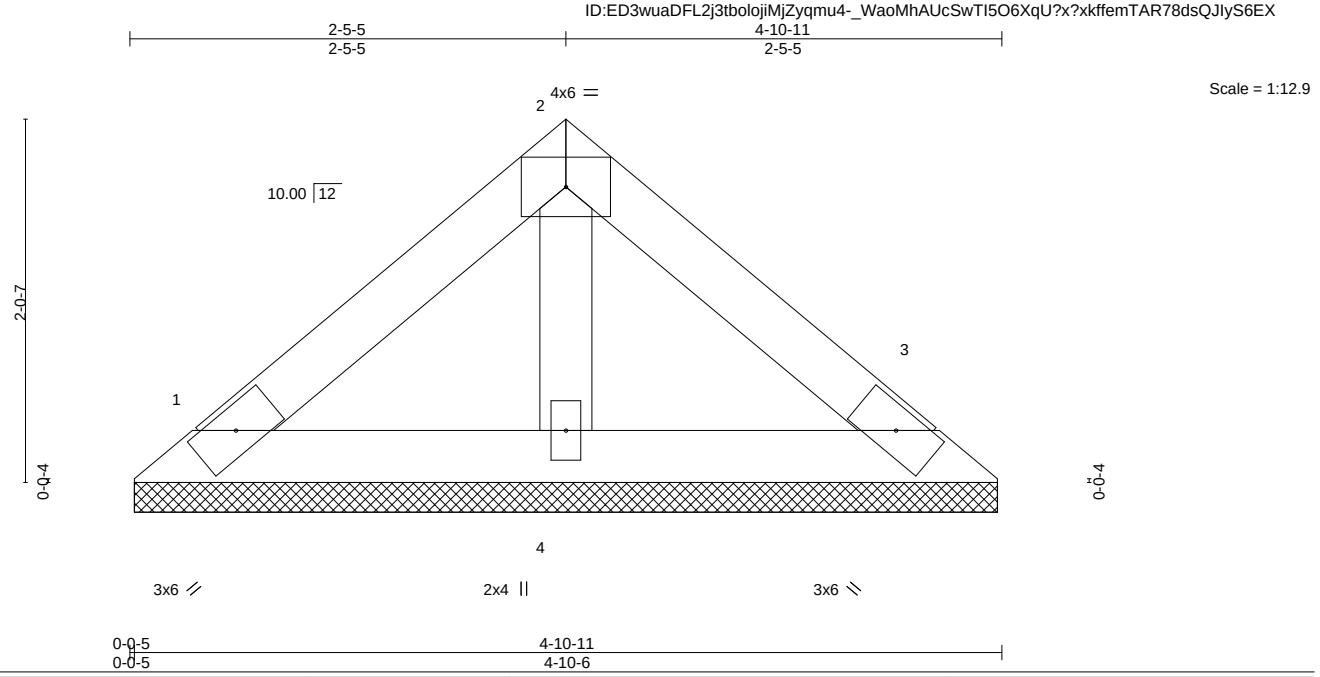



| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-P | | | | | | | Weight: 17 lb | FT = 20% |

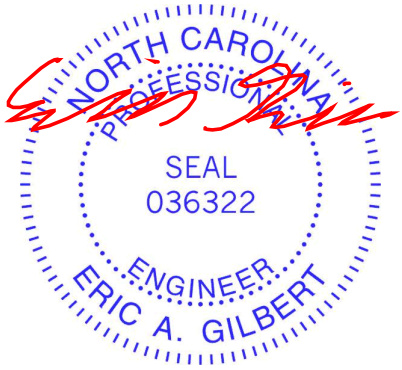
**LUMBER-**
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-10-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-10-1, 3=4-10-1, 4=4-10-1
Max Horz 1=36(LC 9)
Max Uplift 1=-13(LC 11), 3=-17(LC 11)
Max Grav 1=93(LC 1), 3=93(LC 1), 4=141(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V7 | Valley | 1 | 1 | I54792753 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:45 2022 Page 1
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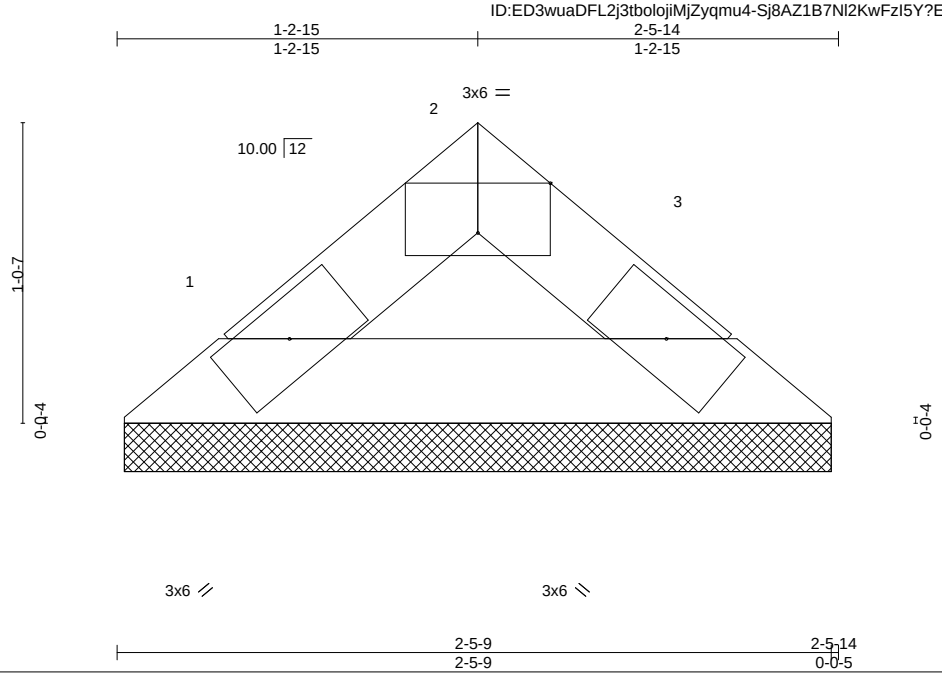


Plate Offsets (X,Y)-- [2:0-3-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.02 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 7 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=2-5-4, 3=2-5-4
Max Horz 1=15(LC 7)
Max Uplift 1=-2(LC 10), 3=-2(LC 11)
Max Grav 1=67(LC 1), 3=67(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


October 19,2022



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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V8 | Valley | 1 | 1 | I54792754 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:46 2022 Page 1
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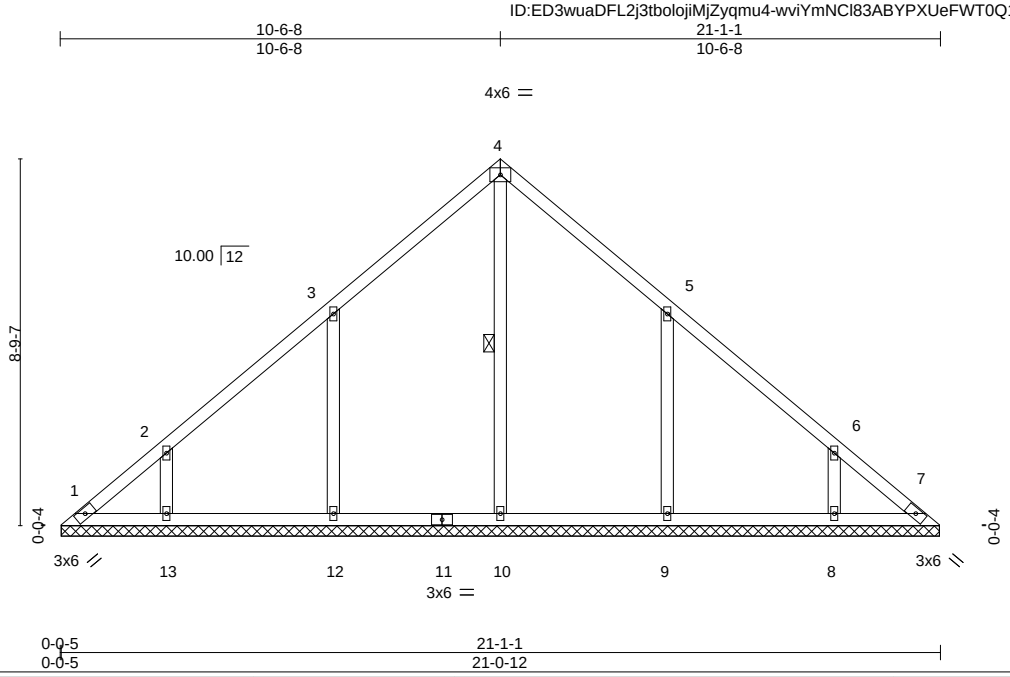


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.14 | Horz(CT) | 0.00 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 102 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3 *Except*
4-10: 2x4 SP No.2 or 2x4 SPF 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.
WEBS 1 Row at midpt 4-10

**REACTIONS.** All bearings 21-0-7.
(lb) - Max Horz 1=-178(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 12=-144(LC 10), 13=-106(LC 10), 9=-144(LC 11), 8=-107(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=390(LC 20), 12=428(LC 17), 13=280(LC 17), 9=428(LC 18), 8=280(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-12=-288/193, 5-9=-287/193

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7 except (jt=lb) 12=144, 13=106, 9=144, 8=107.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V9 | Valley | 1 | 1 | I54792755 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:47 2022 Page 1
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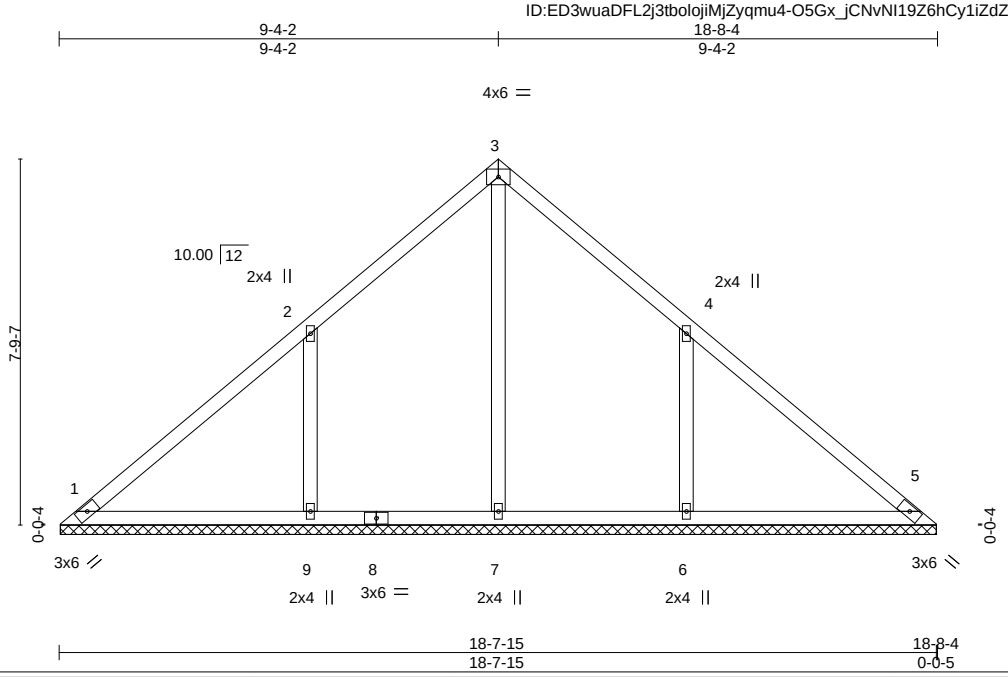


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.31 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 85 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2 or 2x4 SPF 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 18-7-11.
(lb) - Max Horz 1=-157(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) except 9=-177(LC 10), 6=-177(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=354(LC 20), 9=520(LC 17), 6=520(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-347/229, 4-6=-346/229

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 177 lb uplift at joint 9 and 177 lb uplift at joint 6.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V10 | Valley | 1 | 1 | I54792756 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:35 2022 Page 1
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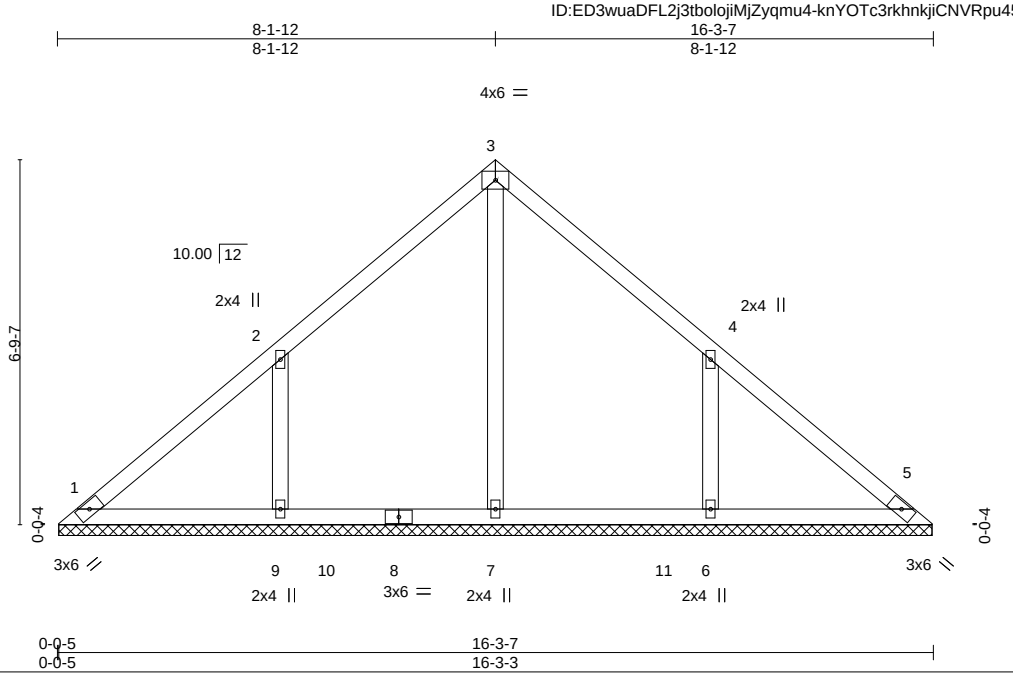


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 72 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2 or 2x4 SPF 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 16-2-14.
(lb) - Max Horz 1=-136(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-151(LC 10), 6=-151(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=357(LC 20), 9=422(LC 17), 6=422(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-295/196, 4-6=-294/196

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=151, 6=151.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V11 | Valley | 1 | 1 | I54792757 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:36 2022 Page 1
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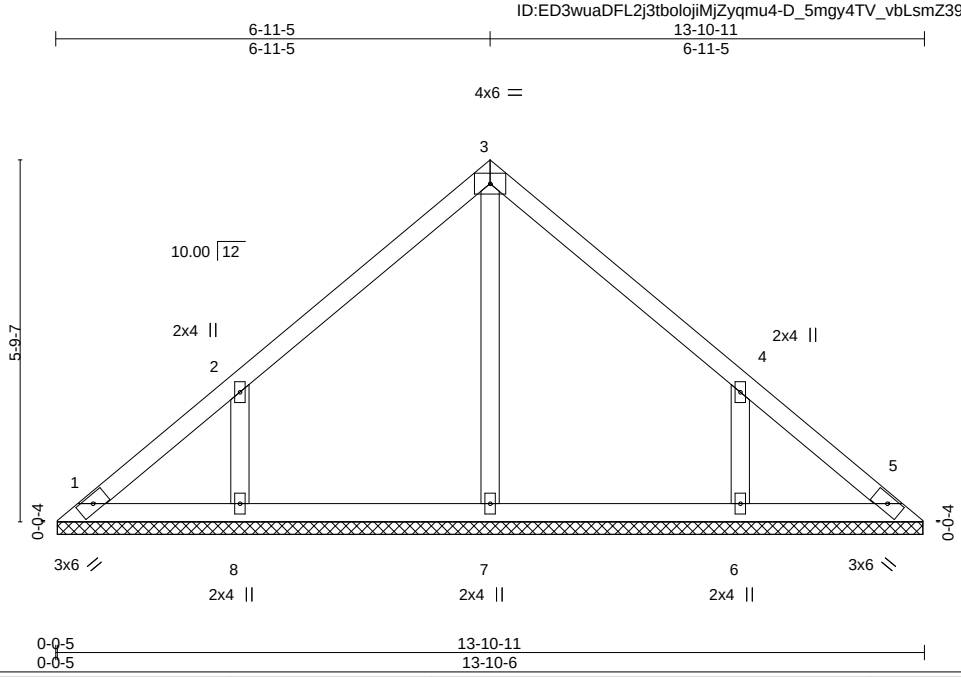


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.09 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 59 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 13-10-1.
(lb) - Max Horz 1=-115(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-132(LC 10), 6=-131(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=331(LC 17), 6=331(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-258/173, 4-6=-258/173

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=132, 6=131.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V12 | Valley | 1 | 1 | I54792758 |

Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:37 2022 Page 1
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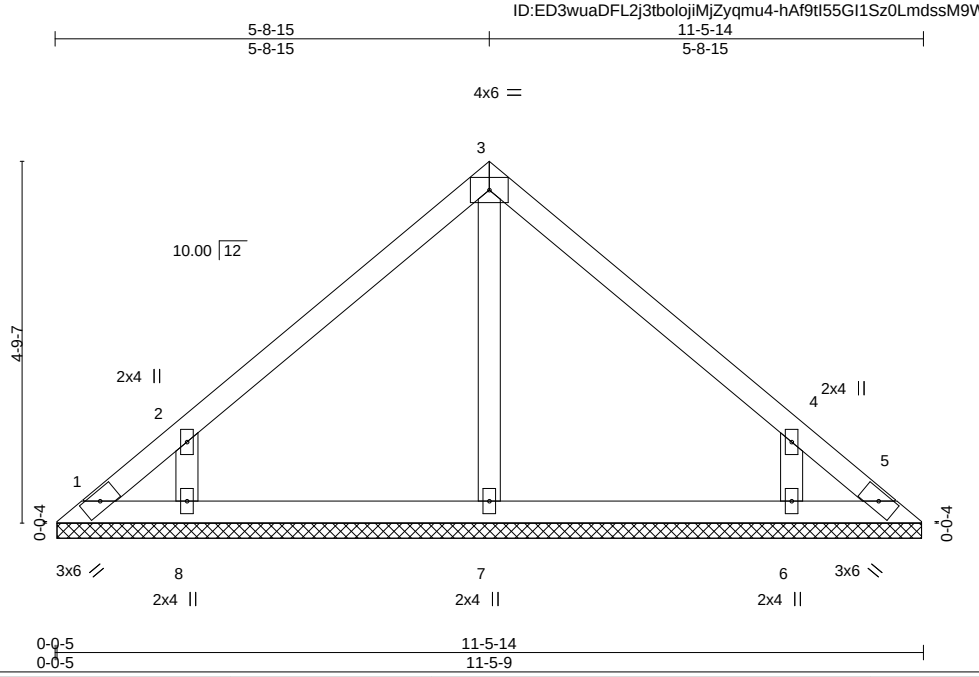


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 47 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 11-5-4.
(lb) - Max Horz 1=-94(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-129(LC 10), 6=-128(LC 11)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 8=314(LC 17), 6=314(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-255/174, 4-6=-255/173

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=129, 6=128.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V13 | Valley | 1 | 1 | I54792759 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:38 2022 Page 1
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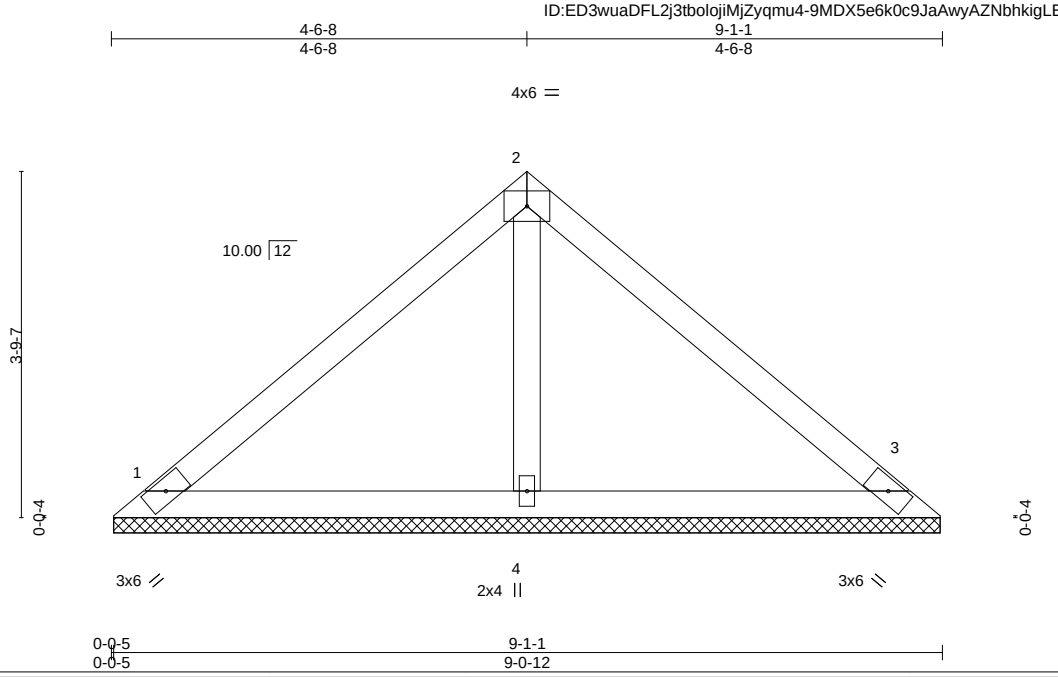


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.24 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 34 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** (size) 1=9-0-7, 3=9-0-7, 4=9-0-7
Max Horz 1=-73(LC 6)
Max Uplift 1=-17(LC 11), 3=-26(LC 11)
Max Grav 1=175(LC 1), 3=175(LC 1), 4=312(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V14 | Valley | 1 | 1 | I54792760 |
| | | | | | Job Reference (optional) |

84 Components (Dunn), Dunn, NC - 28334, 8.620 s Aug 22 2022 MiTek Industries, Inc. Tue Oct 18 17:44:38 2022 Page 1
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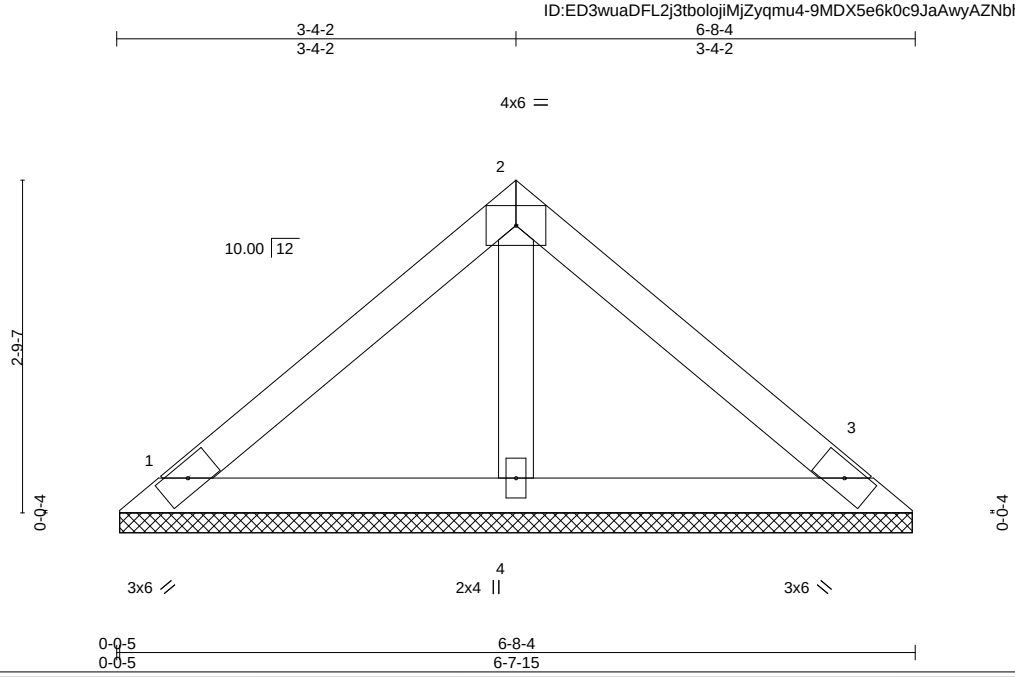


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.27 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 197/144 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 25 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
OTHERS 2x4 SP No.3

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

**REACTIONS.** (size) 1=6-7-11, 3=6-7-11, 4=6-7-11
Max Horz 1=-52(LC 6)
Max Uplift 1=-18(LC 10), 3=-25(LC 11)
Max Grav 1=134(LC 1), 3=134(LC 1), 4=202(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


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| Job | Truss | Truss Type | Qty | Ply | 50 SERENITY - roof |
|---|---|---|---|---|---|
| 32379-32379A | V15 | Valley | 1 | 1 | I54792761 |
| | | | | | Job Reference (optional) |

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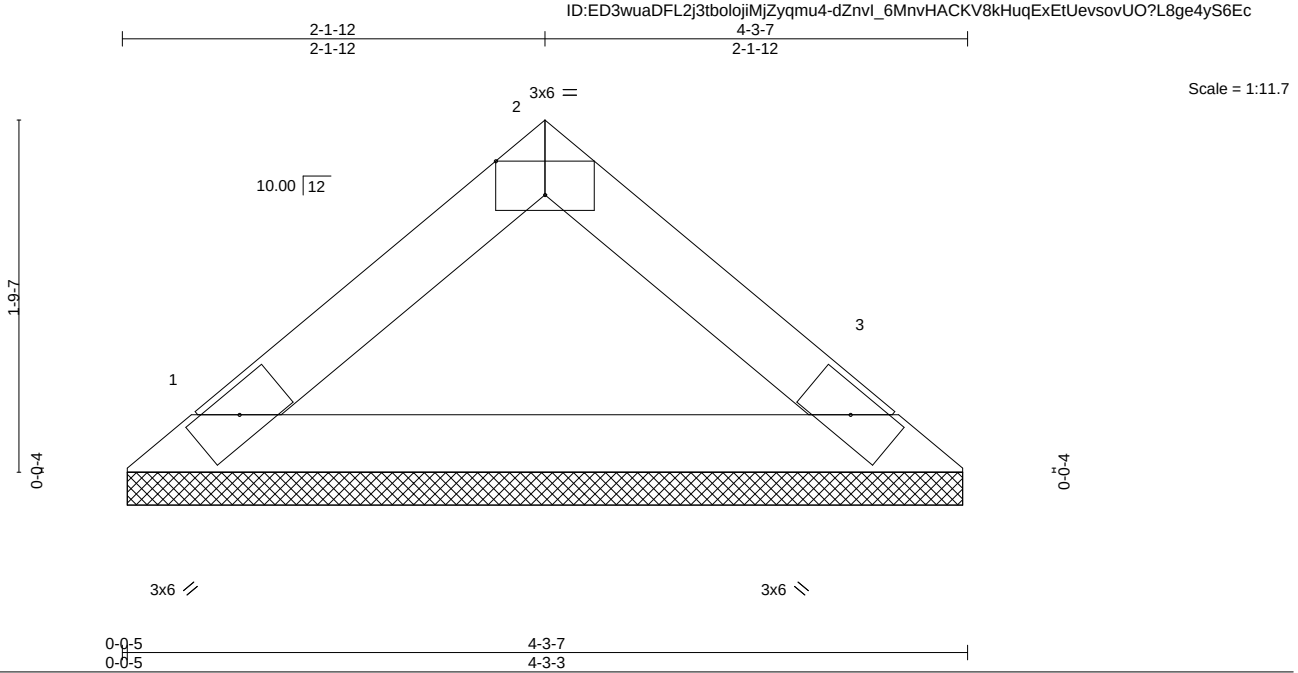


Plate Offsets (X,Y)-- [2:0-3-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.25 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 13 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-3-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-2-14, 3=4-2-14
Max Horz 1=-31(LC 6)
Max Uplift 1=-5(LC 10), 3=-5(LC 11)
Max Grav 1=139(LC 1), 3=139(LC 1)

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

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


October 19,2022



ENGINEERING BY TRENCO
A MiTek Affiliate
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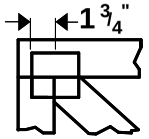
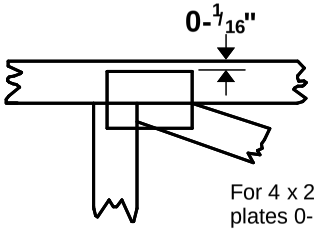
# Symbols

## PLATE LOCATION AND ORIENTATION




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




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

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

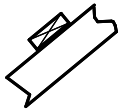
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

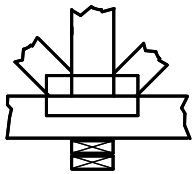
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

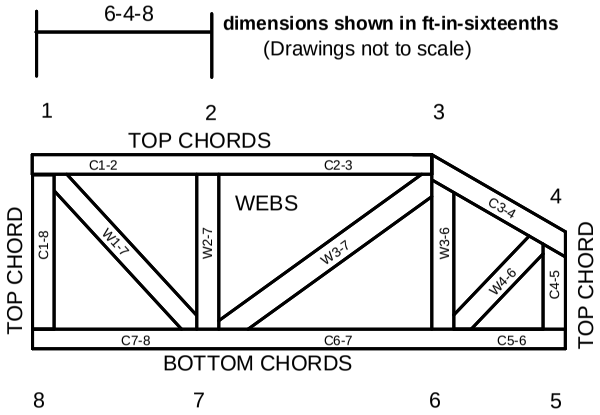


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System




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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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



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

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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