ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 4600435
SUNSET A - LOT 24 - ILA'S WAY

Trenco
818 Soundside Rd
Edenton, NC 27932

**Site Information:**

Customer: Project Name: 4600435
Lot/Block: Model:
Address: Subdivision:
City: State:

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.8
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 1 | I72459532 | A01G | 4/2/2025 |
| 2 | I72459533 | A02 | 4/2/2025 |
| 3 | I72459534 | A02A | 4/2/2025 |
| 4 | I72459535 | A03 | 4/2/2025 |
| 5 | I72459536 | A04 | 4/2/2025 |
| 6 | I72459537 | A05 | 4/2/2025 |
| 7 | I72459538 | A06 | 4/2/2025 |
| 8 | I72459539 | A07 | 4/2/2025 |
| 9 | I72459540 | A08 | 4/2/2025 |
| 10 | I72459541 | A09 | 4/2/2025 |
| 11 | I72459542 | B01G | 4/2/2025 |
| 12 | I72459543 | C01 | 4/2/2025 |
| 13 | I72459544 | C02 | 4/2/2025 |
| 14 | I72459545 | J01 | 4/2/2025 |
| 15 | I72459546 | J02G | 4/2/2025 |
| 16 | I72459547 | J03 | 4/2/2025 |
| 17 | I72459548 | J04 | 4/2/2025 |
| 18 | I72459549 | M01 | 4/2/2025 |

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource (Albermarle,NC).

Truss Design Engineer's Name: Galinski, John

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

North Carolina COA: C-0844


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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. 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.

April 02, 2025

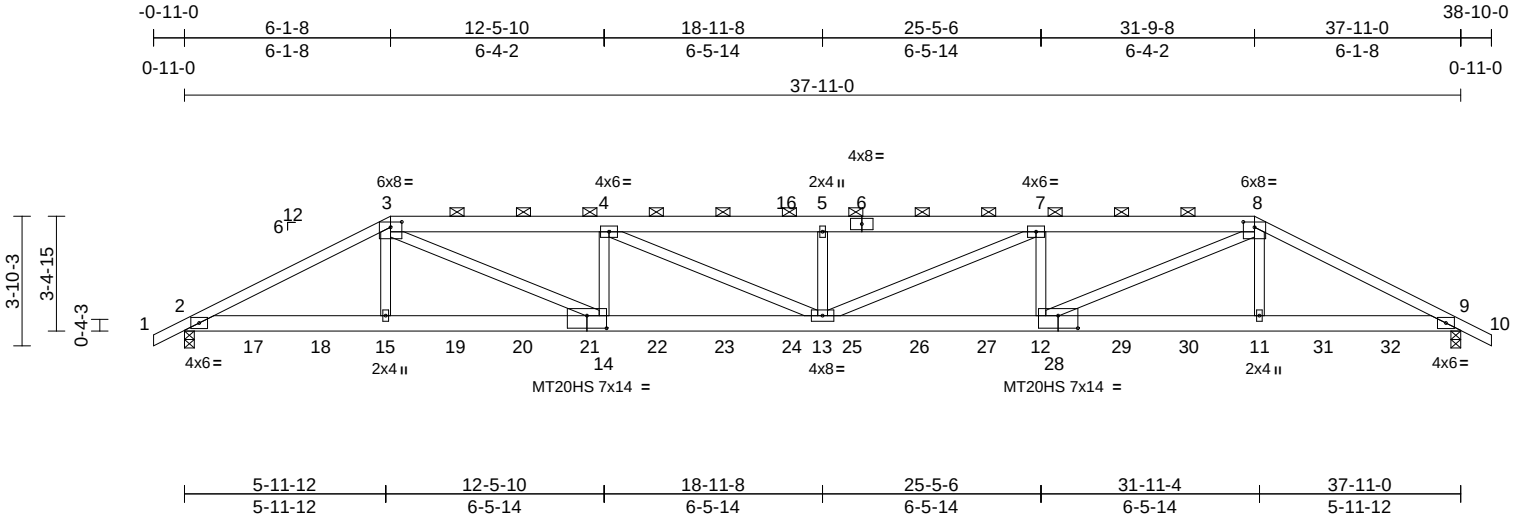


Galinski, John

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A01G | Hip Girder | 1 | 2 | I72459532 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:07 Page: 1
ID:N8N01_e?VFGd6hN7m8o7YkyST3m-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:68.5

Plate Offsets (X, Y): [3:0-4-0,0-1-15], [8:0-4-0,0-1-15], [12:0-7-0,0-4-8], [14:0-7-0,0-4-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.42 | Vert(LL) | -0.44 | 13-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.53 | Vert(CT) | -0.72 | 13-14 | >626 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.67 | Horz(CT) | 0.13 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 462 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS *Except* 3-6,6-8:2x6 SP 2400F 2.0E or 2x6 SP DSS
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 14-3,12-8,13-4,13-7:2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-10-5 oc purlins, except 2-0-0 oc purlins (4-8-15 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=58 (LC 12)
Max Uplift 2=-860 (LC 9), 9=-860 (LC 8)
Max Grav 2=3990 (LC 36), 9=3990 (LC 36)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-8174/1845, 3-4=-12209/2842, 4-5=-13834/3224, 5-7=-13834/3224, 7-8=-12208/2843, 8-9=-8174/1845, 9-10=0/40
BOT CHORD 2-15=-1625/7291, 13-15=-2796/12208, 11-13=-2767/12207, 9-11=-1592/7291
WEBS 3-15=-170/1024, 8-11=-171/1024, 3-14=-1351/5487, 8-12=-1351/5486, 4-14=-1373/383, 4-13=-453/1787, 5-13=-478/168, 7-13=-453/1788, 7-12=-1372/383

**NOTES**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
12) All bearings are assumed to be SP 2400F 2.0E or DSS .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 860 lb uplift at joint 2 and 860 lb uplift at joint 9.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.


April 2,2025

Continued on page 2



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16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 273 lb down and 55 lb up at 2-0-12, 216 lb down and 42 lb up at 4-0-12, 262 lb down and 83 lb up at 6-0-12, 262 lb down and 83 lb up at 8-0-12, 262 lb down and 83 lb up at 10-0-12, 262 lb down and 83 lb up at 12-0-12, 262 lb down and 83 lb up at 14-0-12, 262 lb down and 83 lb up at 16-0-12, 262 lb down and 83 lb up at 18-0-12, 262 lb down and 83 lb up at 19-10-4, 262 lb down and 83 lb up at 21-10-4, 262 lb down and 83 lb up at 23-10-4, 262 lb down and 83 lb up at 25-10-4, 262 lb down and 83 lb up at 27-10-4, 262 lb down and 83 lb up at 29-10-4, 262 lb down and 83 lb up at 31-10-4, and 216 lb down and 42 lb up at 33-10-4, and 273 lb down and 55 lb up at 35-10-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-3=-51, 3-8=-61, 8-10=-51, 2-9=-20
   Concentrated Loads (lb)
   Vert: 15=-262, 11=-262, 17=-273, 18=-216, 19=-262, 20=-262, 21=-262, 22=-262, 23=-262, 24=-262, 25=-262, 26=-262, 27=-262, 28=-262, 29=-262, 30=-262, 31=-216, 32=-273

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A02 | Roof Special | 1 | 1 | I72459533 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

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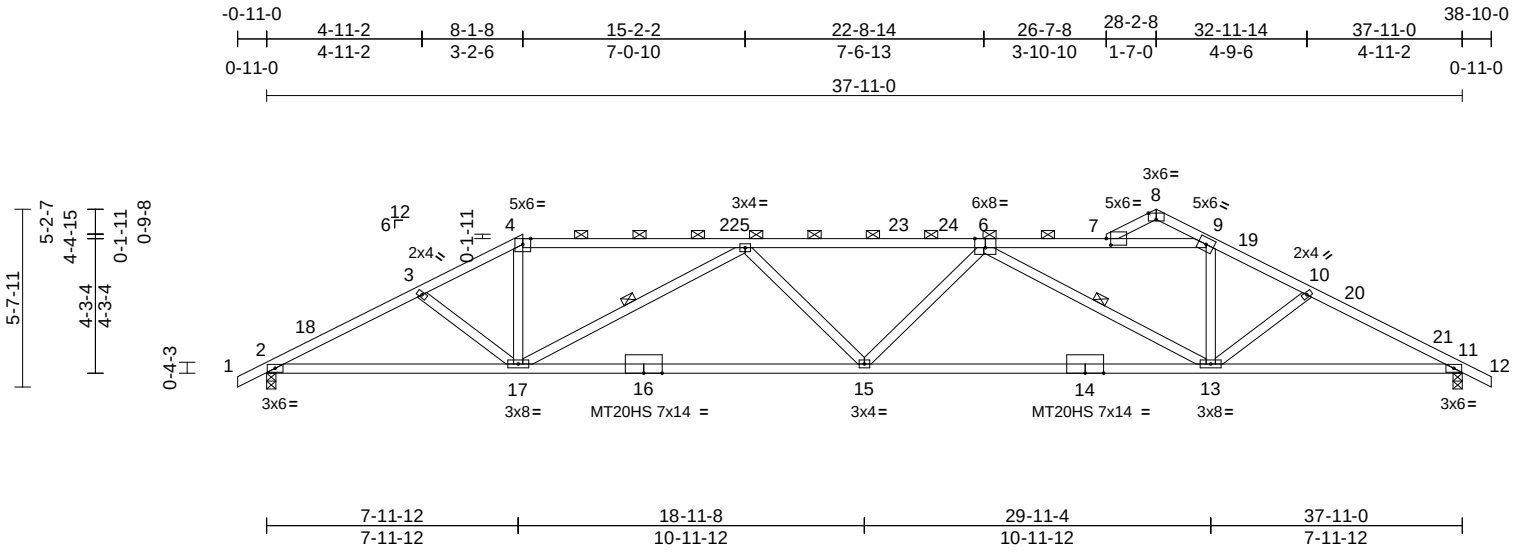


Scale = 1:73.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.81 | Vert(LL) | -0.31 | 15 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.88 | Vert(CT) | -0.67 | 15-17 | >672 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.63 | Horz(CT) | 0.17 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 186 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 6-4:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
BOT CHORD 2x4 SP No.1 *Except* 16-14:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-0-2 oc purlins, except 2-0-0 oc purlins (2-8-1 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 8-2-9 oc bracing.
WEBS 1 Row at midpt 5-17, 6-13

**REACTIONS** (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-89 (LC 13)
Max Uplift 2=-273 (LC 12), 11=-146 (LC 12)
Max Grav 2=1569 (LC 2), 11=1569 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-3001/502, 3-4=-2956/463, 7-8=-144/29, 8-9=-185/52, 9-10=-2794/348, 10-11=-2891/341, 11-12=0/32, 4-5=-2631/436, 5-7=-4078/554, 7-9=-2389/302
BOT CHORD 2-17=-461/2634, 15-17=-568/4026, 13-15=-515/3913, 11-13=-255/2505
WEBS 4-17=-79/956, 9-13=-52/940, 3-17=-297/129, 10-13=-190/152, 5-15=0/314, 5-17=-1598/288, 6-15=0/317, 6-13=-1633/322

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.1 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 11 and 273 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | |
|---|---|---|---|---|---|---|
| 4600435 | A02A | Hip | 1 | 1 | Job Reference (optional) | I72459534 |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

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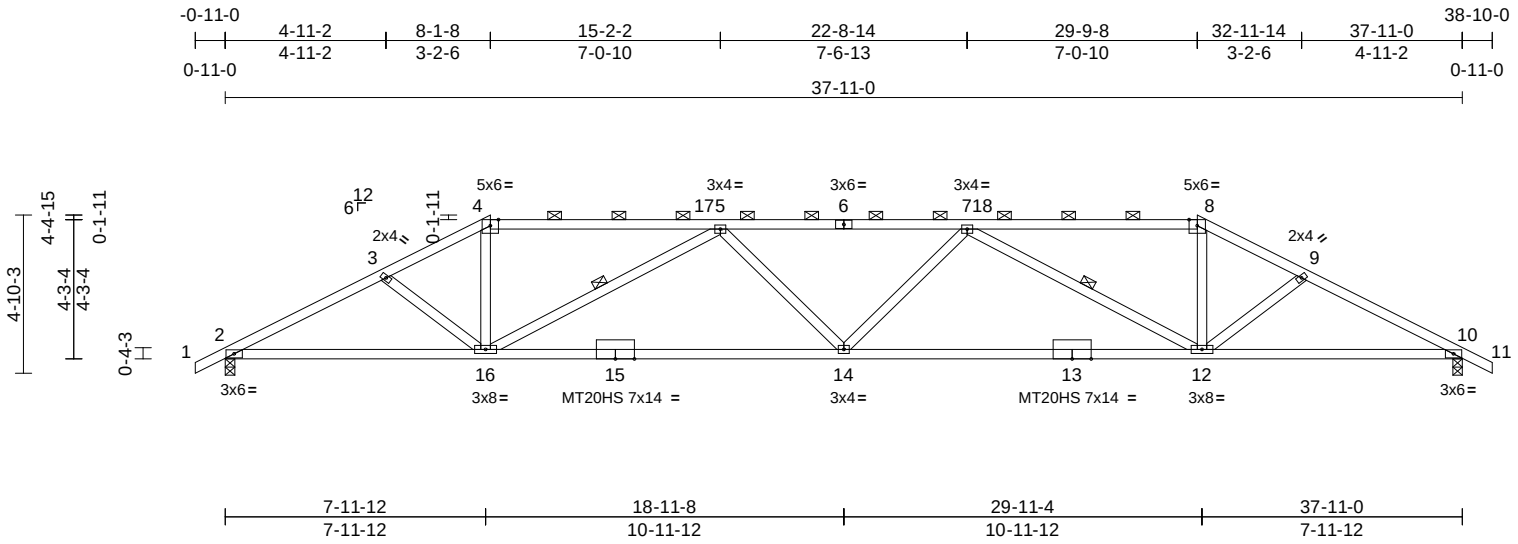


Scale = 1:70.6

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.73 | Vert(LL) | -0.34 | 14 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.91 | Vert(CT) | -0.70 | 14-16 | >648 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.65 | Horz(CT) | 0.18 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 181 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 4-6,6-8:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
BOT CHORD 2x4 SP No.1 *Except* 15-13:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-11-11 oc purlins, except 2-0-0 oc purlins (2-7-14 max.): 4-8.
BOT CHORD Rigid ceiling directly applied or 8-10-1 oc bracing.
WEBS 1 Row at midpt 5-16, 7-12

**REACTIONS** (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-74 (LC 17)
Max Uplift 2=-149 (LC 9), 10=-149 (LC 8)
Max Grav 2=1588 (LC 36), 10=1588 (LC 36)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-3101/338, 3-4=-3059/335, 4-5=-2723/313, 5-7=-4305/466, 7-8=-2723/313, 8-9=-3059/335, 9-10=-3101/338, 10-11=0/34
BOT CHORD 2-16=-297/2723, 14-16=-490/4198, 12-14=-465/4198, 10-12=-250/2723
WEBS 4-16=-39/997, 8-12=-39/997, 3-16=-295/156, 9-12=-295/156, 5-14=0/315, 5-16=-1689/319, 7-14=0/315, 7-12=-1689/319

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.1 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 149 lb uplift at joint 2 and 149 lb uplift at joint 10.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



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| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A03 | Hip | 2 | 1 | I72459535 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:10 Page: 1
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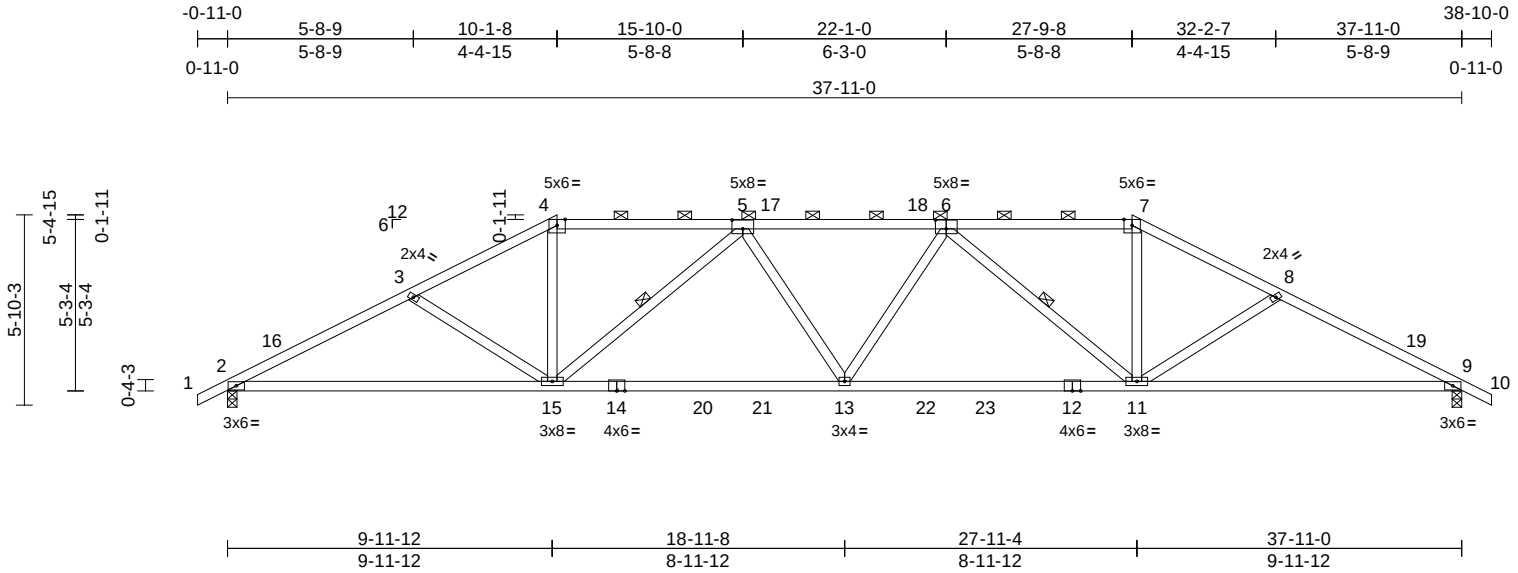


Scale = 1:70.8

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.73 | Vert(LL) | -0.24 | 9-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.82 | Vert(CT) | -0.54 | 9-11 | >842 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.38 | Horz(CT) | 0.15 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 187 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-6-7 oc purlins, except 2-0-0 oc purlins (2-7-10 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-15, 6-11

**REACTIONS** (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=-91 (LC 17)
Max Uplift 2=-123 (LC 12), 9=-123 (LC 13)
Max Grav 2=1600 (LC 37), 9=1600 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-2830/283, 3-4=-2714/267, 4-5=-2393/254, 5-7=-3225/328, 7-8=-2714/267, 8-9=-2830/284, 9-10=0/34
BOT CHORD 2-15=-254/2479, 13-15=-307/3173, 11-13=-281/3173, 9-11=-195/2479
WEBS 3-15=-453/202, 4-15=-23/916, 7-11=-23/916, 8-11=-453/203, 5-13=0/199, 5-15=-1028/222, 6-13=0/199, 6-11=-1028/222

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.1 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 2 and 123 lb uplift at joint 9.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



ENGINEERING BY TRENCO
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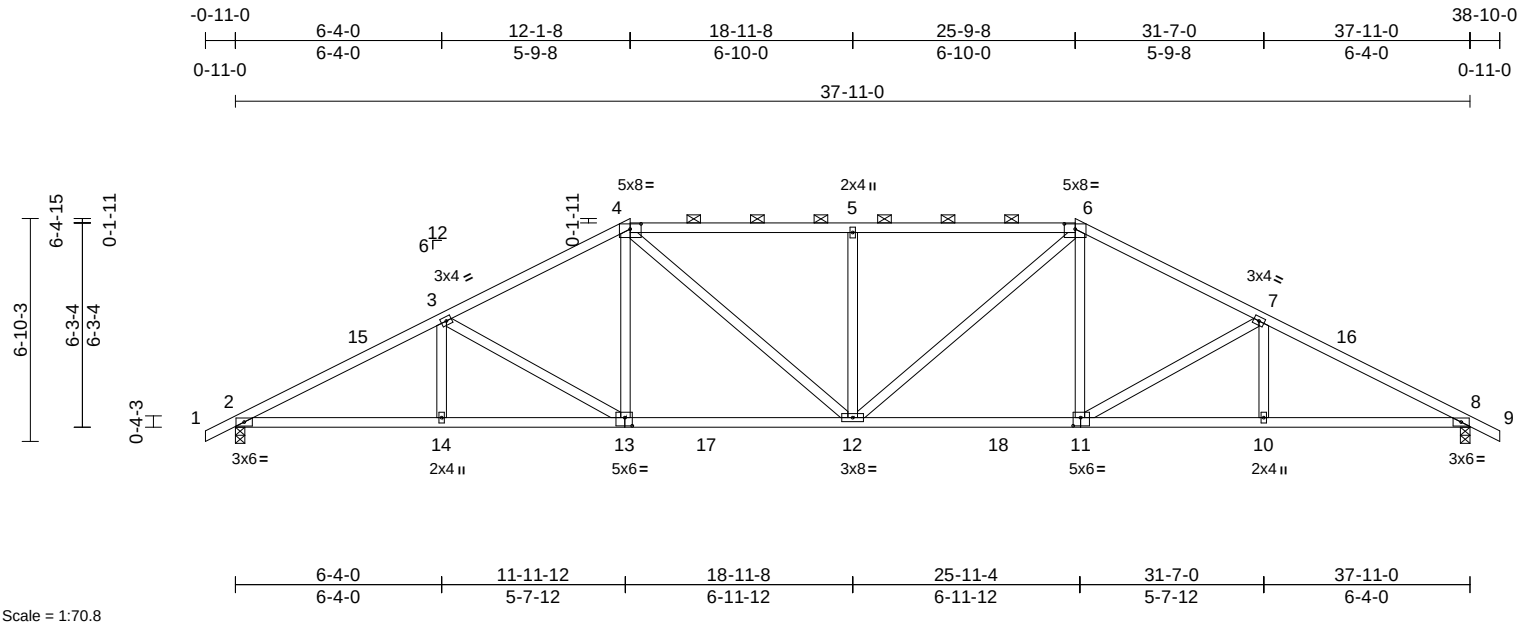
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A04 | Hip | 2 | 1 | I72459536 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:10 Page: 1
ID:DyuGIcZDUBfqaBNq4UXV3eySSvY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:70.8

Plate Offsets (X, Y): [4:0-4-0,0-1-15], [6:0-4-0,0-1-15], [11:0-2-12,0-3-0], [13:0-2-12,0-3-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.88 | Vert(LL) | -0.17 | 12 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.89 | Vert(CT) | -0.37 | 11-12 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.58 | Horz(CT) | 0.15 | 8 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 199 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

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

**REACTIONS** (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-108 (LC 13)
Max Uplift 2=-144 (LC 12), 8=-144 (LC 13)
Max Grav 2=1678 (LC 37), 8=1678 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-3037/209, 3-4=-2383/209, 4-5=-2569/246, 5-6=-2569/246, 6-7=-2383/209, 7-8=-3037/210, 8-9=0/32
BOT CHORD 2-14=-207/2601, 12-14=-207/2601, 10-12=-100/2601, 8-10=-100/2601
WEBS 3-14=0/248, 3-13=-719/189, 4-13=-19/489, 4-12=-142/669, 5-12=-743/217, 6-12=-142/669, 6-11=-19/489, 7-11=-719/190, 7-10=0/248

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 2 and 144 lb uplift at joint 8.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



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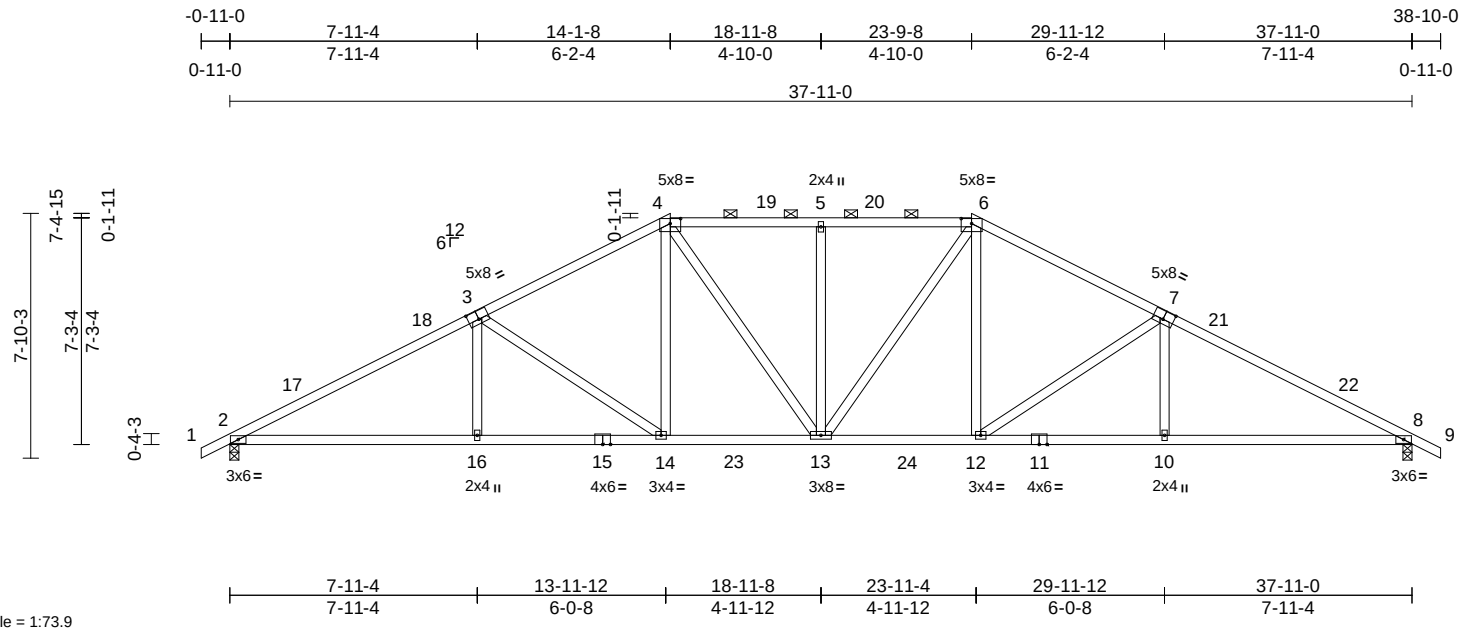
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | I72459537 |
|---|---|---|---|---|---|---|
| 4600435 | A05 | Hip | 2 | 1 | Job Reference (optional) | |

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:10 Page: 1
ID:pBoPM18KAxi0KZ22uZOl?mySSuo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:73.9

Plate Offsets (X, Y): [3:0-4-0,0-3-4], [4:0-4-0,0-1-15], [6:0-4-0,0-1-15], [7:0-4-0,0-3-4]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.98 | Vert(LL) | -0.17 | 12-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.74 | Vert(CT) | -0.32 | 12-13 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.85 | Horz(CT) | 0.14 | 8 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 207 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 1-3,7-9:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
BOT CHORD 2x4 SP No.1 *Except* 15-11:2x4 SP No.2
WEBS 2x4 SP No.3

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

**REACTIONS** (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-125 (LC 17)
Max Uplift 2=-163 (LC 12), 8=-163 (LC 13)
Max Grav 2=1713 (LC 37), 8=1713 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-4=-3119/235, 4-5=-2059/170, 5-6=-2059/170, 6-8=-3119/236, 8-9=0/32
BOT CHORD 2-16=-228/2681, 14-16=-228/2681, 13-14=-50/1962, 12-13=0/1962, 10-12=-104/2681, 8-10=-104/2681
WEBS 3-14=-848/212, 4-14=-53/561, 6-12=-53/561, 7-12=-848/213, 6-13=-105/413, 5-13=-535/152, 4-13=-105/413, 3-16=0/318, 7-10=0/318

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.1 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 2 and 163 lb uplift at joint 8.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



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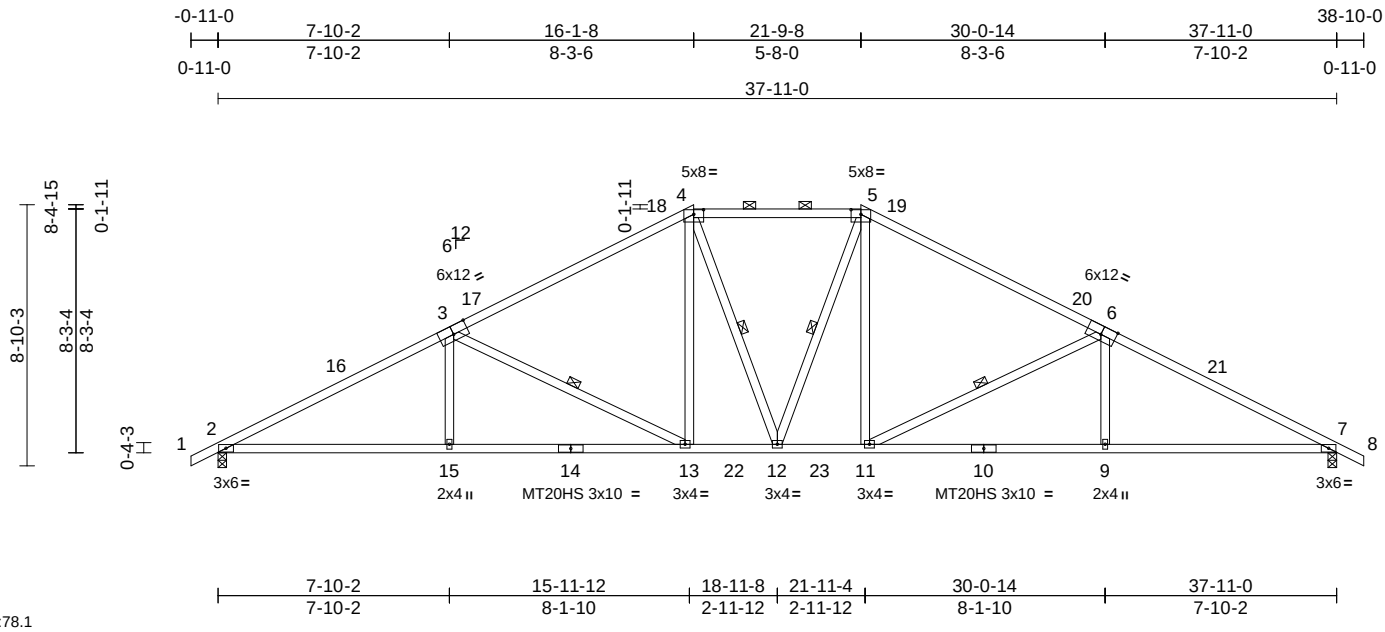
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A06 | Hip | 2 | 1 | I72459538 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:11 Page: 1
ID:7MIKXsrjWm0oHUTBHIRMM?ySStu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:78.1

Plate Offsets (X, Y): [3:0-6-0,Edge], [4:0-4-0,0-1-15], [5:0-4-0,0-1-15], [6:0-6-0,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.96 | Vert(LL) | -0.18 | 9-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -0.38 | 9-11 | >999 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.44 | Horz(CT) | 0.17 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 206 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS *Except* 4-5:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (2-10-13 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 3-13, 6-11, 4-12, 5-12

**REACTIONS** (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=-141 (LC 13)
Max Uplift 2=-180 (LC 12), 7=-180 (LC 13)
Max Grav 2=1756 (LC 37), 7=1756 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-4=-3292/278, 4-5=-1968/210, 5-7=-3292/278, 7-8=0/32
BOT CHORD 2-15=-287/2876, 13-15=-289/2873, 12-13=-53/1968, 11-12=0/1968, 9-11=-148/2873, 7-9=-146/2876
WEBS 3-15=0/353, 3-13=-999/263, 4-13=-30/581, 5-11=-30/581, 6-11=-999/264, 6-9=0/353, 4-12=-157/155, 5-12=-157/155

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) All bearings are assumed to be SP No.2 .
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 180 lb uplift at joint 2 and 180 lb uplift at joint 7.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025

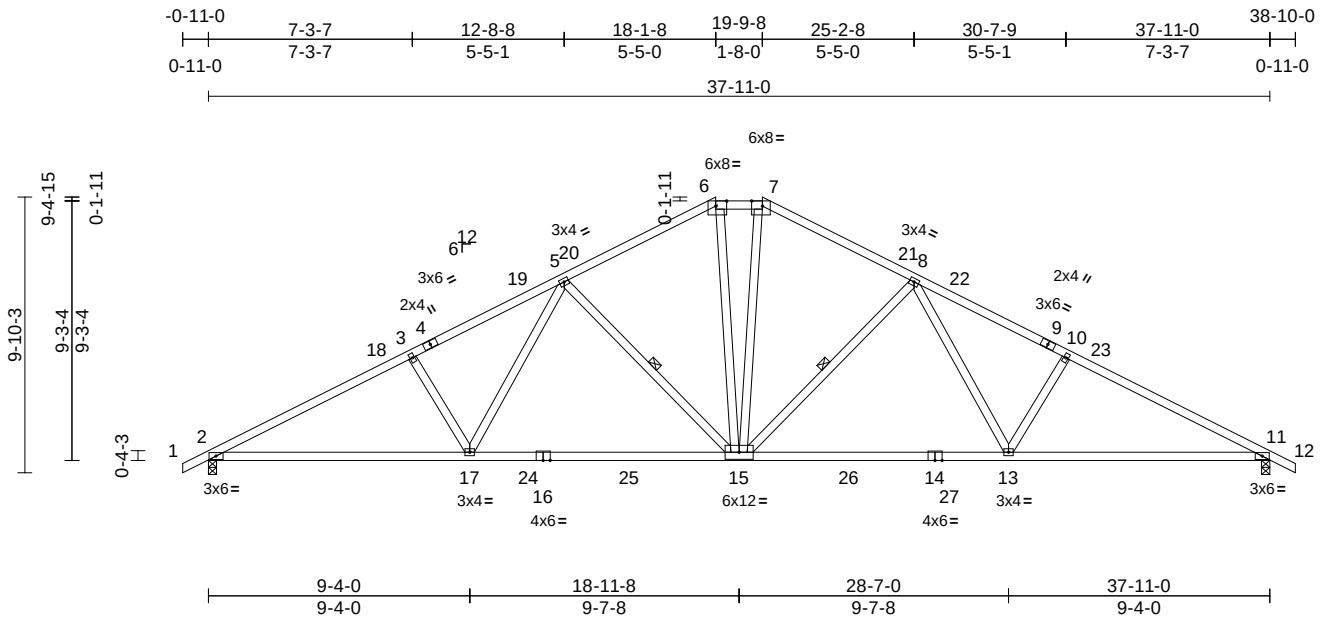


ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A07 | Hip | 2 | 1 | I72459539 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:11 Page: 1
ID:53sw2Y9a_yXw9aQsKILcSnySSpc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:82.3

Plate Offsets (X, Y): [6:0-4-10,Edge], [7:0-4-10,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.82 | Vert(LL) | -0.31 | 15-17 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.53 | 15-17 | >850 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.35 | Horz(CT) | 0.15 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 206 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 1-4,9-12:2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-11-8 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-15, 8-15

**REACTIONS** (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-158 (LC 13)
Max Uplift 2=-194 (LC 12), 11=-194 (LC 13)
Max Grav 2=1799 (LC 37), 11=1799 (LC 37)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-3368/318, 3-5=-3183/335, 5-6=-2214/240, 6-7=-1948/237, 7-8=-2214/240, 8-10=-3183/335, 10-11=-3368/318, 11-12=0/32
BOT CHORD 2-17=-341/2946, 15-17=-195/2464, 13-15=-59/2464, 11-13=-184/2946
WEBS 3-17=-388/216, 5-17=-81/614, 5-15=-828/233, 8-15=-828/233, 8-13=-81/615, 10-13=-388/216, 6-15=-82/689, 7-15=-81/689

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) All bearings are assumed to be SP No.1 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 194 lb uplift at joint 2 and 194 lb uplift at joint 11.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025

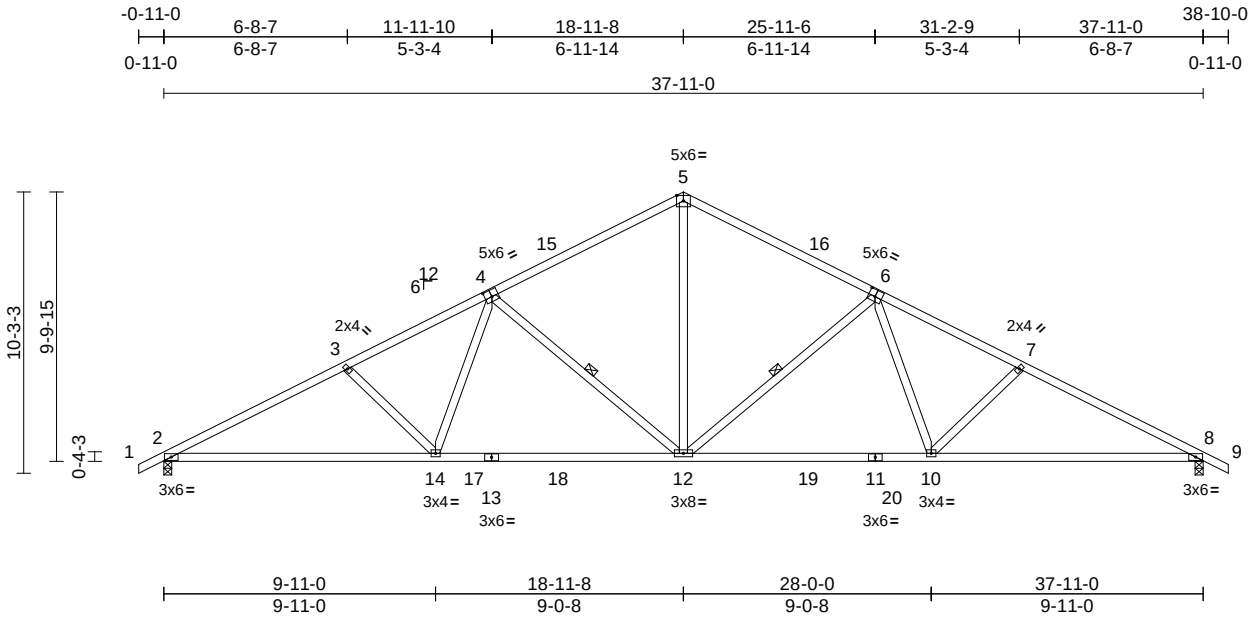


ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | A08 | Common | 4 | 1 | I72459540 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12 Page: 1
ID:PrXPdG5yJ6hDMAfcivD7xWySSn6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:84.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.94 | Vert(LL) | -0.23 | 10-12 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.52 | 2-14 | >862 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.46 | Horz(CT) | 0.13 | 8 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 195 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.1 *Except* 1-4,6-9:2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 13-11:2x4 SP No.2
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-12, 6-12

**REACTIONS** (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-166 (LC 17)
Max Uplift 2=-200 (LC 12), 8=-200 (LC 13)
Max Grav 2=1569 (LC 2), 8=1569 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2793/342, 3-5=-2538/311, 5-7=-2538/311, 7-8=-2793/342, 8-9=0/32
BOT CHORD 2-14=-376/2427, 12-14=-234/2063, 10-12=-74/2063, 8-10=-211/2427
WEBS 4-14=-19/521, 3-14=-315/193, 4-12=-736/249, 5-12=-85/1114, 6-12=-736/250, 6-10=-20/521, 7-10=-315/193

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.1 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 2 and 200 lb uplift at joint 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | I72459541 |
|---|---|---|---|---|---|---|
| 4600435 | A09 | Common | 6 | 1 | Job Reference (optional) | |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12

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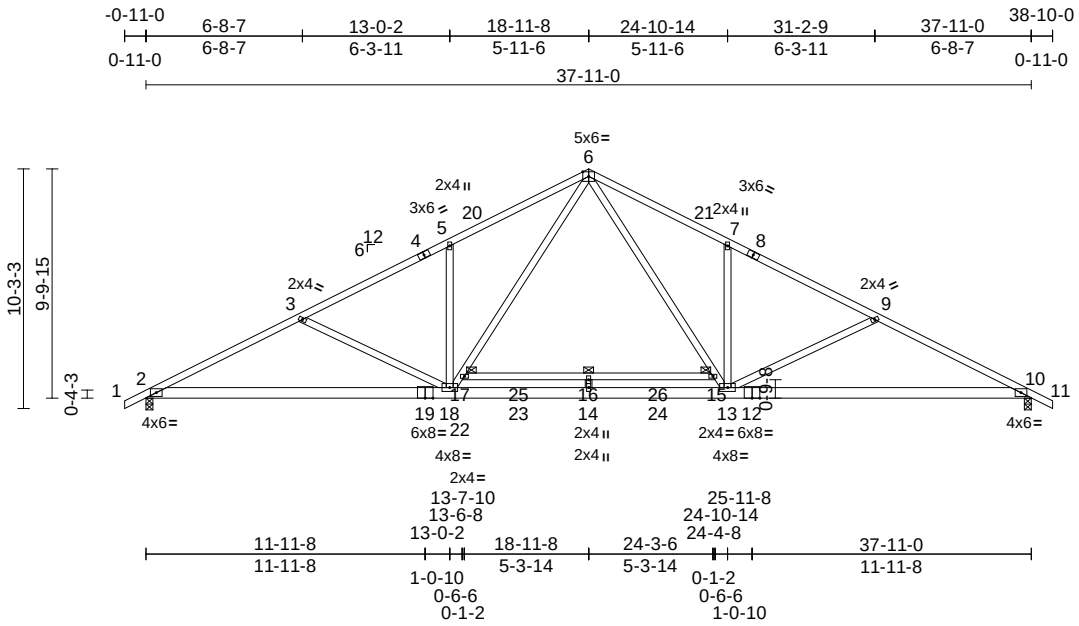


Scale = 1:98.7

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.80 | Vert(LL) | -0.41 | 16 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.85 | Vert(CT) | -0.69 | 16 | >651 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.60 | Horz(CT) | 0.09 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 243 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2

BOT CHORD 2x6 SP No.2 *Except* 17-15:2x4 SP No.2, 19-12:2x6 SP 2400F 2.0E or 2x6 SP DSS

WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 10=0-3-8

Max Horiz 2=-166 (LC 13)

Max Uplift 2=-134 (LC 12), 10=-134 (LC 13)

Max Grav 2=1679 (LC 2), 10=1679 (LC 2)

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

TOP CHORD 1-2=0/37, 2-3=-3137/227, 3-5=-2774/105, 5-6=-2772/245, 6-7=-2772/245, 7-9=-2774/105, 9-10=-3137/228, 10-11=0/37

BOT CHORD 2-18=-275/2742, 14-18=0/1764, 13-14=0/1764, 10-13=-110/2742, 16-17=-42/0, 15-16=-42/0

WEBS 5-18=-393/242, 17-18=-193/1191, 6-17=-158/1273, 3-18=-450/262, 7-13=-393/242, 9-13=-450/263, 14-16=-275/0, 6-15=-158/1273, 13-15=-192/1191

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 2 and 134 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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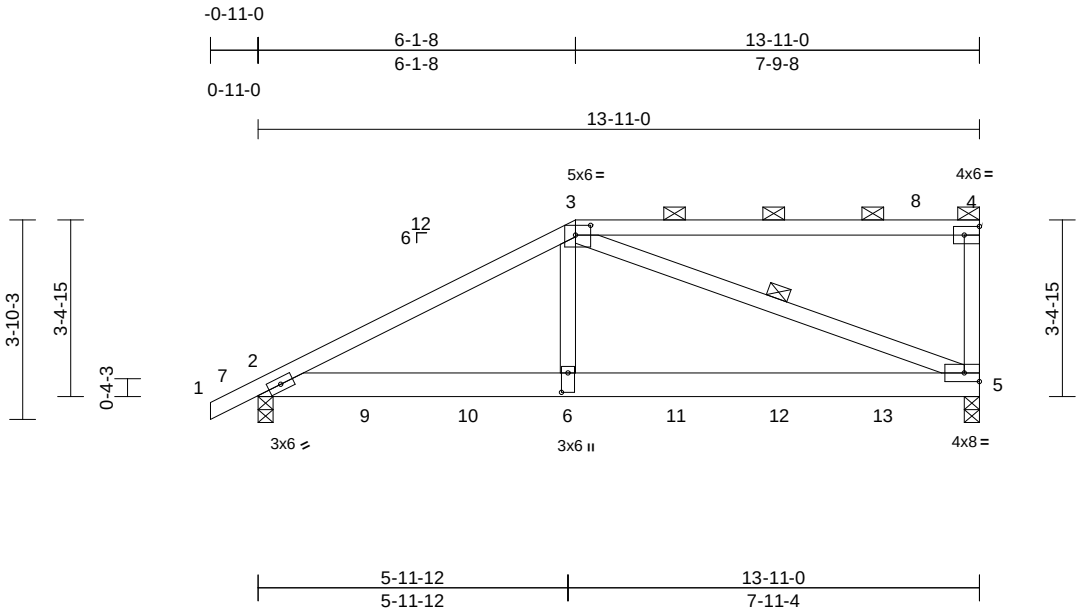
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | I72459542 |
|---|---|---|---|---|---|---|
| 4600435 | B01G | Half Hip Girder | 1 | 1 | Job Reference (optional) | |

Builders FirstSource (Albermarle), Albemarle, NC - 28001, Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12 Page: 1
ID:tzE3Guzmq?uFK4Xn6gMbRWyS8T7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:44.4

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.90 | Vert(LL) | -0.12 | 5-6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.52 | Vert(CT) | -0.21 | 5-6 | >796 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.70 | Horz(CT) | 0.02 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 76 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 3-4:2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS
WEBS 2x4 SP No.3 *Except* 4-5:2x4 SP No.2

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

**REACTIONS** (size) 2=0-3-8, 5=0-3-8
Max Horiz 2=134 (LC 12)
Max Uplift 2=-267 (LC 12), 5=-323 (LC 9)
Max Grav 2=1457 (LC 34), 5=1440 (LC 33)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2176/436, 3-4=-146/39, 4-5=-344/105
BOT CHORD 2-6=-412/1884, 5-6=-403/1828
WEBS 3-6=-214/1236, 3-5=-1812/402

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP 2400F 2.0E or DSS .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 323 lb uplift at joint 5 and 267 lb uplift at joint 2.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 273 lb down and 55 lb up at 2-0-12, 216 lb down and 43 lb up at 4-0-12, 262 lb down and 83 lb up at 6-0-12, 262 lb down and 83 lb up at 8-0-12, and 262 lb down and 83 lb up at 10-0-12, and 262 lb down and 83 lb up at 12-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-51, 3-4=-61, 2-5=-20
Concentrated Loads (lb)
Vert: 6=-262, 9=-273, 10=-216, 11=-262, 12=-262, 13=-262


April 2,2025



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| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | I72459543 |
|---|---|---|---|---|---|---|
| 4600435 | C01 | Common | 3 | 1 | Job Reference (optional) | |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13 Page: 1
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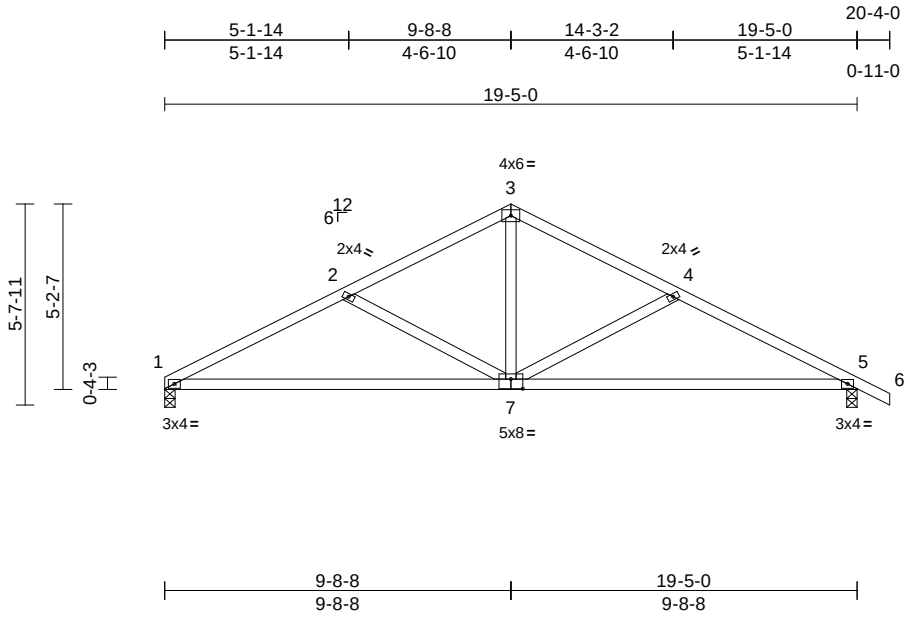


Scale = 1:64.6

Plate Offsets (X, Y): [7:0-4-0,0-3-4]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | -0.19 | 1-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.99 | Vert(CT) | -0.40 | 1-7 | >580 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.23 | Horz(CT) | 0.03 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 85 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-8-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

**REACTIONS** (size) 1=0-3-8, 5=0-3-8
Max Horiz 1=-96 (LC 13)
Max Uplift 1=-89 (LC 12), 5=-113 (LC 13)
Max Grav 1=763 (LC 2), 5=831 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1281/189, 2-3=-963/110, 3-4=-962/111, 4-5=-1276/184, 5-6=0/32
BOT CHORD 1-5=-185/1101
WEBS 3-7=-5/572, 2-7=-383/210, 4-7=-377/204

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 1 and 113 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | C02 | Common Supported Gable | 1 | 1 | I72459544 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13 Page: 1
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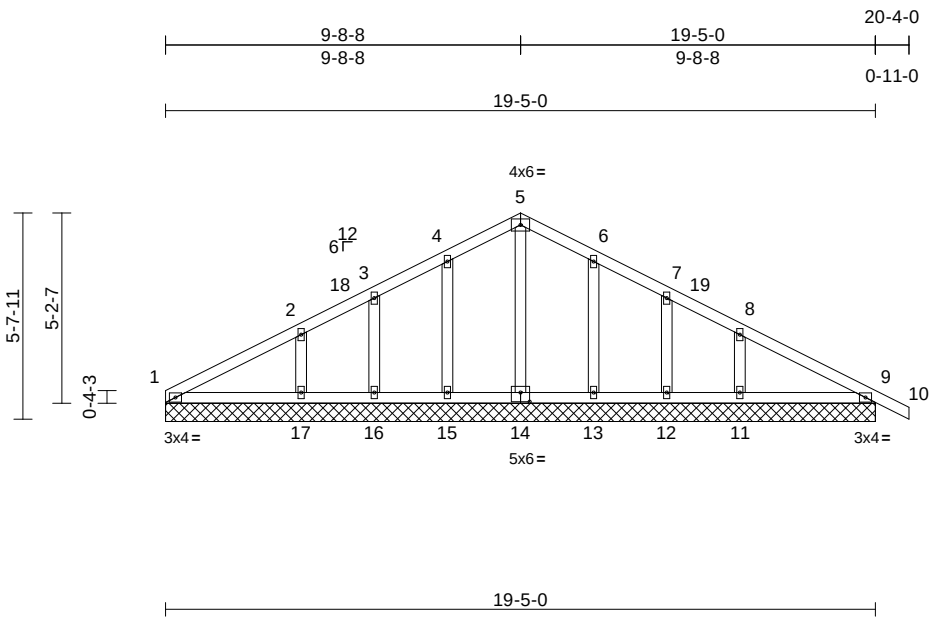


Scale = 1:63

Plate Offsets (X, Y): [14:0-3-0,0-3-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.16 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-S | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 94 lb | FT = 20% |

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

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

**REACTIONS** (size) 1=19-5-0, 9=19-5-0, 11=19-5-0, 12=19-5-0, 13=19-5-0, 14=19-5-0, 15=19-5-0, 16=19-5-0, 17=19-5-0
Max Horiz 1=-96 (LC 13)
Max Uplift 1=-12 (LC 13), 9=-26 (LC 13), 11=-86 (LC 13), 12=-35 (LC 13), 13=-53 (LC 13), 15=-55 (LC 12), 16=-31 (LC 12), 17=-93 (LC 12)
Max Grav 1=126 (LC 2), 9=190 (LC 2), 11=288 (LC 33), 12=139 (LC 20), 13=225 (LC 20), 14=214 (LC 29), 15=226 (LC 19), 16=134 (LC 19), 17=302 (LC 32)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-89/72, 2-3=-58/81, 3-4=-42/102, 4-5=-52/126, 5-6=-52/119, 6-7=-42/73, 7-8=-51/43, 8-9=-70/46, 9-10=0/31
BOT CHORD 1-17=-6/83, 16-17=-6/83, 15-16=-6/83, 13-15=-6/83, 12-13=-6/83, 11-12=-6/83, 9-11=-6/83
WEBS 5-14=-109/0, 4-15=-181/80, 3-16=-112/51, 2-17=-217/128, 6-13=-180/79, 7-12=-117/55, 8-11=-206/120

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) All bearings are assumed to be SP No.2 .
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 26 lb uplift at joint 9, 55 lb uplift at joint 15, 31 lb uplift at joint 16, 93 lb uplift at joint 17, 53 lb uplift at joint 13, 35 lb uplift at joint 12 and 86 lb uplift at joint 11.
14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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

| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | J01 | Jack-Open | 6 | 1 | I72459545 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13 Page: 1
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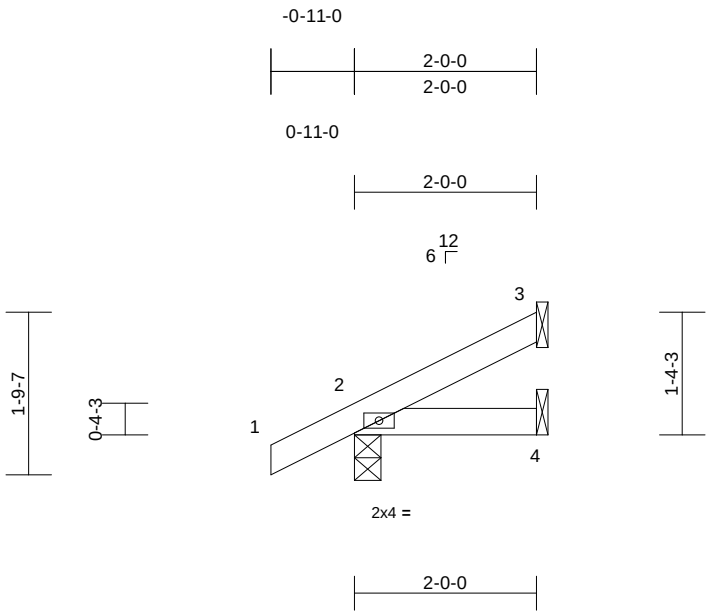


Scale = 1:25.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.08 | Vert(LL) | 0.00 | 2-4 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(CT) | 0.00 | 2-4 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 8 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=54 (LC 12)
Max Uplift 2=-30 (LC 12), 3=-30 (LC 12)
Max Grav 2=176 (LC 19), 3=55 (LC 19), 4=39 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-3=-41/19
BOT CHORD 2-4=0/0

**NOTES**
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: , Joint 2 SP No.2 .
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 3.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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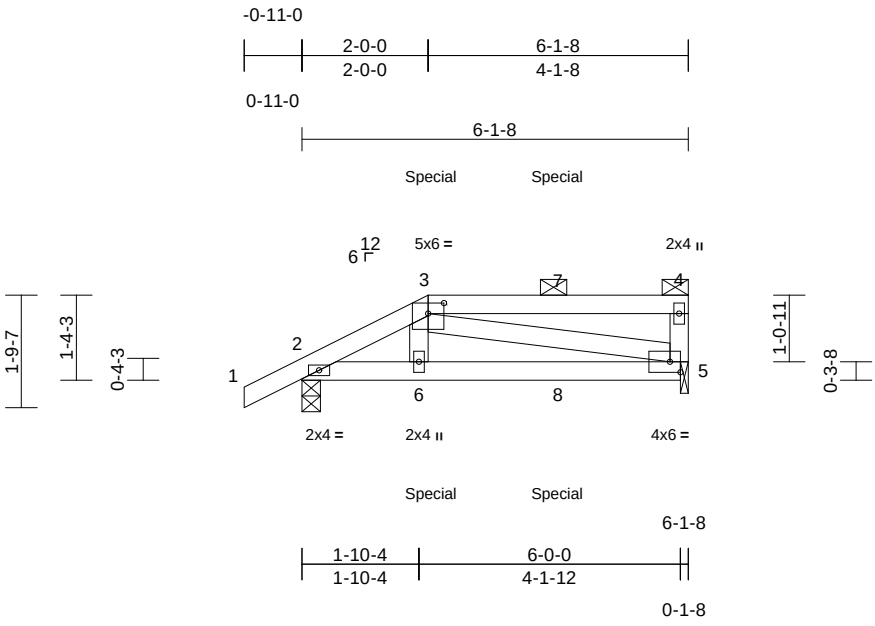
| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | |
|---|---|---|---|---|---|---|
| 4600435 | J02G | Half Hip Girder | 3 | 1 | Job Reference (optional) | I72459546 |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14 Page: 1
ID:J_SwJ2Fw1QEAGmw_uQDdF_yST4G-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:36.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.50 | Vert(LL) | -0.01 | 5-6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.22 | Vert(CT) | -0.03 | 5-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.12 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 28 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-3-8, 5=0-1-8
Max Horiz 2=55 (LC 12)
Max Uplift 2=-54 (LC 12), 5=-43 (LC 9)
Max Grav 2=348 (LC 34), 5=293 (LC 33)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-387/23, 3-4=0/0, 4-5=-174/54
BOT CHORD 2-6=-27/321, 5-6=-34/311
WEBS 3-6=0/162, 3-5=-321/36

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
9) Bearings are assumed to be: Joint 2 SP No.2 , Joint 5 SP No.3 .
10) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 2 and 43 lb uplift at joint 5.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 46 lb down and 34 lb up at 2-0-0, and 53 lb down and 32 lb up at 4-0-12 on top chord, and 8 lb down at 2-0-12, and 8 lb down at 4-0-12 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-51, 3-4=-61, 2-5=-20
Concentrated Loads (lb)
Vert: 3=-4 (F)


April 2,2025



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| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | J03 | Half Hip | 3 | 1 | I72459547 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14 Page: 1
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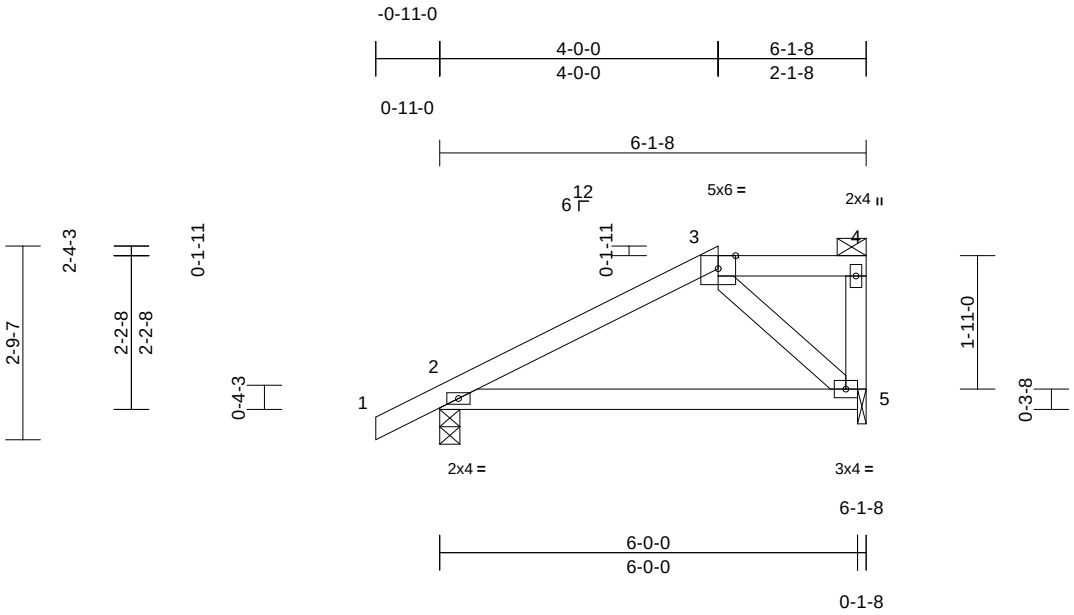


Scale = 1:33.1

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | -0.07 | 2-5 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 20.4/20.0 | Lumber DOL | 1.15 | BC | 0.44 | Vert(CT) | -0.14 | 2-5 | >504 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.04 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 27 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-3-8, 5=0-1-8
Max Horiz 2=89 (LC 12)
Max Uplift 2=-50 (LC 12), 5=-30 (LC 9)
Max Grav 2=395 (LC 34), 5=236 (LC 33)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/34, 2-3=-220/29, 3-4=-2/2, 4-5=-87/26
BOT CHORD 2-5=-50/122
WEBS 3-5=-173/71

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
9) Bearings are assumed to be: Joint 2 SP No.2 , Joint 5 SP No.3 .
10) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2 and 30 lb uplift at joint 5.
13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard


April 2,2025



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| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY | I72459548 |
|---|---|---|---|---|---|---|
| 4600435 | J04 | Jack-Closed | 18 | 1 | Job Reference (optional) | |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14 Page: 1
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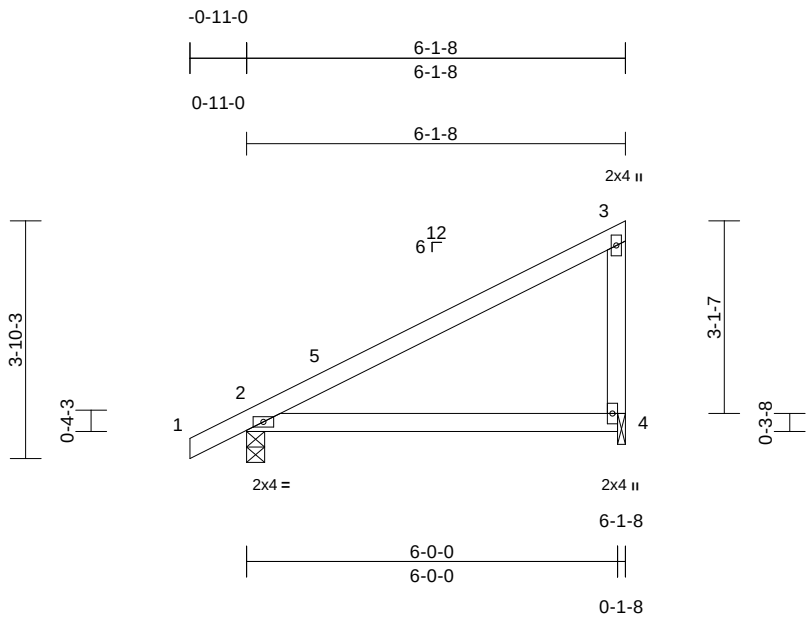


Scale = 1:37.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.85 | Vert(LL) | -0.07 | 2-4 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.43 | Vert(CT) | -0.14 | 2-4 | >504 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | n/a | - | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 25 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-3-8, 4=0-1-8
Max Horiz 2=131 (LC 12)
Max Uplift 2=-37 (LC 12), 4=-71 (LC 12)
Max Grav 2=319 (LC 19), 4=282 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-90/82, 3-4=-224/106
BOT CHORD 2-4=0/0

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
8) Bearings are assumed to be: Joint 2 SP No.2 , Joint 4 SP No.3 .
9) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 2 and 71 lb uplift at joint 4.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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| Job | Truss | Truss Type | Qty | Ply | SUNSET A - LOT 24 - ILA'S WAY |
|---|---|---|---|---|---|
| 4600435 | M01 | Monopitch | 3 | 1 | I72459549 Job Reference (optional) |

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14 Page: 1
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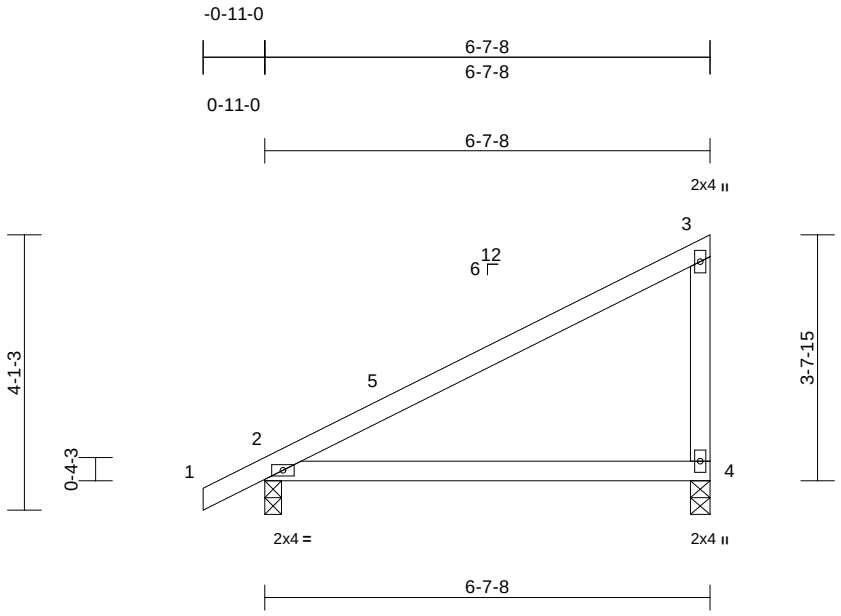


Scale = 1:34.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.74 | Vert(LL) | -0.10 | 2-4 | >780 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 15.4/20.0 | Lumber DOL | 1.15 | BC | 0.52 | Vert(CT) | -0.20 | 2-4 | >390 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | n/a | - | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-P | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 27 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

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

**REACTIONS** (size) 2=0-3-0, 4=0-3-8
Max Horiz 2=141 (LC 12)
Max Uplift 2=-38 (LC 12), 4=-77 (LC 12)
Max Grav 2=331 (LC 19), 4=306 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-97/88, 3-4=-242/115
BOT CHORD 2-4=0/0

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 .
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 4 and 38 lb uplift at joint 2.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard


April 2,2025



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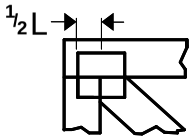
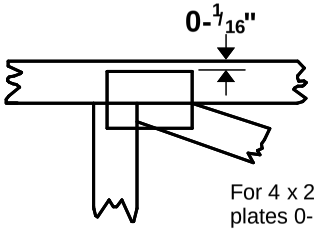
# Symbols

## PLATE LOCATION AND ORIENTATION




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




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

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

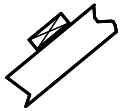
* Plate location details available in MiTek software or upon request.

## PLATE SIZE

4 x 4

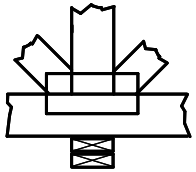
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

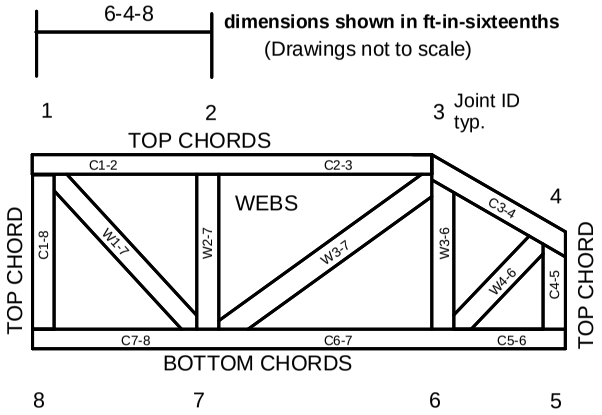


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

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

# Numbering System




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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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



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

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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