ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 21070088-B
210 Crossings-Kessler C-Roof

Trenco
818 Soundside Rd
Edenton, NC 27932

**Site Information:**

Customer: Capitol City Homes Project Name: 21070088-B
Lot/Block: 210 Model:
Address: 100 Kensington Dr. Subdivision: Crossings at Anderson Creek
City: Spring Lakes State: NC

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.3
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 23 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal# | Truss Name | Date | No. | Seal# | Truss Name | Date |
|---|---|---|---|---|---|---|---|
| 1 | E15385575 | T3GE | 7/14/2021 | 21 | E15385595 | T1AGR | 7/14/2021 |
| 2 | E15385576 | T3 | 7/14/2021 | 22 | E15385596 | T2 | 7/14/2021 |
| 3 | E15385577 | T4 | 7/14/2021 | 23 | E15385597 | V8 | 7/14/2021 |
| 4 | E15385578 | T5A | 7/14/2021 | | | | |
| 5 | E15385579 | T5 | 7/14/2021 | | | | |
| 6 | E15385580 | T5B | 7/14/2021 | | | | |
| 7 | E15385581 | T2GR | 7/14/2021 | | | | |
| 8 | E15385582 | T2GE | 7/14/2021 | | | | |
| 9 | E15385583 | T1AGE | 7/14/2021 | | | | |
| 10 | E15385584 | T1A | 7/14/2021 | | | | |
| 11 | E15385585 | T1BGE | 7/14/2021 | | | | |
| 12 | E15385586 | T1B | 7/14/2021 | | | | |
| 13 | E15385587 | T1 | 7/14/2021 | | | | |
| 14 | E15385588 | T1GE | 7/14/2021 | | | | |
| 15 | E15385589 | V3 | 7/14/2021 | | | | |
| 16 | E15385590 | V4 | 7/14/2021 | | | | |
| 17 | E15385591 | V5 | 7/14/2021 | | | | |
| 18 | E15385592 | V6 | 7/14/2021 | | | | |
| 19 | E15385593 | V7 | 7/14/2021 | | | | |
| 20 | E15385594 | T2SE | 7/14/2021 | | | | |

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2021.

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.

July 14, 2021



Gilbert, Eric

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T3GE | Monopitch Supported Gable | 1 | 1 | E15385575 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:53 2021 Page 1
ID:xgAp6L5?n01tuWo8jgtJlVzEbO5-UQFJJW7M2LExJXtxrGr3LmeeklR?C7yq1zX73lzoBGC

-0-10-8 4-0-0
0-10-8 4-0-0

Scale = 1:13.7

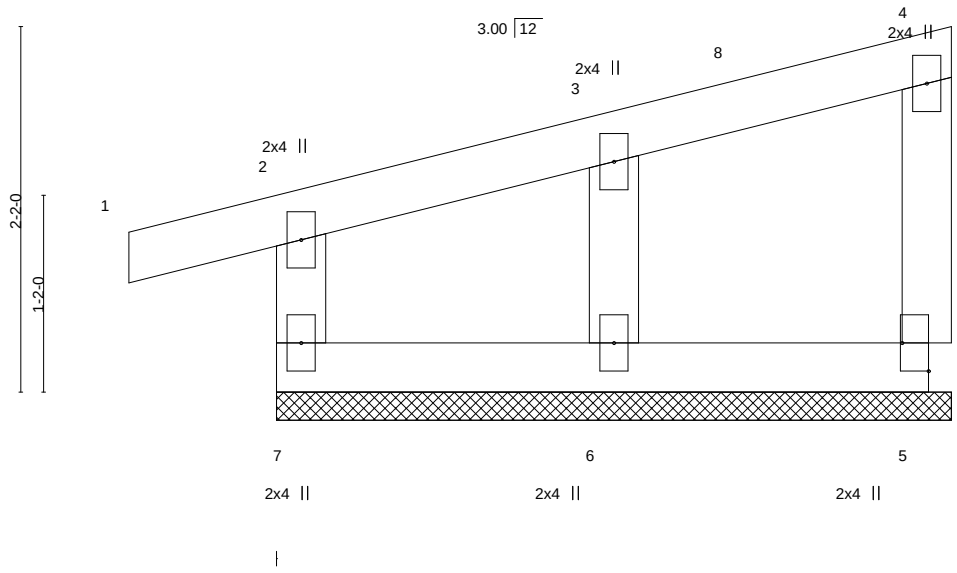


Plate Offsets (X,Y)-- [5:Edge,0-1-14]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.14 | Vert(LL) | -0.00 | 1 | n/r | 120 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.00 | 1 | n/r | 120 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.04 | Horz(CT) | -0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 18 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

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

**REACTIONS.** (size) 7=4-0-0, 5=4-0-0, 6=4-0-0
Max Horz 7=58(LC 12)
Max Uplift 7=-32(LC 11), 5=-1(LC 15), 6=-12(LC 15)
Max Grav 7=141(LC 2), 5=63(LC 2), 6=154(LC 2)

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

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
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 13.9 psf on overhangs non-concurrent with other live loads.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7, 5, and 6. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T3 | Monopitch | 8 | 1 | E15385576 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:52 2021 Page 1
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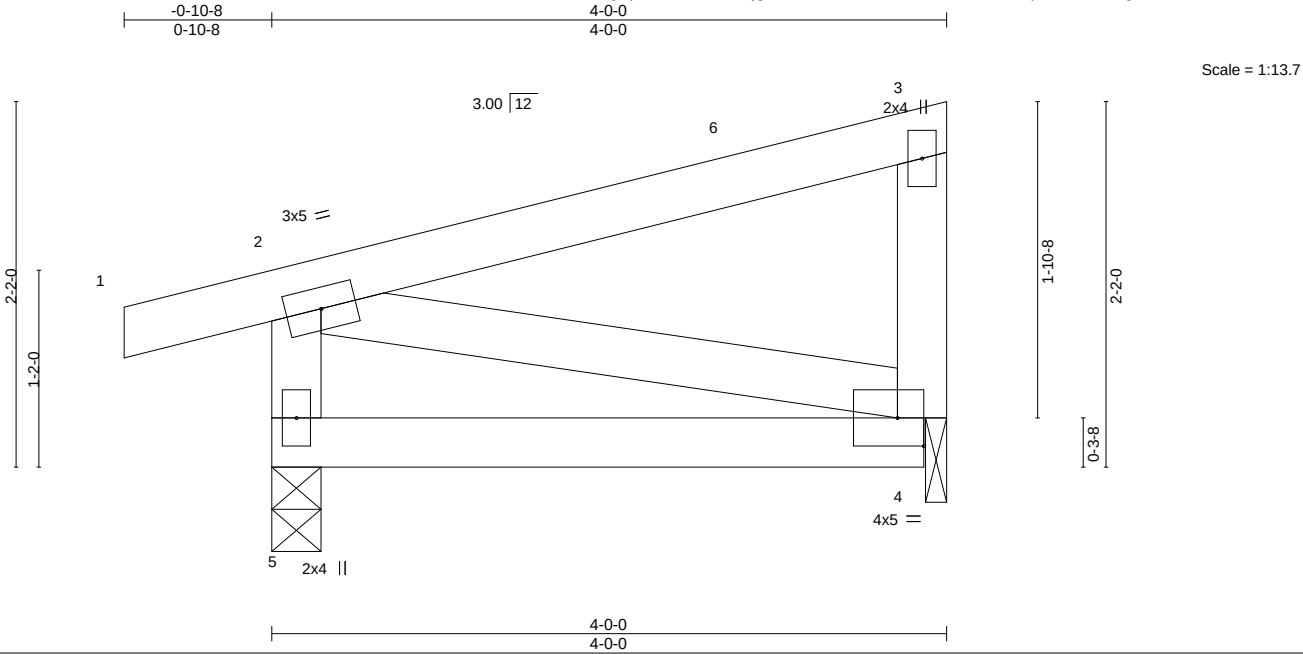


| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.22 | Vert(LL) | 0.00 | 5 | **** | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | -0.01 | 4-5 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | -0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | Weight: 22 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 4-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=0-3-8, 4=0-1-8
Max Horz 5=58(LC 12)
Max Uplift 5=-35(LC 11), 4=-7(LC 15)
Max Grav 5=218(LC 2), 4=140(LC 2)

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

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
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 13.9 psf on overhangs non-concurrent with 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) 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.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 4. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T4 | Monopitch | 2 | 1 | E15385577 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:54 2021 Page 1
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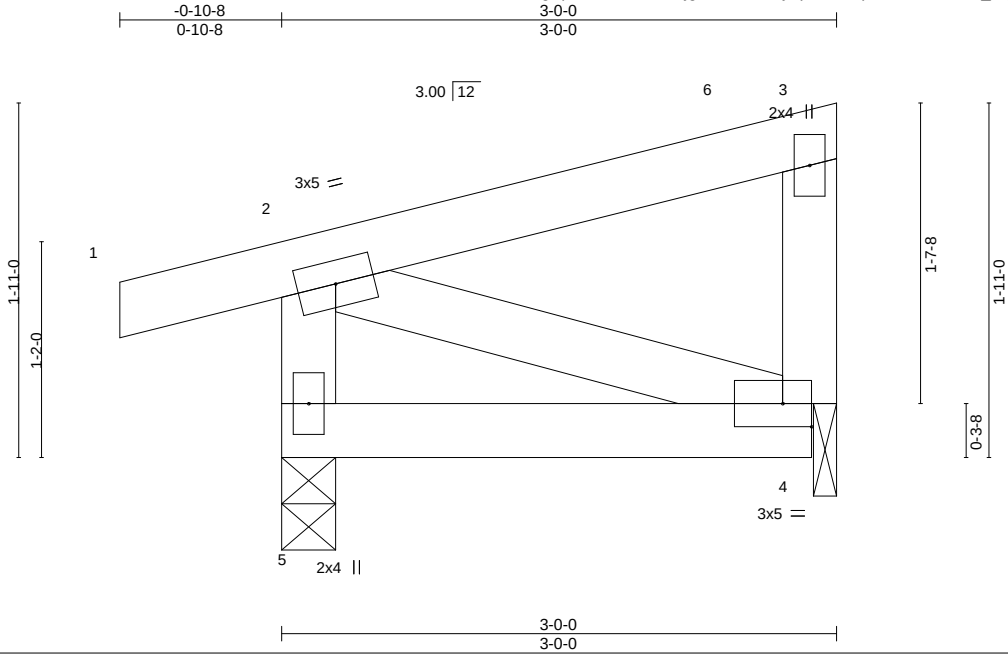


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.10 | Vert(LL) | 0.00 | 5 | **** | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | -0.00 | 4-5 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | -0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | Weight: 17 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

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

**REACTIONS.** (size) 5=0-3-8, 4=0-1-8
Max Horz 5=50(LC 12)
Max Uplift 5=-36(LC 11), 4=-8(LC 12)
Max Grav 5=181(LC 2), 4=97(LC 2)

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

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10; Min. flat roof snow load governs.
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 13.9 psf on overhangs non-concurrent with 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) 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.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
8) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 4. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T5A | Half Hip | 1 | 1 | E15385578 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:56 2021 Page 1
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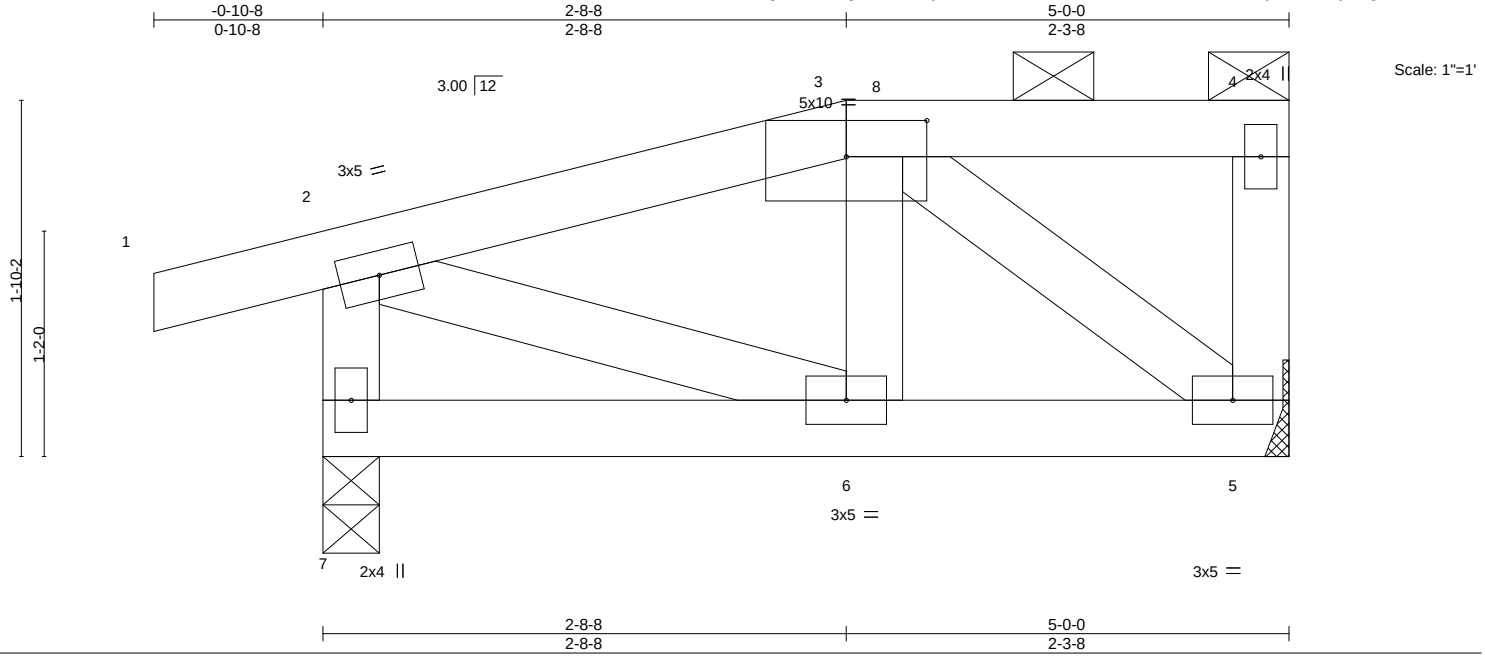


Plate Offsets (X,Y)-- [3:0-5-0,0-2-4]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.10 | Vert(LL) | -0.00 | 6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | -0.00 | 6-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | -0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | Weight: 28 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

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

**REACTIONS.** (size) 7=0-3-8, 5=Mechanical
Max Horz 7=49(LC 12)
Max Uplift 7=-37(LC 11), 5=-9(LC 12)
Max Grav 7=282(LC 35), 5=186(LC 34)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-7=-258/157

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5.
9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T5 | Roof Special | 5 | 1 | E15385579 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:55 2021 Page 1
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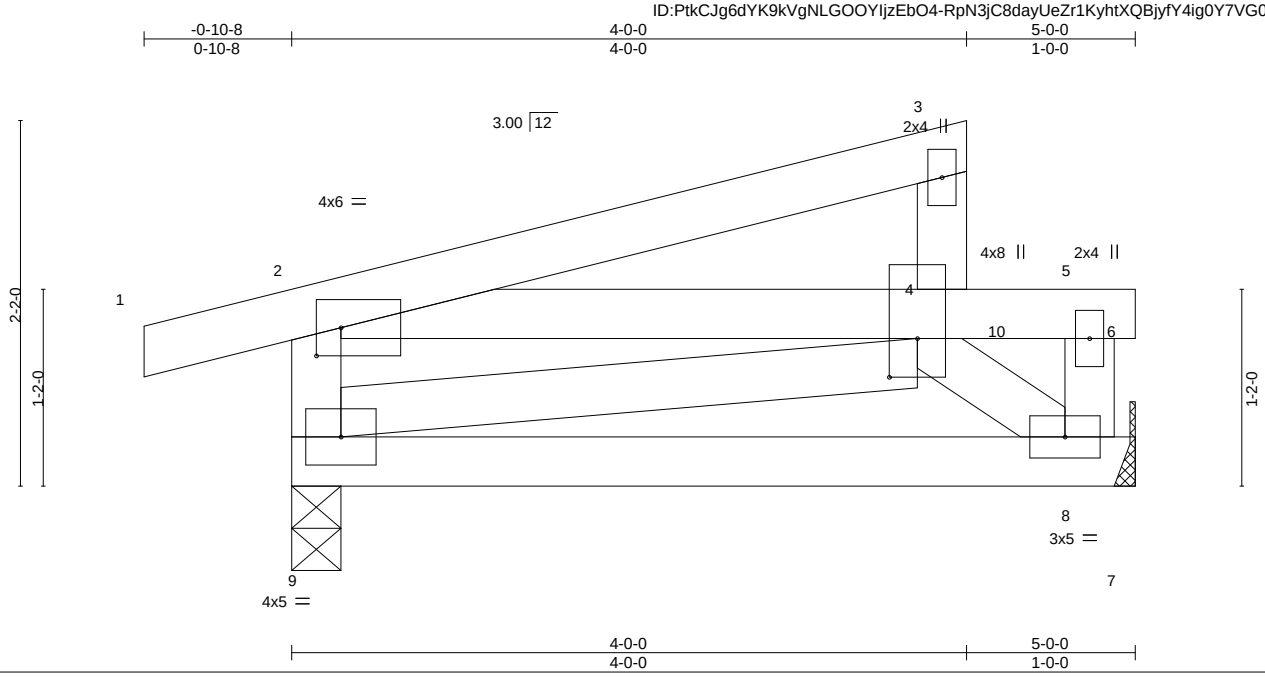


Plate Offsets (X,Y)-- [2:0-1-12,0-2-0], [4:0-2-12,0-2-0]

| 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 | 0.31 | Vert(LL) | 0.00 | 9 | **** | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.24 | Vert(CT) | -0.03 | 8-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.10 | Horz(CT) | 0.00 | 8 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | Weight: 32 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

**REACTIONS.** (size) 9=0-3-8, 8=Mechanical
Max Horz 9=48(LC 12)
Max Uplift 9=-37(LC 11), 8=-21(LC 15)
Max Grav 9=332(LC 35), 8=626(LC 33)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
BOT CHORD 8-9=-192/294
WEBS 5-8=-282/138, 4-8=-416/271, 4-9=-302/146

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8.
9) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-48, 2-3=-48, 7-9=-20, 4-6=-58


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Continued on page 2



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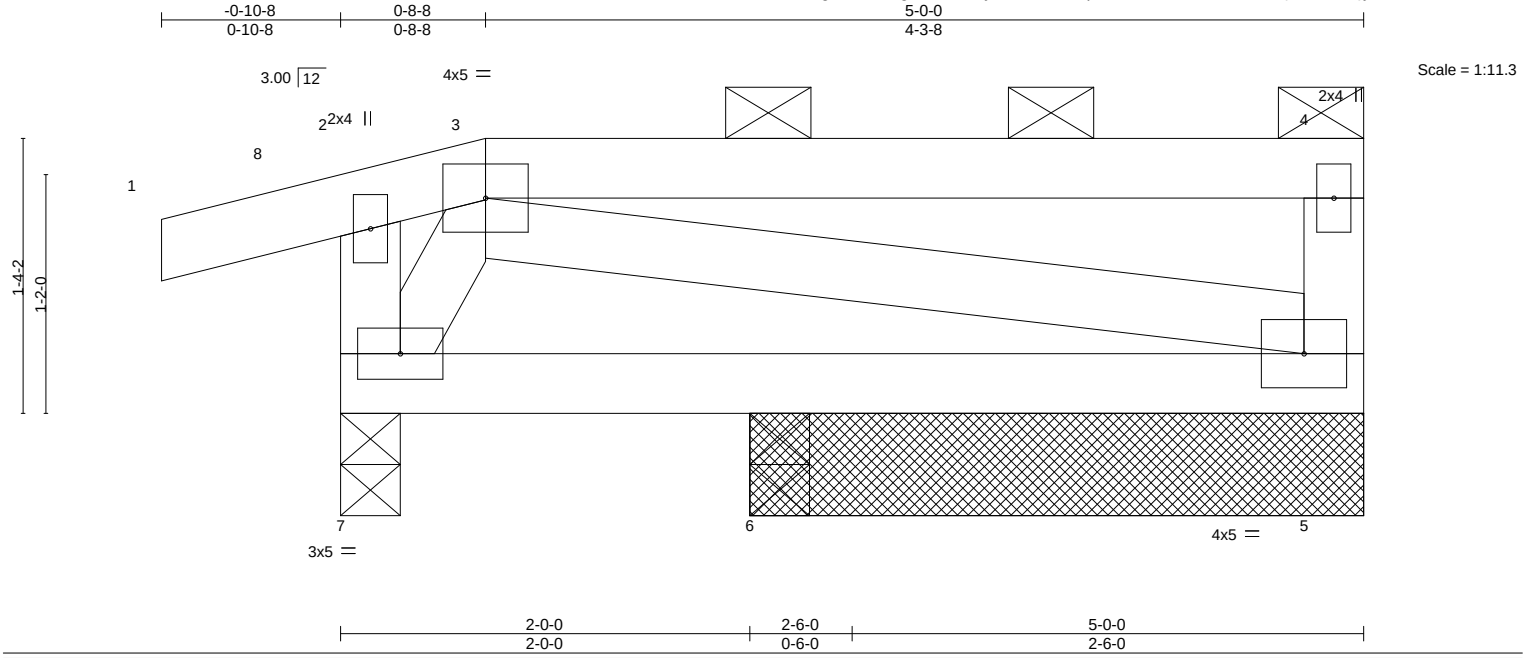
818 Soundside Road
Edenton, NC 27932

**LOAD CASE(S)** Standard
Concentrated Loads (lb)
Vert: 10=-400(F)

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T5B | Half Hip Structural Gable | 1 | 1 | E15385580<br>Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:57 2021 Page 1
ID:PtkCJg6dYK9kVgNLGOOYIjzEbO4-NCVq8uAt6akMo9Bi45v?VcoGQMo88x6QyaVLCWzoBG8




| 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) | 0.00 | 6 | **** | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | -0.00 | 5-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | -0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | Weight: 26 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

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

**REACTIONS.** (size) 5=3-0-0, 7=0-3-8, 6=0-3-8
Max Horz 7=34(LC 12)
Max Uplift 5=-26(LC 12), 7=-59(LC 11)
Max Grav 5=190(LC 34), 7=222(LC 2), 6=60(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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 4-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) Gable studs spaced at 2-0-0 oc.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5 and 7. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T2GR | Common Girder | 1 | 2 | E15385581 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:50 2021 Page 1
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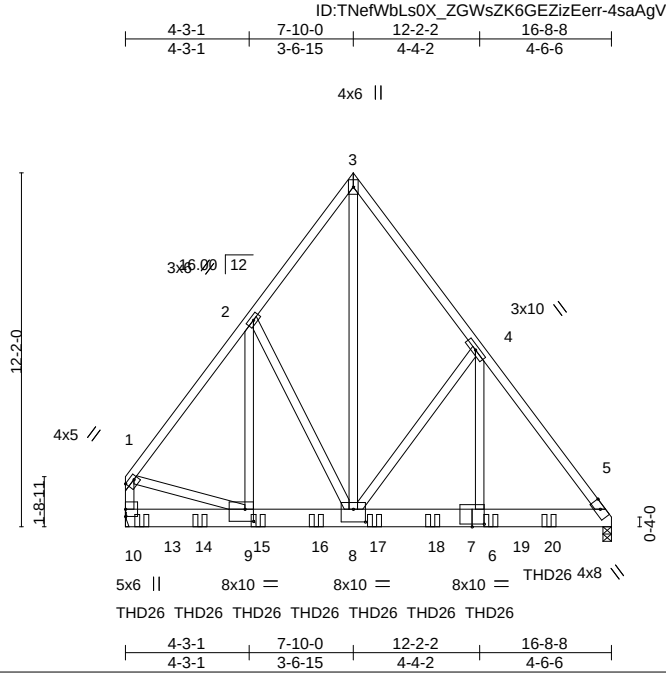


Plate Offsets (X,Y)-- [1:0-3-8,Edge], [7:0-5-0,0-1-2], [8:0-5-0,0-5-4], [9:0-3-8,0-5-0]

| 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 | 0.65 | Vert(LL) | -0.06 | 6-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.27 | Vert(CT) | -0.12 | 6-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.68 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | Weight: 311 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP No.2 *Except*
1-10,1-9: 2x4 SP No.3

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

**REACTIONS.** (size) 5=0-3-8, 10=Mechanical
Max Horz 10=-261(LC 5)
Max Grav 5=5353(LC 3), 10=6379(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-4660/0, 2-3=-3682/0, 3-4=-3707/0, 4-5=-5707/0, 1-10=-4616/0
BOT CHORD 9-10=-202/385, 8-9=0/2741, 6-8=0/3393, 5-6=0/3393
WEBS 2-9=0/1702, 2-8=-1237/0, 3-8=0/5579, 4-8=-2040/0, 4-6=0/3042, 1-9=0/2674

**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: 2x8 - 2 rows staggered at 0-6-0 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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
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) Refer to girder(s) for truss to truss connections.
8) Use USP THD26 (With 18-16d nails into Girder & 12-10d x 1-1/2 nails into Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-6-12 from the left end to 14-6-12 to connect truss(es) to front face of bottom chord.
9) Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-48, 3-5=-48, 5-10=-20
Concentrated Loads (lb)
Vert: 13=-1068(F) 14=-1062(F) 15=-1062(F) 16=-1062(F) 17=-1062(F) 18=-1062(F) 19=-1062(F) 20=-1062(F)


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T2GE | Roof Special Supported Gable | 1 | 1 | E15385582 |
| | | | | | Job Reference (optional) |

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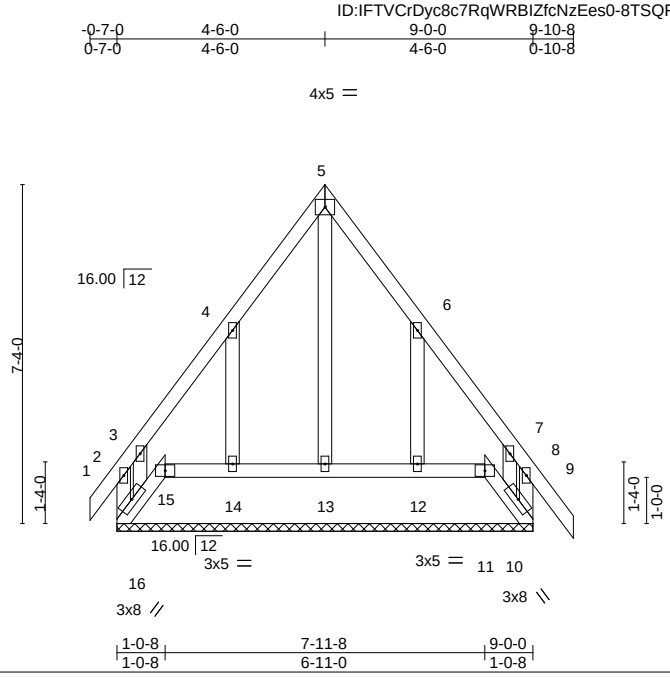


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.16 | Vert(LL) | -0.00 | 9 | n/r | 120 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.11 | Vert(CT) | -0.01 | 9 | n/r | 120 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.25 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 67 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except*
5-13: 2x4 SP No.2

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

**REACTIONS.** All bearings 9-0-0.
(lb) - Max Horz 16=-175(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 10, 11 except 16=-266(LC 9), 15=-174(LC 12), 14=-127(LC 13), 12=-124(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 10, 15, 11, 14, 12 except 16=309(LC 12), 13=251(LC 13)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 4-5=-260/314, 5-6=-260/314
WEBS 5-13=-427/288, 4-14=-256/253, 6-12=-255/246

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) * 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.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16, 10, and 15. This connection is for uplift only and does not consider lateral forces.
12) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11, 14, and 12. This connection is for uplift only and does not consider lateral forces.
13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 16, 10, 15, 11, 13, 14, 12.


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1AGE | GABLE | 1 | 1 | E15385583 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:37 2021 Page 1
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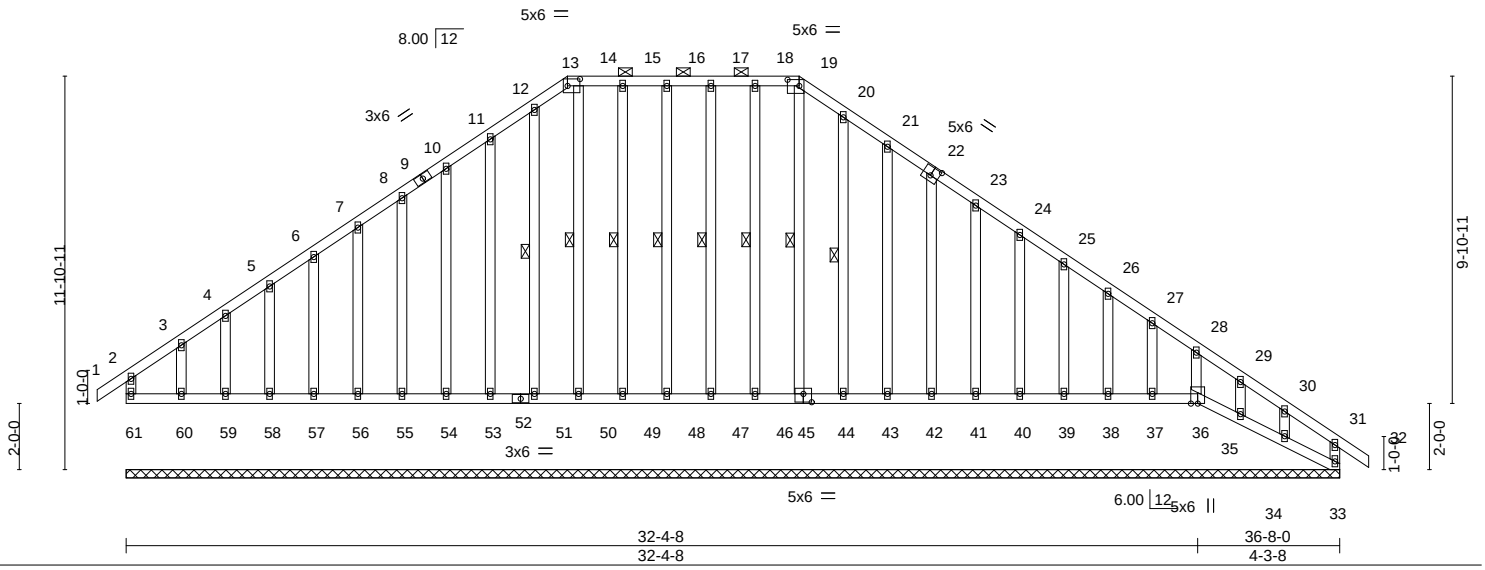
-0-10-8 13-4-0 20-4-0 36-8-0 37-6-8
0-10-8 13-4-0 7-0-0 16-4-0 0-10-8

Scale = 1:69.6




32-4-8 36-8-0
32-4-8 4-3-8

Plate Offsets (X,Y)-- [13:0-4-8,0-2-8], [19:0-4-4,0-2-4], [22:0-3-0,0-3-0], [45:0-3-0,0-3-0]

| 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 | 0.17 | Vert(LL) | -0.00 | 32 | n/r | 120 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | -0.00 | 32 | n/r | 120 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.01 | 33 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 344 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.2 *Except* 6-57,5-58,4-59,3-60,24-40,25-39,26-38,27-37,28-36,29-35,30-34: 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 (6-0-0 max.): 13-19.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 19-45, 18-46, 17-47, 16-48, 15-49, 14-50, 12-51, 20-44

**REACTIONS.** All bearings 36-8-0.
(lb) - Max Horz 61=-237(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 33, 47, 48, 49, 53, 54, 55, 56, 57, 58, 59, 44, 43, 42, 41, 40, 39, 38, 37 except 61=-143(LC 9), 60=-116(LC 10), 34=-104(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 61, 36, 33, 45, 46, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 44, 43, 42, 41, 40, 39, 38, 37, 35, 34

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-10=-213/254, 10-11=-245/293, 11-12=-285/339, 12-13=-288/342, 13-14=-259/314, 14-15=-259/314, 15-16=-259/314, 16-17=-259/314, 17-18=-259/314, 18-19=-260/314, 19-20=-298/358, 20-21=-275/328, 21-22=-238/285

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 1-4-0 oc.
11) * This truss has been designed for a 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.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Continued on page 2



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**NOTES-**

12) One RT16A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 61, 47, 48, 49, 53, 54, 55, 56, 57, 58, 59, 60, 44, 43, 42, 41, 40, 39, 38 , 37, and 34. This connection is for uplift only and does not consider lateral forces.
13) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 33. This connection is for uplift only and does not consider lateral forces.
14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 61, 36, 45, 46, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 44, 43, 42, 41, 40 , 39, 38, 37, 35, 34.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1A | Roof Special | 4 | 1 | E15385584 |
| | | | | | Job Reference (optional) |

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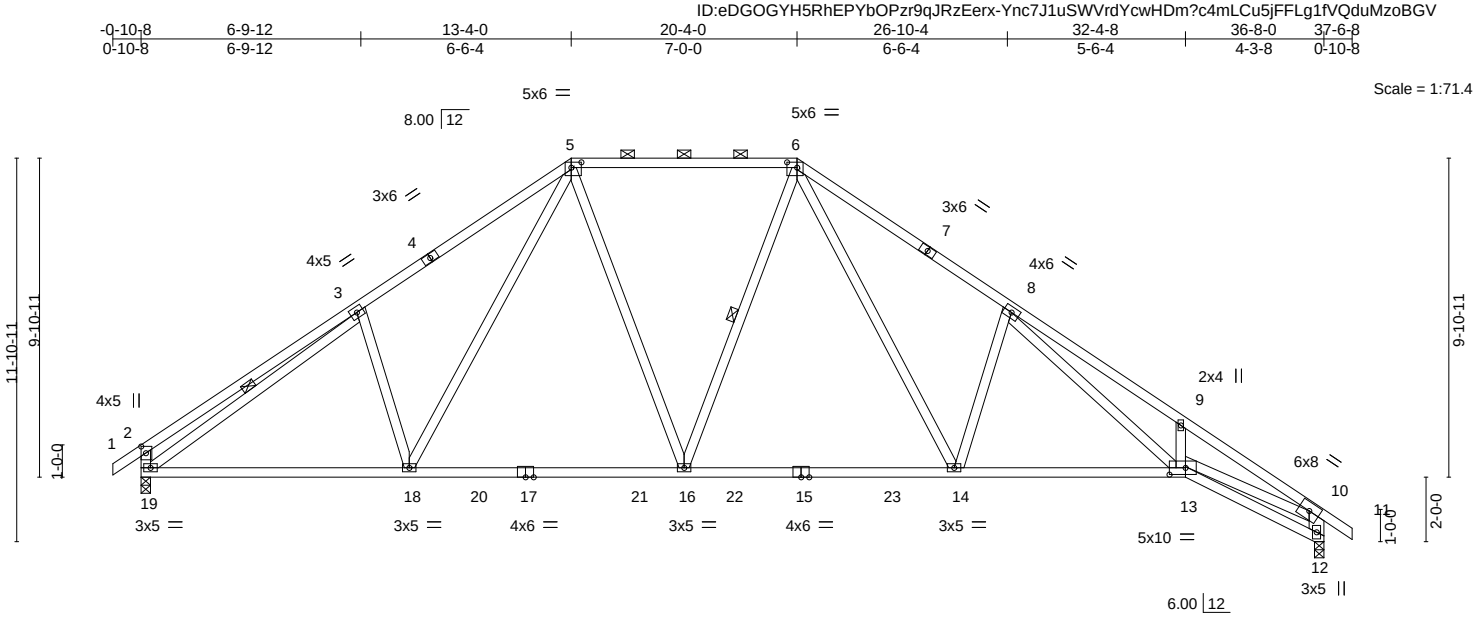


Plate Offsets (X,Y)-- [2:0-2-8,0-1-12], [5:0-3-12,0-2-0], [6:0-3-12,0-2-0], [13:0-6-0,0-2-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.95 | Vert(LL) | -0.28 | 14-16 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -0.51 | 14-16 | >855 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.78 | Horz(CT) | 0.27 | 12 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 232 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
9-13,2-19: 2x4 SP No.3, 10-12: 2x6 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-16, 3-19

**REACTIONS.** (size) 12=0-3-8, 19=0-3-8
Max Horz 19=-236(LC 9)
Max Grav 12=1518(LC 2), 19=1513(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-523/244, 3-5=-1942/489, 5-6=-1420/385, 6-8=-2330/540, 8-9=-4045/742, 9-10=-4089/599, 2-19=-484/228, 10-12=-1584/326
BOT CHORD 18-19=-117/1701, 16-18=0/1367, 14-16=0/1401, 13-14=-181/2025, 12-13=-56/339
WEBS 3-18=-306/244, 5-18=-141/546, 5-16=-22/392, 6-14=-209/1045, 8-14=-722/300, 8-13=-331/1815, 3-19=-1616/153, 10-13=-377/3174

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
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) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1BGE | GABLE | 2 | 1 | E15385585 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:42 2021 Page 1
ID:3oyXuaJ_jcc_P27_fzjXx3zEeru-JJ59?m_TezrVVrXqhS8UOShcEJVP71gDVlM2AuzoBGN

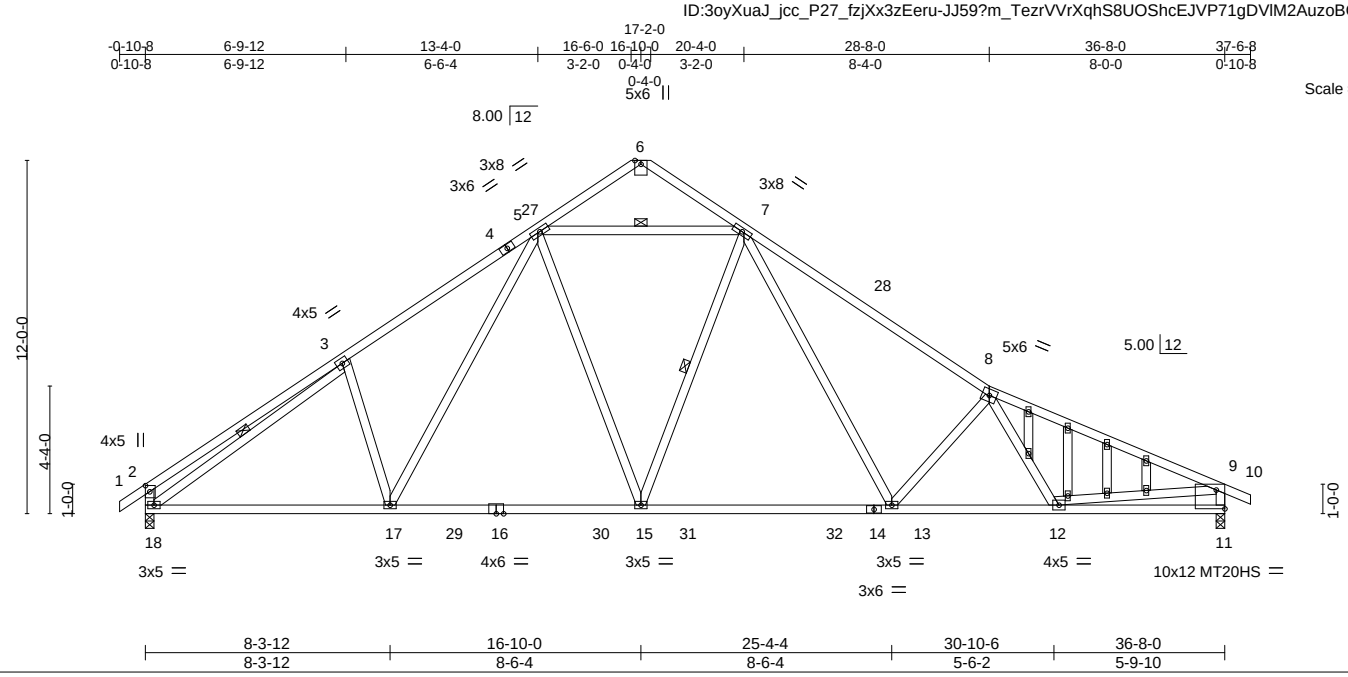


Plate Offsets (X,Y)-- [2:0-2-8,0-1-12], [11:Edge,0-7-11]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.80 | Vert(LL) | -0.21 | 15-17 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.37 | 13-15 | >999 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.52 | Horz(CT) | 0.08 | 11 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | Weight: 246 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 *Except* |
| | 6-8: 2x4 SP 2400F 2.0E, 8-10: 2x4 SP No.1 |
| BOT CHORD | 2x4 SP No.2 *Except* |
| | 14-16: 2x4 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* |
| | 8-13,8-12: 2x4 SP No.3 |
| OTHERS | 2x4 SP No.3 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 7-15, 3-18, 5-7 |

**REACTIONS.** (size) 18=0-3-8, 11=0-3-8
Max Horz 18=-255(LC 13)
Max Uplift 11=-6(LC 16)
Max Grav 18=1547(LC 29), 11=1516(LC 2)

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

| | |
|---|---|
| TOP CHORD | 2-3=-557/255, 3-5=-2002/478, 7-8=-2286/506, 8-9=-2459/438, 2-18=-504/237, 9-11=-1452/357 |
| BOT CHORD | 17-18=-172/1774, 15-17=-41/1468, 13-15=-71/1502, 12-13=-335/2251, 11-12=-211/540 |
| WEBS | 3-17=-272/233, 5-17=-130/510, 5-15=-50/443, 7-13=-166/840, 8-13=-752/301, 3-18=-1646/137, 9-12=-85/1792, 5-7=-1427/440 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable studs spaced at 1-4-0 oc.
10) * 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.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1B | Roof Special | 3 | 1 | E15385586 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:41 2021 Page 1
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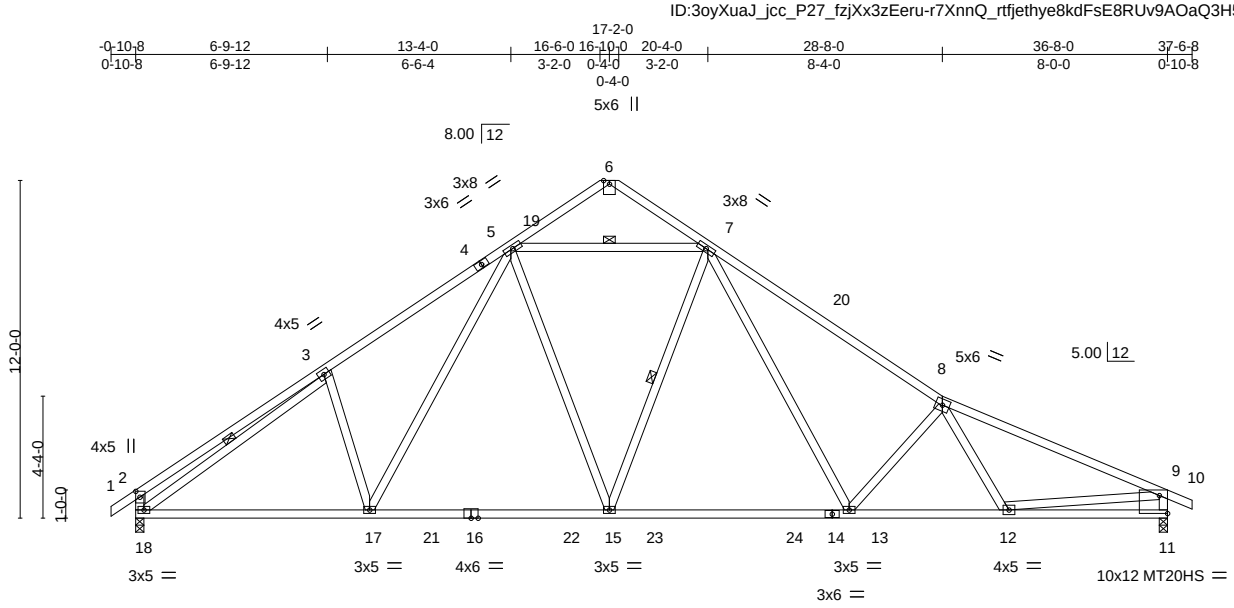


Plate Offsets (X,Y)-- [2:0-2-8,0-1-12], [11:Edge,0-7-11]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.80 | Vert(LL) | -0.21 | 15-17 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.37 | 13-15 | >999 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.52 | Horz(CT) | 0.08 | 11 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | Weight: 236 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 *Except* |
| | 6-8: 2x4 SP 2400F 2.0E, 8-10: 2x4 SP No.1 |
| BOT CHORD | 2x4 SP No.2 *Except* |
| | 14-16: 2x4 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* |
| | 8-13,8-12: 2x4 SP No.3 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 7-15, 3-18, 5-7 |

**REACTIONS.** (size) 18=0-3-8, 11=0-3-8
Max Horz 18=-255(LC 13)
Max Uplift 11=-6(LC 16)
Max Grav 18=1547(LC 29), 11=1516(LC 2)

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

| | |
|---|---|
| TOP CHORD | 2-3=-557/255, 3-5=-2002/478, 7-8=-2286/506, 8-9=-2459/438, 2-18=-504/237, 9-11=-1452/357 |
| BOT CHORD | 17-18=-172/1774, 15-17=-41/1468, 13-15=-71/1502, 12-13=-335/2251, 11-12=-211/540 |
| WEBS | 3-17=-272/233, 5-17=-130/510, 5-15=-50/443, 7-13=-166/840, 8-13=-752/301, 3-18=-1646/137, 9-12=-85/1792, 5-7=-1427/440 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) All plates are MT20 plates unless otherwise indicated.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1 | FAN | 8 | 1 | E15385587 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:32 2021 Page 1
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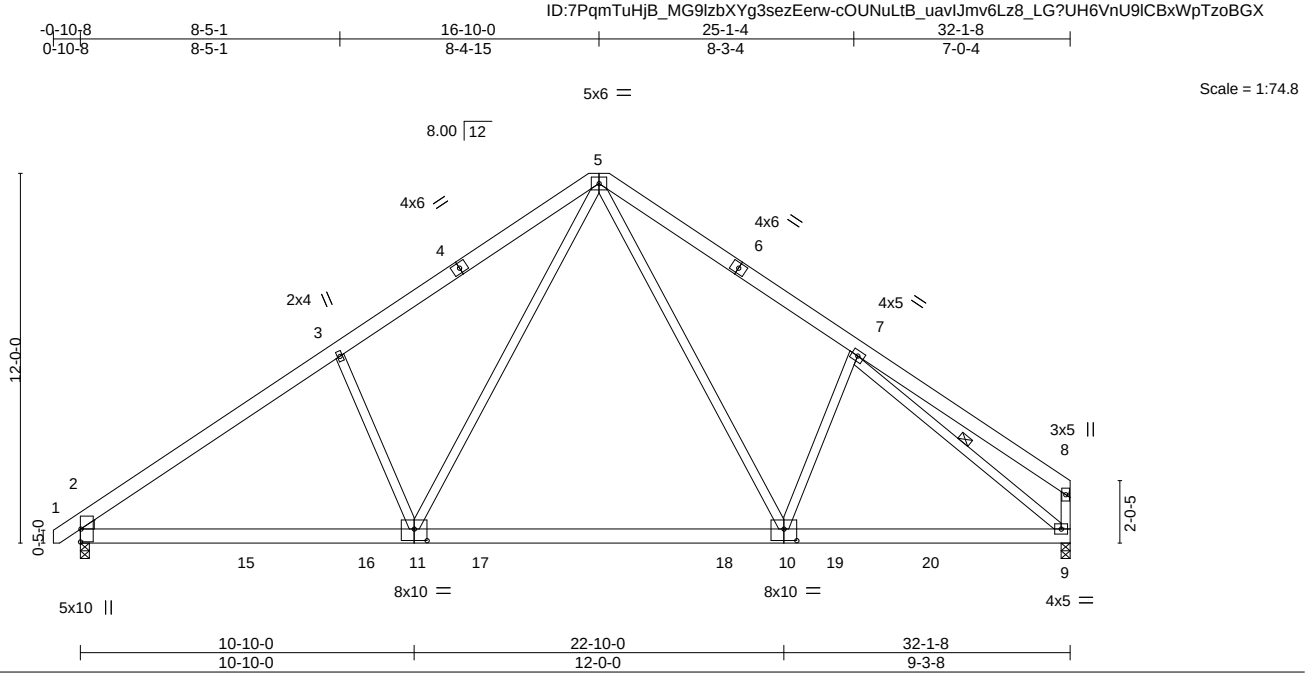


Plate Offsets (X,Y)-- [10:0-5-0,0-4-8], [11:0-5-0,0-4-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.37 | Vert(LL) | -0.23 | 10-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.36 | 10-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.59 | Horz(CT) | 0.04 | 9 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 240 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except*
8-9: 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-1-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-9

**REACTIONS.** (size) 2=0-3-8, 9=0-3-8
Max Horz 2=250(LC 12)
Max Grav 2=1443(LC 25), 9=1393(LC 26)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1929/328, 3-5=-1796/443, 5-7=-1649/420, 8-9=-259/130
BOT CHORD 2-11=-217/1653, 10-11=-27/1047, 9-10=-179/1291
WEBS 3-11=-455/302, 5-11=-163/953, 5-10=-123/695, 7-10=-263/270, 7-9=-1601/204

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with 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.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1GE | GABLE | 1 | 1 | E15385588 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:45 2021 Page 1
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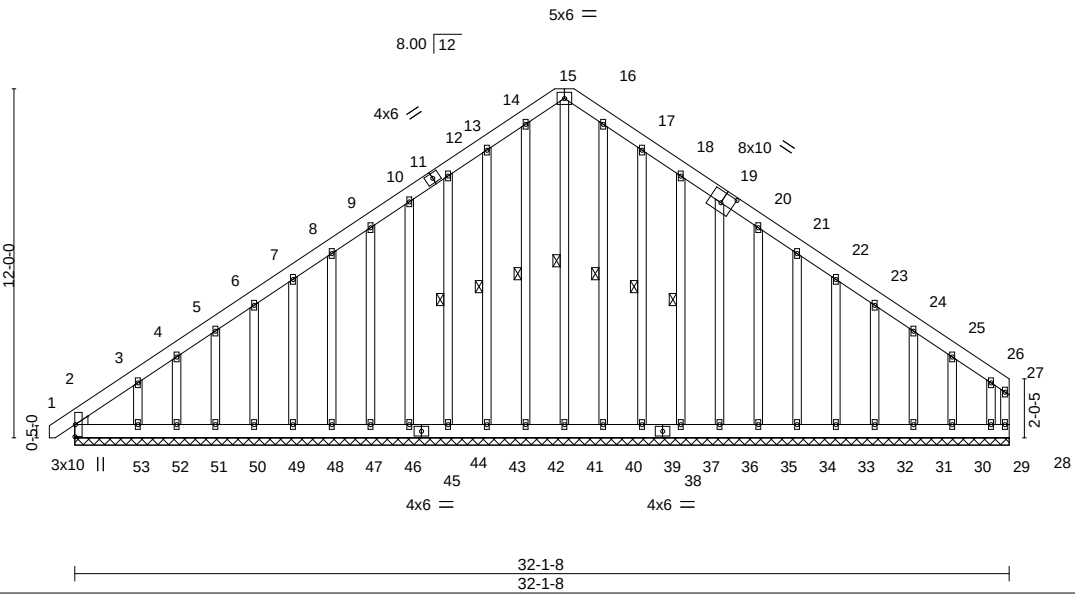


Plate Offsets (X,Y)-- [19:0-5-0,0-4-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | -0.00 | 1 | n/r | 120 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(CT) | 0.00 | 1 | n/r | 120 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.00 | 28 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-SH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 383 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.2 *Except*
6-50,5-51,4-52,3-53,23-32,24-31,25-30,26-29: 2x4 SP No.3
WEDGE
Left: 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.
WEBS 1 Row at midpt 15-41, 14-42, 13-43, 12-44, 16-40, 17-39, 18-37

**REACTIONS.** All bearings 32-1-8.
(lb) - Max Horz 2=250(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 28, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 39, 37, 36, 35, 34, 33, 32, 31, 30 except 2=-135(LC 9), 29=-117(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 2, 28, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 40, 39, 37, 36, 35, 34, 33, 32, 31, 30, 29

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-285/266, 10-12=-243/283, 12-13=-281/327, 13-14=-316/371, 14-15=-304/356, 15-16=-304/356, 16-17=-316/371, 17-18=-280/326, 18-19=-244/283

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 1-4-0 oc.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2, 28, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 39, 37, 36, 35, 34, 33, 32, 31, 30, and 29. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V3 | Valley | 1 | 1 | E15385589 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:58 2021 Page 1
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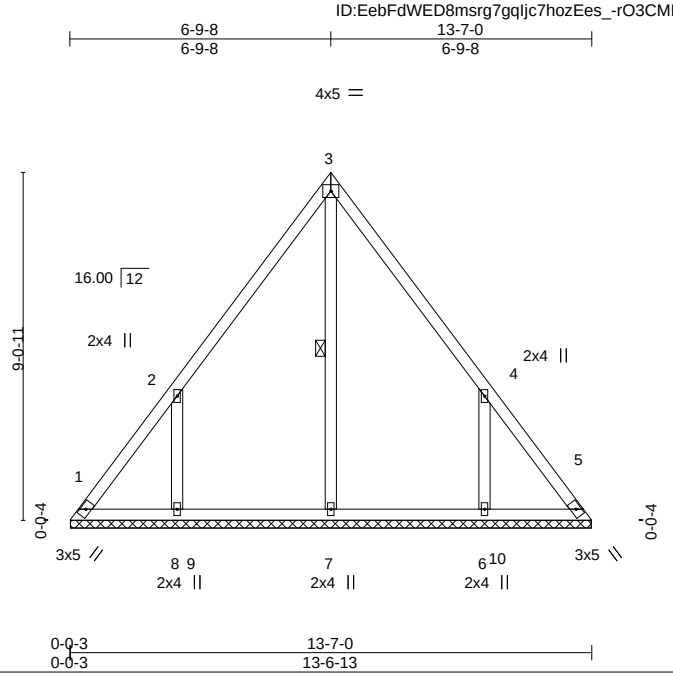


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.11 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-SH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 74 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-7

**REACTIONS.** All bearings 13-6-10.
(lb) - Max Horz 1=186(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-205(LC 13), 6=-204(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=338(LC 27), 8=437(LC 24), 6=437(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-417/378, 4-6=-417/378

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 8, and 6. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V4 | Valley | 1 | 1 | E15385590 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:59 2021 Page 1
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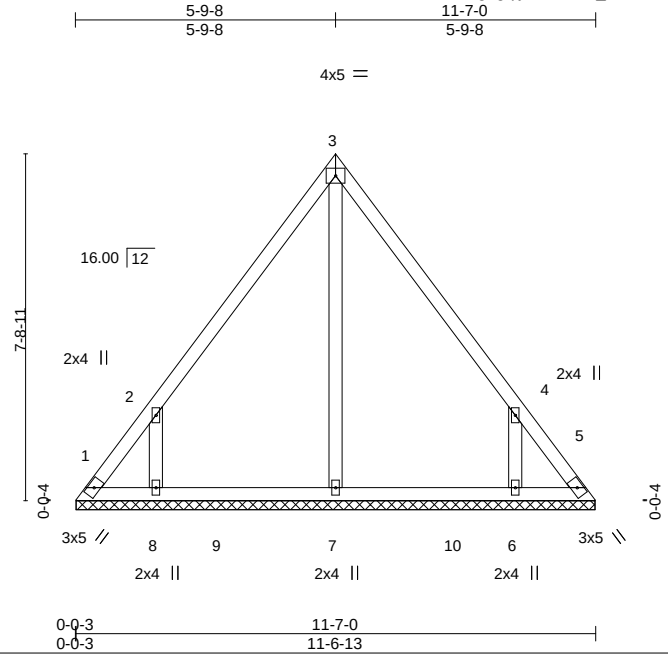


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.26 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-SH | | | | | | | Weight: 60 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except*
3-7: 2x4 SP No.2

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

**REACTIONS.** All bearings 11-6-10.
(lb) - Max Horz 1=157(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 5 except 1=-118(LC 11), 8=-196(LC 13), 6=-196(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=314(LC 27), 8=396(LC 24), 6=396(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-423/396, 4-6=-423/396

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 5, 8, and 6. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V5 | Valley | 1 | 1 | E15385591 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:42:00 2021 Page 1
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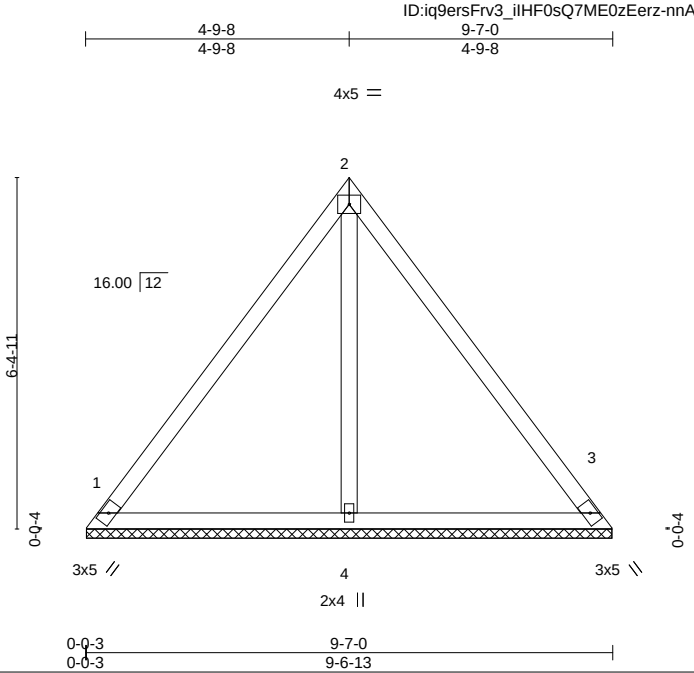


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.31 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.32 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.09 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-SH | | | | | | | Weight: 45 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

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

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

**REACTIONS.** (size) 1=9-6-10, 3=9-6-10, 4=9-6-10
Max Horz 1=-128(LC 9)
Max Uplift 1=-10(LC 14), 3=-2(LC 13)
Max Grav 1=207(LC 2), 3=207(LC 2), 4=306(LC 2)

**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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V6 | Valley | 1 | 1 | E15385592 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:42:01 2021 Page 1
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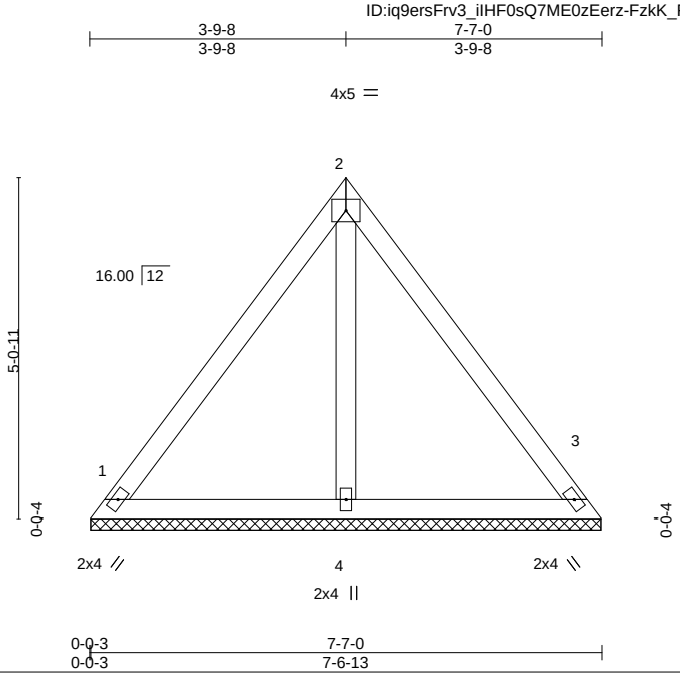


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 35 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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=7-6-10, 3=7-6-10, 4=7-6-10
Max Horz 1=-100(LC 9)
Max Uplift 1=-26(LC 14), 3=-20(LC 13)
Max Grav 1=181(LC 2), 3=181(LC 2), 4=198(LC 2)

**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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V7 | Valley | 1 | 1 | E15385593 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:42:02 2021 Page 1
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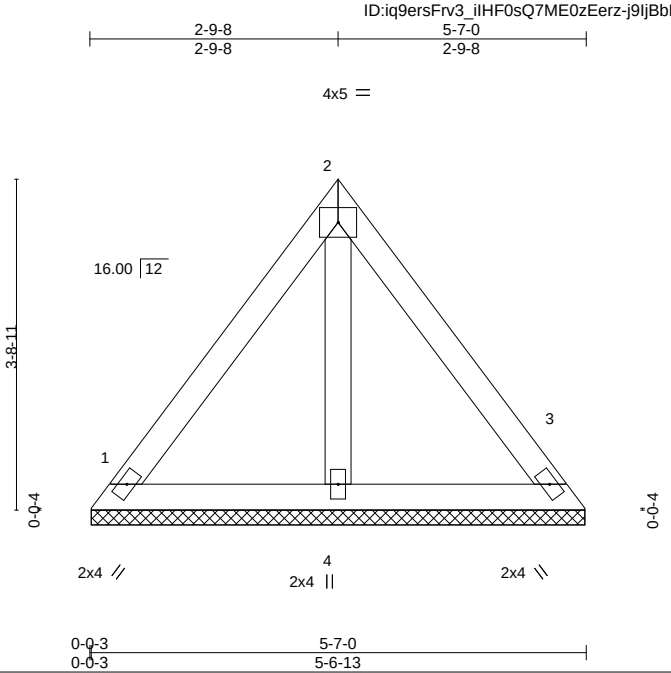


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 25 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 5-7-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=5-6-10, 3=5-6-10, 4=5-6-10
Max Horz 1=71(LC 12)
Max Uplift 1=-19(LC 14), 3=-14(LC 13)
Max Grav 1=129(LC 2), 3=129(LC 2), 4=141(LC 2)

**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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.


February 5,2021



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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T2SE | Roof Special Structural Gable | 1 | 1 | E15385594 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:51 2021 Page 1
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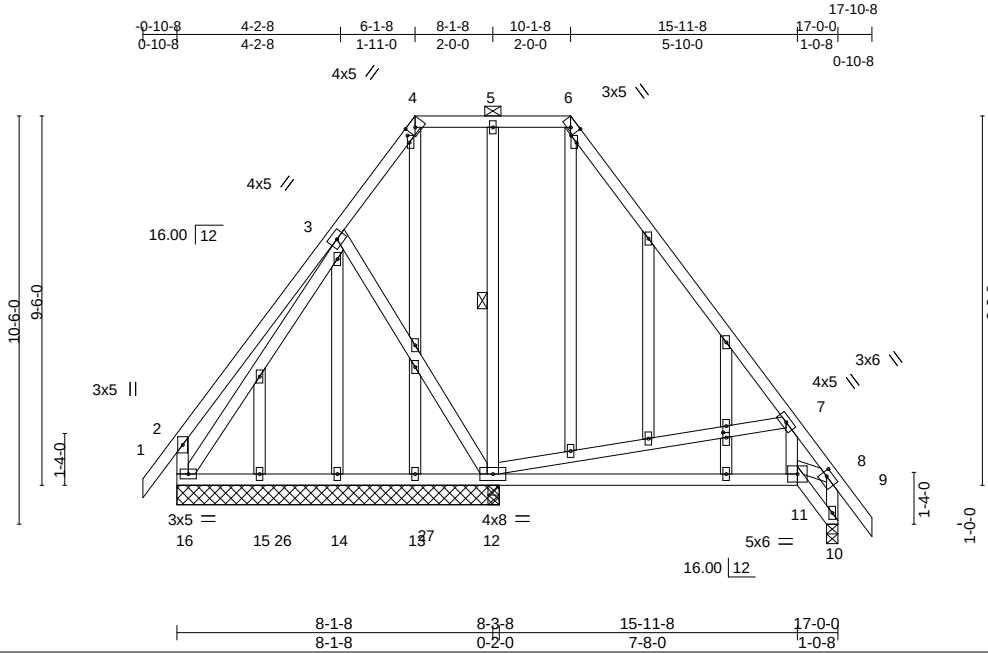


Plate Offsets (X,Y)-- [4:0-2-3,Edge], [4:0-2-3,0-0-10], [6:Edge,0-1-10], [6:0-2-3,Edge], [8:0-1-8,0-1-12], [25:0-1-9,0-1-0]

| LOADING (psf) | | SPACING- | 1-11-4 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.57 | Vert(LL) | -0.01 | 11-12 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.35 | Vert(CT) | -0.10 | 11-12 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.57 | Horz(CT) | 0.02 | 10 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 173 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 8-10,7-11,8-11,2-16: 2x4 SP No.3
OTHERS 2x4 SP No.2 *Except* 13-17,15-19,23-25,24-25: 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 (6-0-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 5-12

**REACTIONS.** All bearings 8-3-8 except (jt=length) 10=0-3-8.
(lb) - Max Horz 16=243(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 10, 12, 16, 13
Max Grav All reactions 250 lb or less at joint(s) 14, 15 except 10=540(LC 2), 12=414(LC 29), 12=340(LC 1), 16=480(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-400/387, 3-4=-268/221, 8-10=-519/58, 2-16=-450/380, 6-7=-401/182, 7-8=-564/110
BOT CHORD 11-12=-159/549
WEBS 7-12=-540/337, 8-11=-210/602, 3-16=-254/122

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
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) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10, 12, 16, and 13. This connection is for uplift only and does not consider lateral forces.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.


February 5,2021



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T1AGR | COMMON GIRDER | 1 | 3 | E15385595 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:40 2021 Page 1
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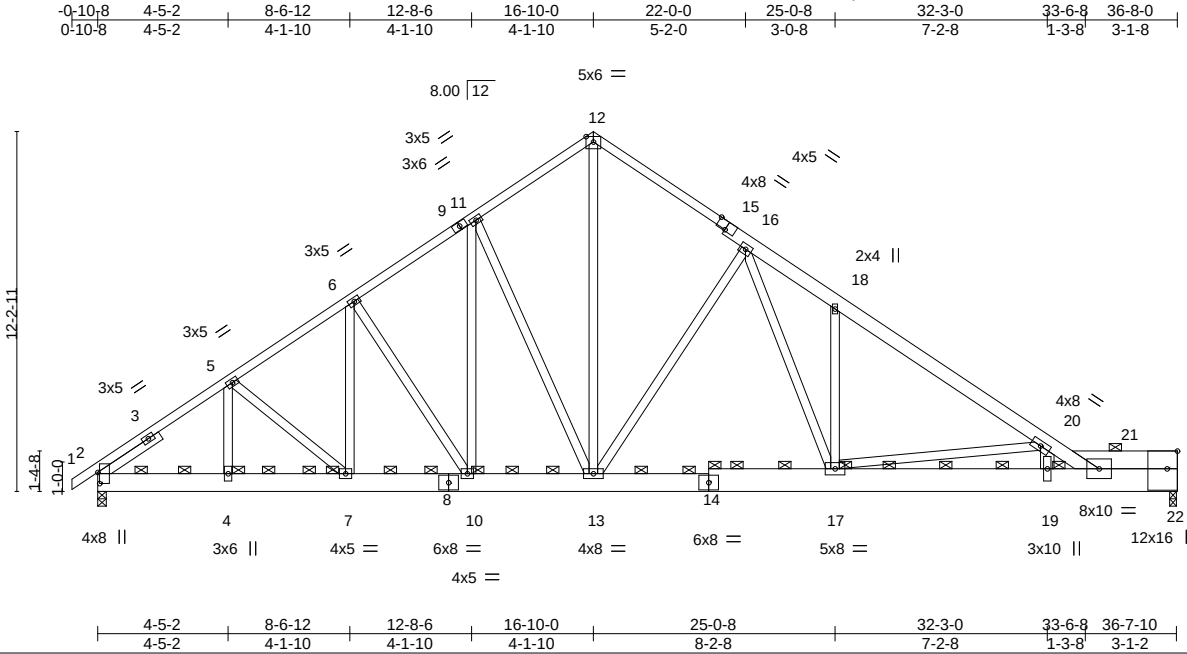


Plate Offsets (X,Y)-- [2:0-4-9,0-0-12], [15:0-4-0,Edge], [22:0-7-4,Edge]

| 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 | 0.46 | Vert(LL) | -0.18 | 18-20 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.00 | Vert(CT) | -0.26 | 18-20 | >999 | 180 | | |
| TCDL | 15.0 | Rep Stress Incr | YES | WB | 0.27 | Horz(CT) | 0.01 | 22 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | | |
| BCDL | 15.0 | | | | | | | | | | Weight: 1011 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 *Except* |
| | 15-21: 2x6 SP No.2, 21-22: 2x8 SP 2400F 2.0E |
| BOT CHORD | 2x8 SP 2400F 2.0E *Except* |
| | 14-22: 2x10 SP 2400F 2.0E |
| WEBS | 2x4 SP No.2 *Except* |
| | 4-5,5-7: 2x4 SP No.3, 19-20: 2x6 SP No.2 |
| SLIDER | Left 2x4 SP No.3 -t 2-6-0 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Sheathed or 6-0-0 oc purlins, except |
| | 2-0-0 oc purlins (10-0-0 max.): 22-23. |
| BOT CHORD | 10-0-0 oc bracing. |
| JOINTS | 1 Brace at Jt(s): 4, 7, 10, 13, 17 |

**REACTIONS.** (size) 2=0-3-8, 22=0-2-12
Max Horz 2=244(LC 8)
Max Uplift 2=-634(LC 10), 22=-627(LC 10)
Max Grav 2=3026(LC 2), 22=3343(LC 2)

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

| | |
|---|---|
| TOP CHORD | 2-5=-3934/869, 5-6=-3989/897, 6-11=-3602/843, 11-12=-3195/789, 12-16=-3281/772, 16-18=-5798/1239, 18-20=-5811/1107, 20-21=-10139/1912, 2-4=-681/3206, 4-7=-681/3206, 7-10=-614/3281, 10-13=-489/2924, 13-17=-576/3708, 17-19=-1607/8571, 19-21=-1607/8571, 21-22=-101/513 |
| WEBS | 4-5=-266/22, 6-7=-171/440, 6-10=-653/231, 10-11=-237/664, 11-13=-814/302, 12-13=-782/3071, 13-16=-2066/495, 16-17=-641/2927, 17-18=-704/205, 17-20=-3919/824, 19-20=-462/2614 |

**NOTES-**

1) 3-ply truss to be connected together with Simpson SDS 1/4 x 4-1/2 screws as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.33
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
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 13.9 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 22.

Continued on page 2


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**NOTES-**

10) One RT8A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 22. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | T2 | Roof Special | 2 | 1 | E15385596 |
| | | | | | Job Reference (optional) |

Carter Components (Sanford), Sanford, NC - 27332, 8.430 s Nov 30 2020 MiTek Industries, Inc. Fri Feb 5 12:41:47 2021 Page 1
ID:3oyXuaJ_jcc_P27_fzjXx3zEeru-gHu22T2cSVTnbcQnU?kf5VOStKEqoKHyf14pr5zoBGI

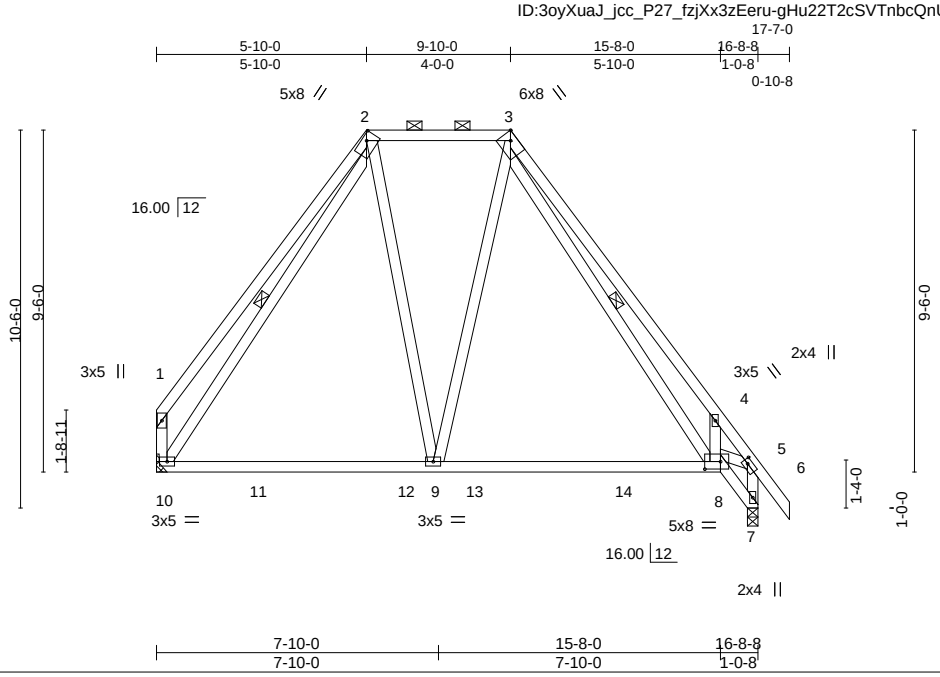


Plate Offsets (X,Y)-- [2:0-3-0,0-1-8], [3:0-2-13,Edge], [5:0-1-8,0-1-8], [8:0-5-4,0-2-8]

| LOADING (psf) | | SPACING- | 1-11-4 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.81 | Vert(LL) | -0.11 | 8-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 18.9/20.0 | Lumber DOL | 1.15 | BC | 0.68 | Vert(CT) | -0.21 | 8-9 | >960 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.37 | Horz(CT) | -0.05 | 10 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-MSH | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 132 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except*
5-7,4-8,5-8,1-10: 2x4 SP No.3

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

**REACTIONS.** (size) 7=0-3-8, 10=Mechanical
Max Horz 7=-239(LC 9)
Max Grav 7=721(LC 25), 10=697(LC 26)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-503/435, 2-3=-385/226, 3-4=-1364/880, 4-5=-955/261, 5-7=-876/189, 1-10=-512/402
BOT CHORD 9-10=-35/333, 8-9=-81/384, 7-8=-319/298
WEBS 2-9=-58/305, 3-8=-748/948, 4-8=-793/662, 5-8=-226/679, 2-10=-454/114

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=18.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 13.9 psf on overhangs non-concurrent with other live loads.
5) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.


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| Job | Truss | Truss Type | Qty | Ply | 210 Crossings-Kessler C-Roof |
|---|---|---|---|---|---|
| 21070088-B | V8 | Valley | 1 | 1 | E15385597 |
| | | | | | Job Reference (optional) |

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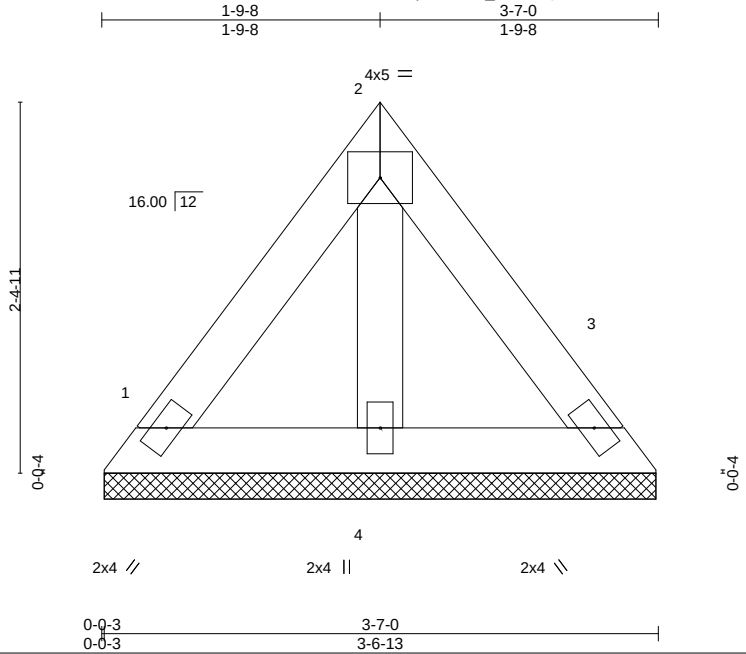
ID:iq9ersFrv3_iIHF0sQ7ME0zEerz-CMs5PxFehQUWW4esQM0Plt2NUns?YfsJKWyfQAzoBG2




| 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 | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 13.9/20.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.01 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 15 lb | FT = 20% |
| BCDL | 10.0 | | | | | | | | | | | |

**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 3-7-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=3-6-10, 3=3-6-10, 4=3-6-10
Max Horz 1=43(LC 10)
Max Uplift 1=-11(LC 14), 3=-9(LC 13)
Max Grav 1=78(LC 2), 3=78(LC 2), 4=85(LC 2)

**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=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=13.9 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
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) One RT7A USP connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.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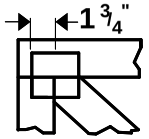
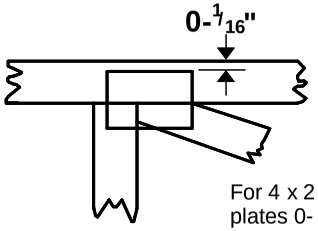
# Symbols

## 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.

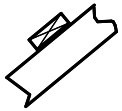
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

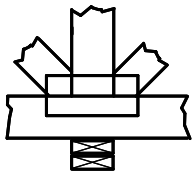
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

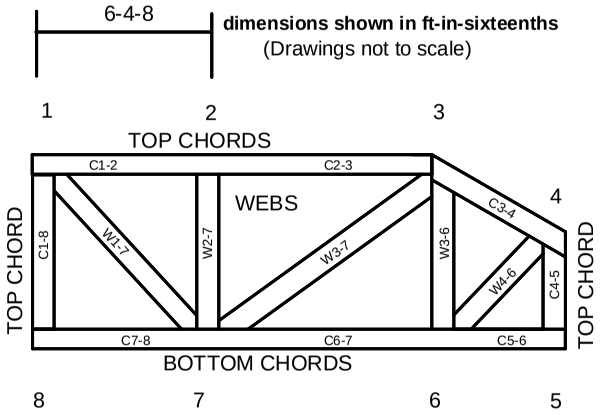


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**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.



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.