ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0322-1312
Precision/12 Liberty Meadows/Harnett

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: I54046232 thru I54046254

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

North Carolina COA: C-0844


September 7,2022

Gilbert, Eric

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

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | A1-GE | GABLE | 1 | 1 | I54046232 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:39 2022 Page 1
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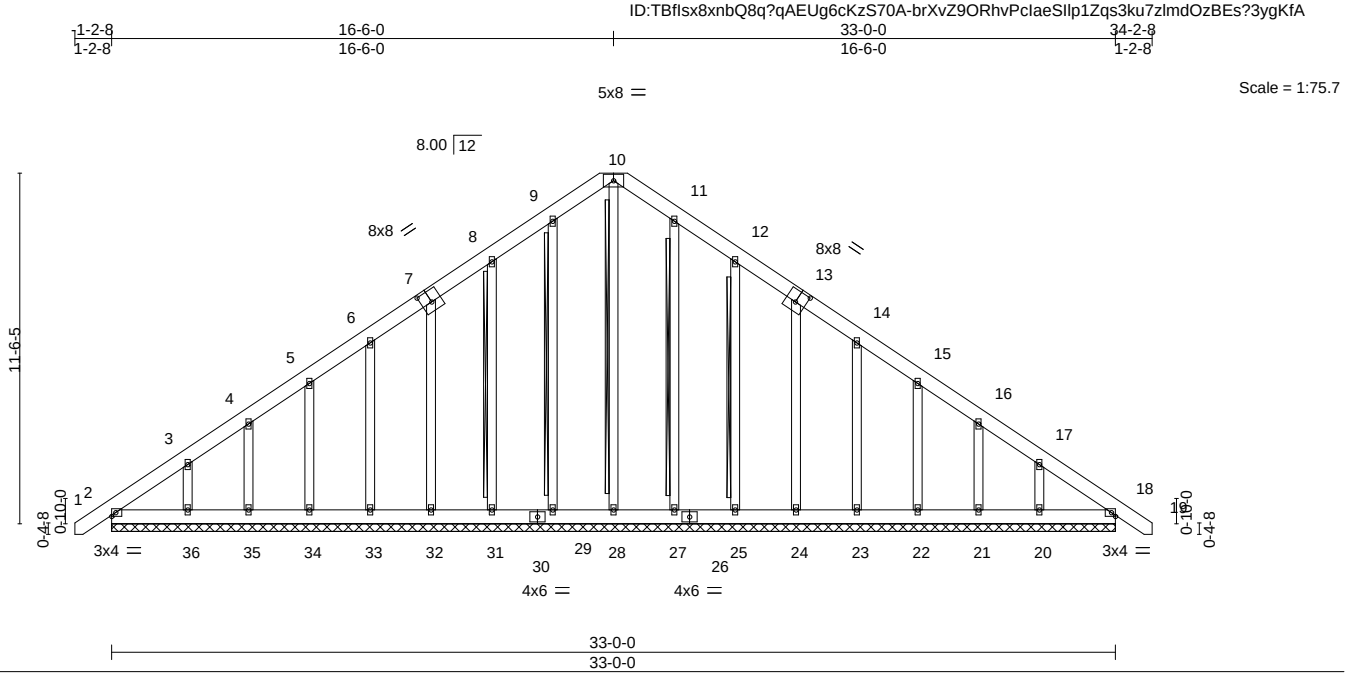


Plate Offsets (X,Y)-- [7:0-4-0,0-4-8], [13:0-4-0,0-4-8]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.05 | Vert(LL) | -0.00 | 18 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | 0.00 | 18 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.01 | 18 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 309 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
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.
WEBS T-Brace: 2x4 SPF No.2 - 10-28, 9-29, 8-31, 11-27, 12-25
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

**REACTIONS.** All bearings 33-0-0.
(lb) - Max Horz 2=-351(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 29, 32, 33, 34, 35, 27, 24, 23, 22, 21 except 31=-103(LC 12), 36=-144(LC 12), 25=-106(LC 13), 20=-136(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 18, 28, 29, 31, 32, 33, 34, 35, 36, 27, 25, 24, 23, 22, 21, 20

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-363/272, 3-4=-252/217, 8-9=-231/272, 9-10=-264/298, 10-11=-264/298, 11-12=-231/255, 17-18=-281/193
BOT CHORD 2-36=-176/277, 35-36=-176/277, 34-35=-176/277, 33-34=-176/277, 32-33=-176/277, 31-32=-178/278, 29-31=-178/278, 28-29=-178/278, 27-28=-178/278, 25-27=-178/278, 24-25=-178/278, 23-24=-176/276, 22-23=-176/276, 21-22=-176/276, 20-21=-176/276, 18-20=-176/276

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 29, 32, 33, 34, 35, 27, 24, 23, 22, 21 except (jt=lb) 31=103, 36=144, 25=106, 20=136.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | A2 | COMMON | 13 | 1 | I54046233 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:41 2022 Page 1
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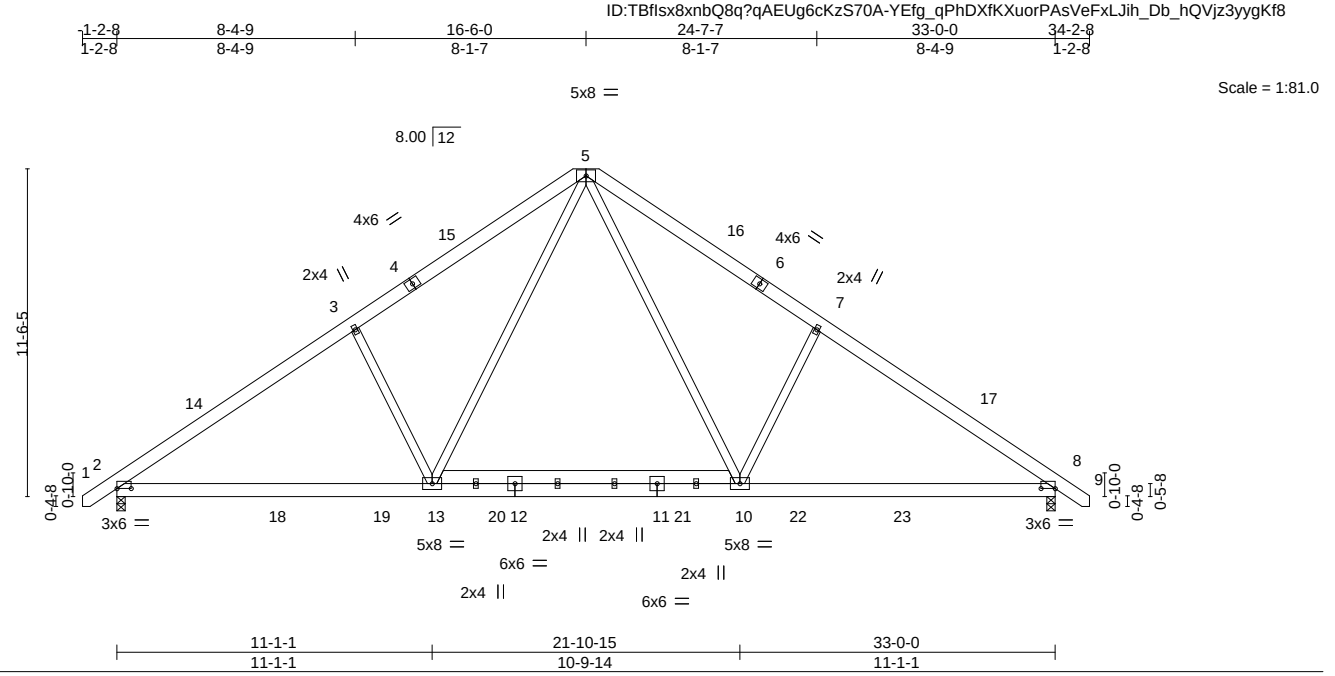


Plate Offsets (X,Y)-- [2:0-6-0,0-0-1], [8:0-6-0,0-0-1]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.30 | Vert(LL) | -0.16 | 10-13 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.57 | Vert(CT) | -0.23 | 10-13 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.48 | Horz(CT) | 0.04 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.04 | 2-13 | >999 | 240 | Weight: 255 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-3-8, 8=0-3-8
Max Horz 2=281(LC 11)
Max Uplift 2=-85(LC 12), 8=-85(LC 13)
Max Grav 2=1596(LC 19), 8=1596(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2148/383, 3-5=-2006/487, 5-7=-2006/487, 7-8=-2148/383
BOT CHORD 2-13=-158/1869, 10-13=0/1225, 8-10=-168/1680
WEBS 5-10=-173/1035, 7-10=-526/320, 5-13=-173/1035, 3-13=-526/320

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 16-6-0, Exterior(2) 16-6-0 to 20-10-13, Interior(1) 20-10-13 to 34-0-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | A3-GE | GABLE | 1 | 1 | I54046234 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:42 2022 Page 1

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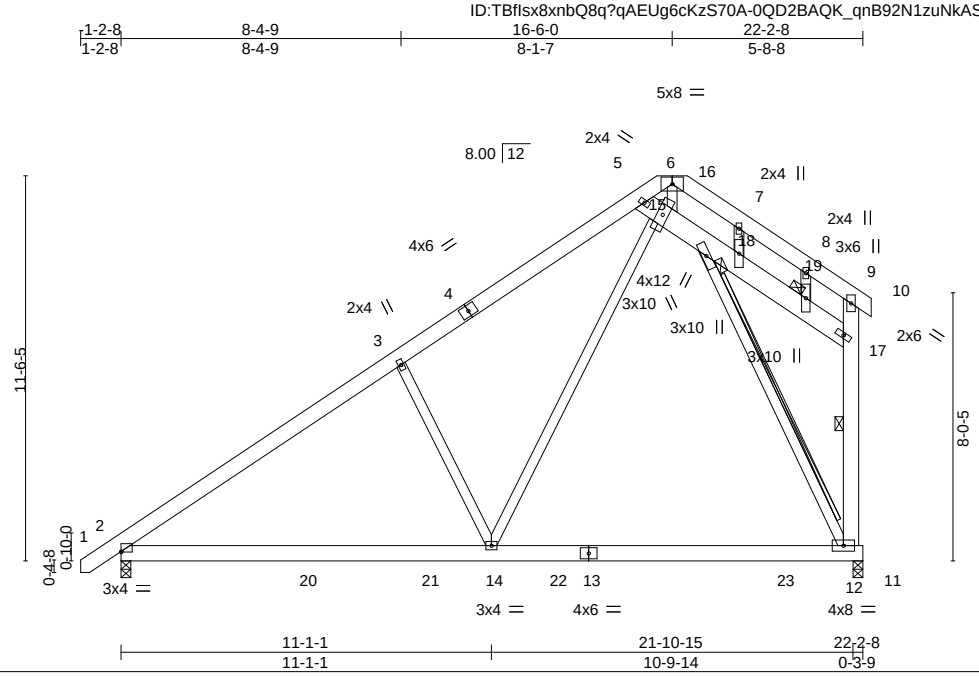


Plate Offsets (X,Y)-- [2:0-0-0,0-0-3]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.29 | Vert(LL) | -0.20 | 12-14 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.56 | Vert(CT) | -0.26 | 12-14 | >998 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.56 | Horz(CT) | 0.01 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.05 | 2-14 | >999 | 240 | Weight: 203 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* 9-12: 2x6 SP No.1, 5-17: 2x8 SP No.1 |
| OTHERS | 2x4 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 9-12<br>T-Brace: 2x4 SPF No.2 - 12-16<br>Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.<br>Brace must cover 90% of web length. |
| JOINTS | 1 Brace at Jt(s): 16, 19 |

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8
Max Horz 2=443(LC 12)
Max Uplift 2=-176(LC 12), 12=-246(LC 12)
Max Grav 2=1086(LC 19), 12=1157(LC 19)

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

| | |
|---|---|
| TOP CHORD | 2-3=-1263/227, 3-5=-1120/333, 5-6=-347/247, 12-17=-288/147, 9-17=-292/106 |
| BOT CHORD | 2-14=-413/1115, 12-14=-123/409 |
| WEBS | 12-16=-828/297, 14-15=-252/1103, 3-14=-506/400, 5-15=-847/304, 15-16=-765/255, 6-15=-243/385 |

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable studs spaced at 2-0-0 oc.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=176, 12=246.
8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


September 7,2022




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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | A4 | COMMON | 9 | 1 | I54046235 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:43 2022 Page 1

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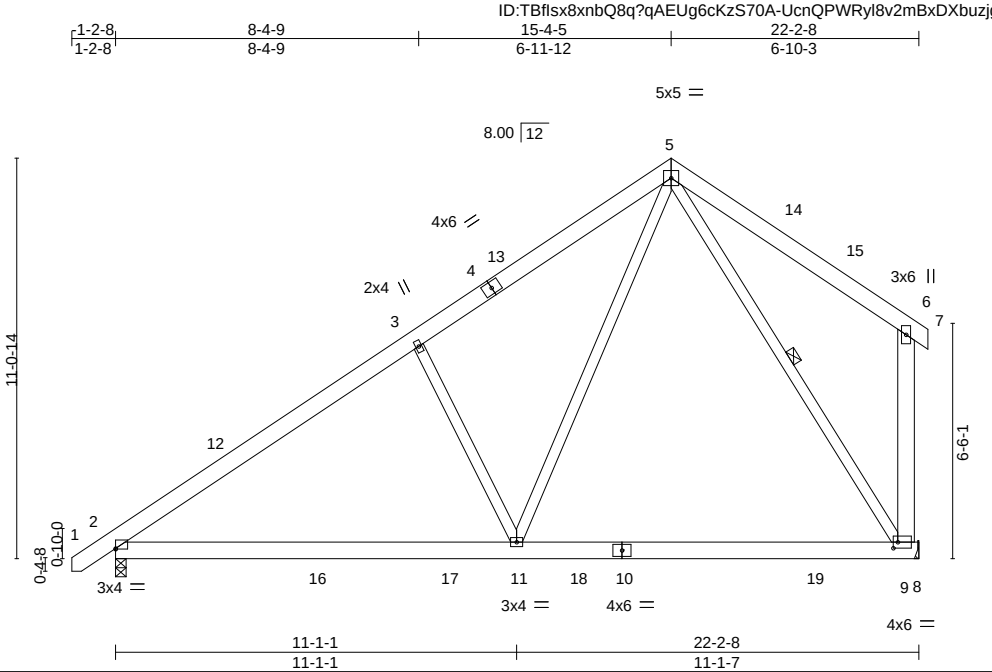


Plate Offsets (X,Y)-- [2:0-0-0,0-0-3], [9:0-1-8,0-2-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.30 | Vert(LL) | -0.18 | 9-11 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.56 | Vert(CT) | -0.25 | 9-11 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.56 | Horz(CT) | 0.01 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.04 | 2-11 | >999 | 240 | Weight: 176 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* 6-9: 2x6 SP No.1 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | 1 Row at midpt 5-9 |

**REACTIONS.** (size) 9=Mechanical, 2=0-3-8
Max Horz 2=260(LC 12)
Max Uplift 9=-71(LC 12), 2=-51(LC 12)
Max Grav 9=1119(LC 19), 2=1079(LC 19)

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

| | |
|---|---|
| TOP CHORD | 2-3=-1269/199, 3-5=-1127/294, 6-9=-309/214 |
| BOT CHORD | 2-11=-244/1093, 9-11=-58/497 |
| WEBS | 3-11=-518/305, 5-9=-829/101, 5-11=-143/1064 |

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-15 to 3-3-14, Interior(1) 3-3-14 to 15-4-5, Exterior(2) 15-4-5 to 19-9-2, Interior(1) 19-9-2 to 22-5-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9, 2.


September 7,2022




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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | A5-GE | GABLE | 1 | 1 | I54046236 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:45 2022 Page 1
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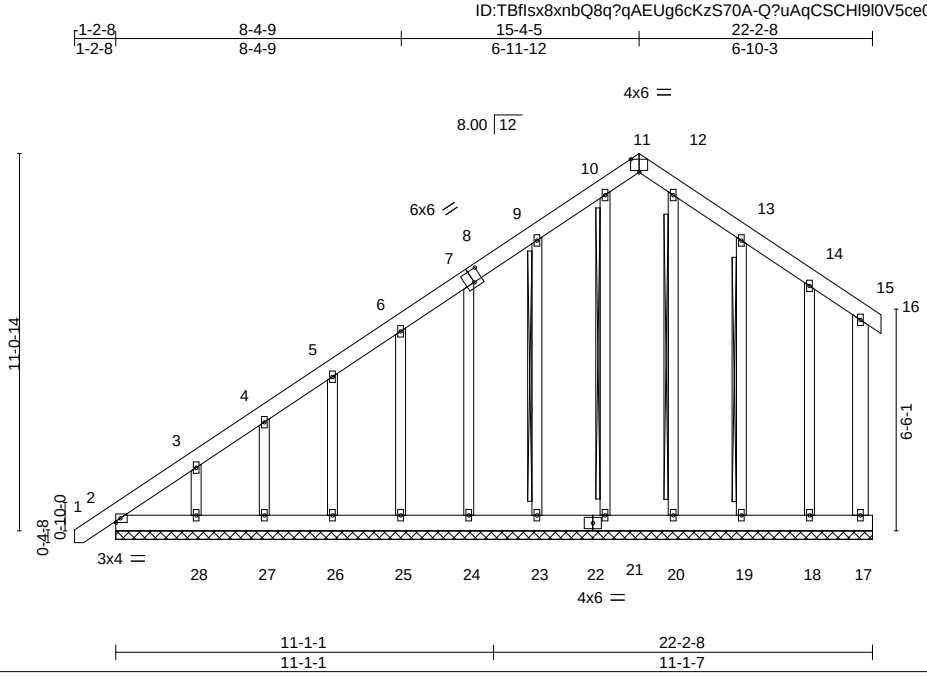


Plate Offsets (X,Y)-- [8:0-3-0,0-4-4], [11:0-3-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | 0.00 | 15 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.01 | Vert(CT) | 0.00 | 15 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.13 | Horz(CT) | 0.00 | 17 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 227 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x6 SP No.1 |
| OTHERS | 2x4 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | T-Brace: 2x4 SP No.2 - 10-21<br>2x4 SPF No.2 - 9-23, 12-20, 13-19<br>Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length. |

**REACTIONS.** All bearings 22-2-8.
(lb) - Max Horz 2=387(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 17, 2, 21, 23, 24, 25, 26, 27, 18 except 28=-147(LC 12), 19=-104(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 17, 2, 21, 23, 24, 25, 26, 27, 28, 20, 19, 18

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-426/302, 3-4=-308/248

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 2, 21, 23, 24, 25, 26, 27, 18 except (jt=lb) 28=147, 19=104.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | B1 | FLAT GIRDER | 1 | 2 | I54046237 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:47 2022 Page 1

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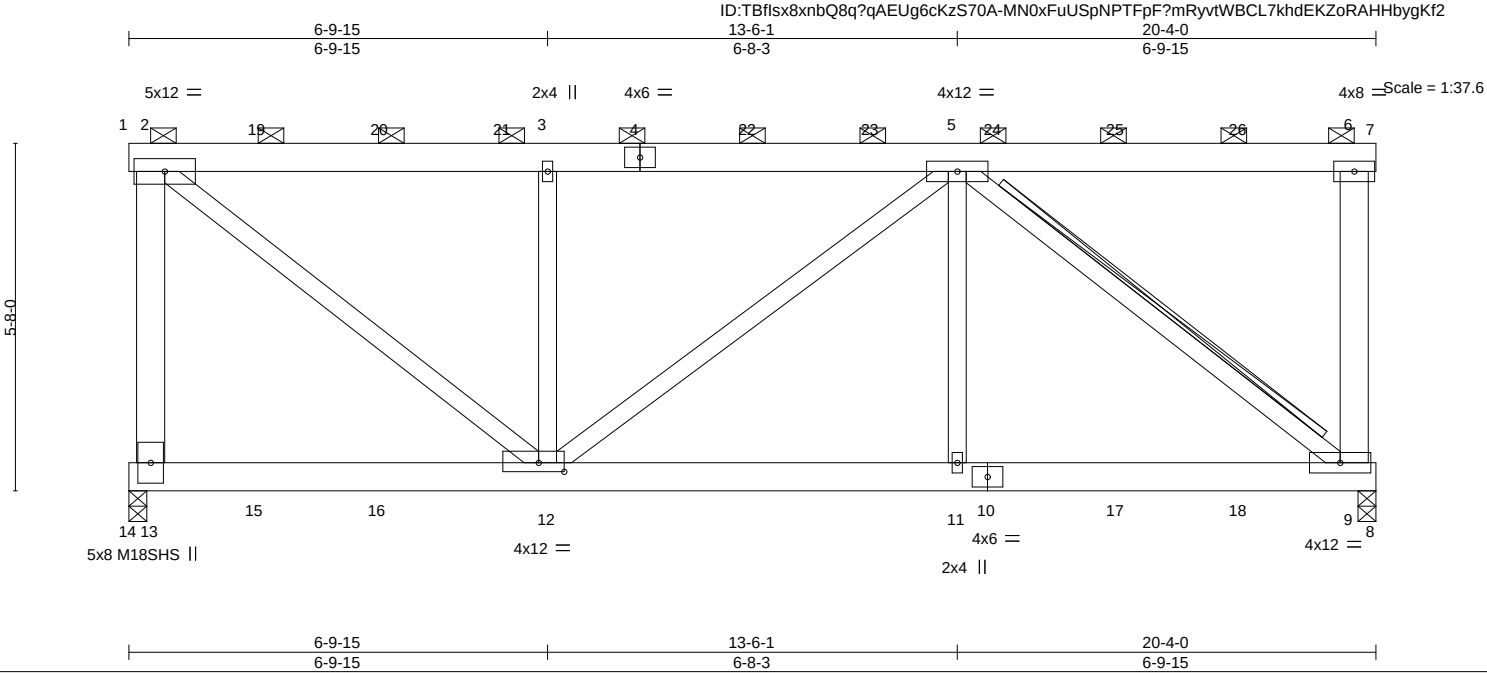


Plate Offsets (X,Y)-- [12:0-5-0,0-1-12]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.91 | Vert(LL) | -0.07 | 11-12 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.55 | Vert(CT) | -0.12 | 11-12 | >999 | 240 | M18SHS | 244/190 |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.80 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | Wind(LL) | 0.06 | 12-13 | >999 | 240 | Weight: 332 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* 2-13,6-9: 2x6 SP No.1 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | 2-0-0 oc purlins (5-10-4 max.): 1-7, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | T-Brace: 2x6 SPF No.2 - 5-9 Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length. |

**REACTIONS.** (size) 13=0-3-8, 9=0-3-8
Max Horz 13=-144(LC 6)
Max Uplift 13=-662(LC 4), 9=-626(LC 5)
Max Grav 13=5900(LC 2), 9=5800(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-13=-5441/516, 6-9=-1196/127, 2-3=-5389/505, 3-5=-5389/505, 5-6=-265/41
BOT CHORD 12-13=-96/317, 11-12=-494/5444, 9-11=-494/5444
WEBS 2-12=-563/6555, 3-12=-3787/313, 5-11=-41/390, 5-9=-6649/581

**NOTES-**

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 13=662, 9=626.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 69 lb down and 49 lb up at 0-4-4, 1015 lb down and 72 lb up at 2-1-4, 1015 lb down and 72 lb up at 4-1-4, 1015 lb down and 72 lb up at 6-1-4, 1015 lb down and 72 lb up at 8-1-4, 1015 lb down and 72 lb up at 10-1-4, 1015 lb down and 72 lb up at 12-1-4, 1015 lb down and 72 lb up at 14-1-4, and 1015 lb down and 72 lb up at 16-1-4, and 1015 lb down and 72 lb up at 18-1-4 on top chord, and 316 lb down and 155 lb up at 2-0-12, 316 lb down and 155 lb up at 4-0-12, and 316 lb down and 155 lb up at 16-1-4, and 316 lb down and 155 lb up at 18-1-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


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Continued on page 2

**LOAD CASE(S)** Standard



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Edenton, NC 27932

**LOAD CASE(S)** Standard

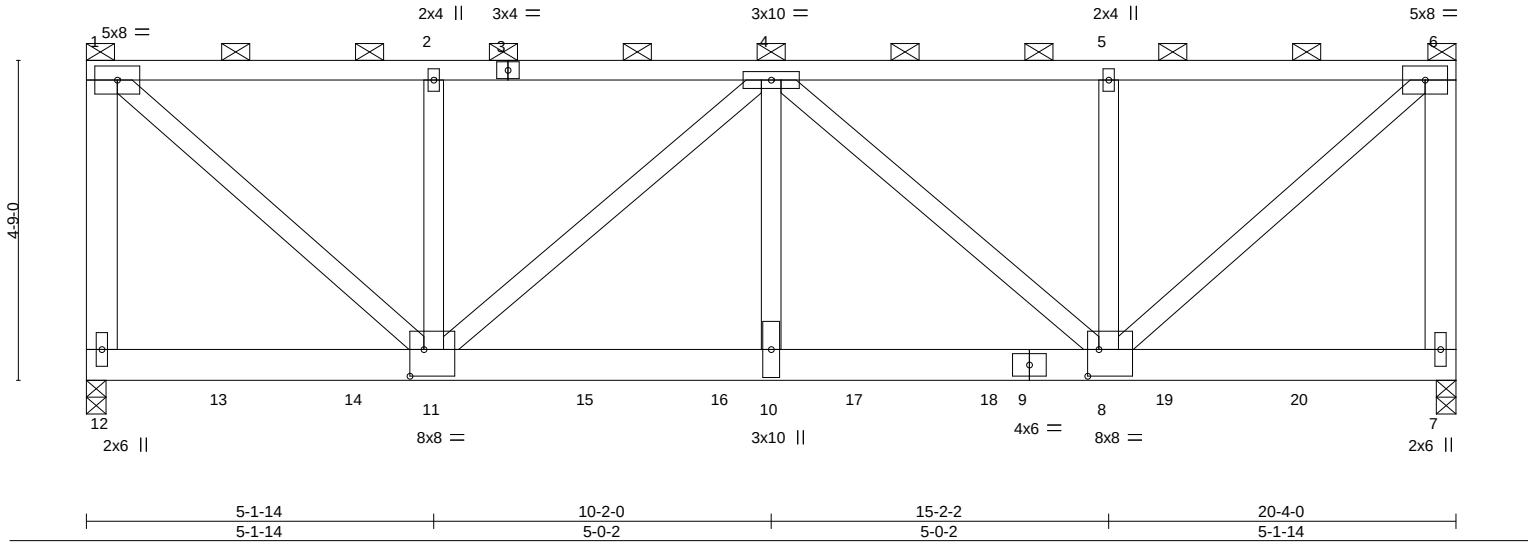
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 8-14=-20, 1-2=-60, 2-6=-60, 6-7=-60
   Concentrated Loads (lb)
   Vert: 2=-65 4=-850(F) 15=-316(B) 16=-316(B) 17=-316(B) 18=-316(B) 19=-850(F) 20=-850(F) 21=-850(F) 22=-850(F) 23=-850(F) 24=-850(F) 25=-850(F) 26=-850(F)

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | B2 | FLAT GIRDER | 1 | 2 | I54046238 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:48 2022 Page 1
ID:TBfIsx8xnbQ8q?qAEUg6cKzS70A-qaaJSEV4agXKtzqBJ8U8QjkZfW3fMjzj15wrp2ygKf1

| 5-1-14 | 10-2-0 | 15-2-2 | 20-4-0 |
|---|---|---|---|
| 5-1-14 | 5-0-2 | 5-0-2 | 5-1-14 |

Scale = 1:34.2




| 5-1-14 | 10-2-0 | 15-2-2 | 20-4-0 |
|---|---|---|---|
| 5-1-14 | 5-0-2 | 5-0-2 | 5-1-14 |

Plate Offsets (X,Y)-- [8:0-2-0,0-4-12], [11:0-2-8,0-4-12]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.17 | Vert(LL) | -0.07 | 8-10 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.63 | Vert(CT) | -0.14 | 8-10 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.65 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.07 | 8-10 | >999 | 240 | Weight: 301 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
1-12,6-7: 2x6 SP No.1

**BRACING-**
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 12=0-3-8, 7=0-3-8
Max Horz 12=-121(LC 6)
Max Uplift 12=-674(LC 4), 7=-687(LC 5)
Max Grav 12=3924(LC 1), 7=3981(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-12=-3548/658, 1-2=-3902/728, 2-4=-3902/728, 4-5=-4040/725, 5-6=-4040/725, 6-7=-3676/682
BOT CHORD 10-11=-926/5303, 8-10=-926/5303
WEBS 1-11=-921/5122, 2-11=-296/114, 4-11=-1859/312, 4-10=-398/2020, 4-8=-1676/277, 5-8=-295/113, 6-8=-955/5312

**NOTES-**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
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) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=674, 7=687.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 500 lb down and 47 lb up at 2-0-0, 500 lb down and 47 lb up at 4-0-0, 500 lb down and 47 lb up at 16-0-8, 500 lb down and 47 lb up at 18-0-8, 758 lb down and 271 lb up at 5-5-4, 758 lb down and 123 lb up at 7-5-4, 758 lb down and 123 lb up at 9-5-4, 758 lb down and 123 lb up at 11-5-4, and 758 lb down and 123 lb up at 13-5-4, and 758 lb down and 271 lb up at 14-10-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.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**LOAD CASE(S)** Standard

Continued on page 2



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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-6=-60, 7-12=-20
   Concentrated Loads (lb)
   Vert: 11=-758(B) 8=-758(B) 13=-441(F) 14=-441(F) 15=-758(B) 16=-758(B) 17=-758(B) 18=-758(B) 19=-441(F) 20=-441(F)

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | C1-GE | GABLE | 1 | 1 | I54046239 |
| | | | | | Job Reference (optional) |

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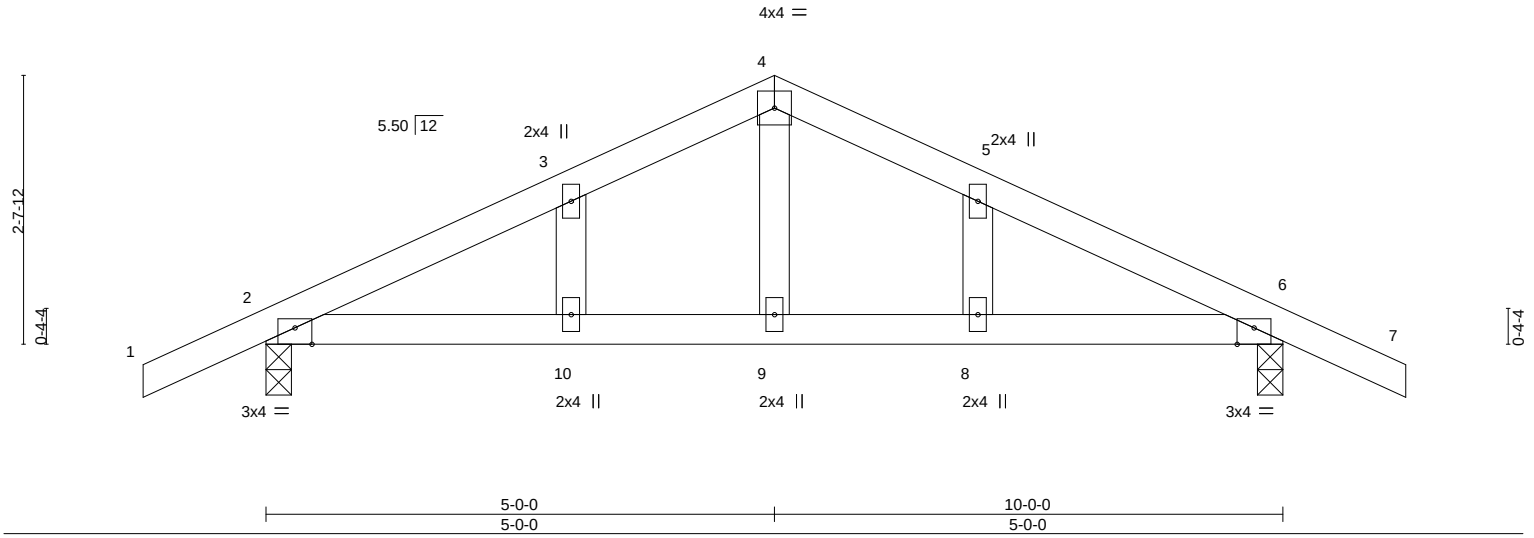
-1-2-8 | 5-0-0 | 10-0-0 | 11-2-8
1-2-8 | 5-0-0 | 5-0-0 | 1-2-8

Scale = 1:22.7




5-0-0 | 10-0-0
5-0-0 | 5-0-0

Plate Offsets (X,Y)-- [2:0-2-0,Edge], [6:0-2-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | -0.02 | 8 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.24 | Vert(CT) | -0.04 | 6-8 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.01 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.04 | 6-8 | >999 | 240 | Weight: 42 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-8-0 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 6=0-3-0
Max Horz 2=-58(LC 13)
Max Uplift 2=-154(LC 8), 6=-154(LC 9)
Max Grav 2=470(LC 1), 6=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-555/635, 3-4=-500/660, 4-5=-500/660, 5-6=-555/635
BOT CHORD 2-10=-479/453, 9-10=-479/453, 8-9=-479/453, 6-8=-479/453
WEBS 4-9=-334/207

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable studs spaced at 2-0-0 oc.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=154, 6=154.


September 7,2022



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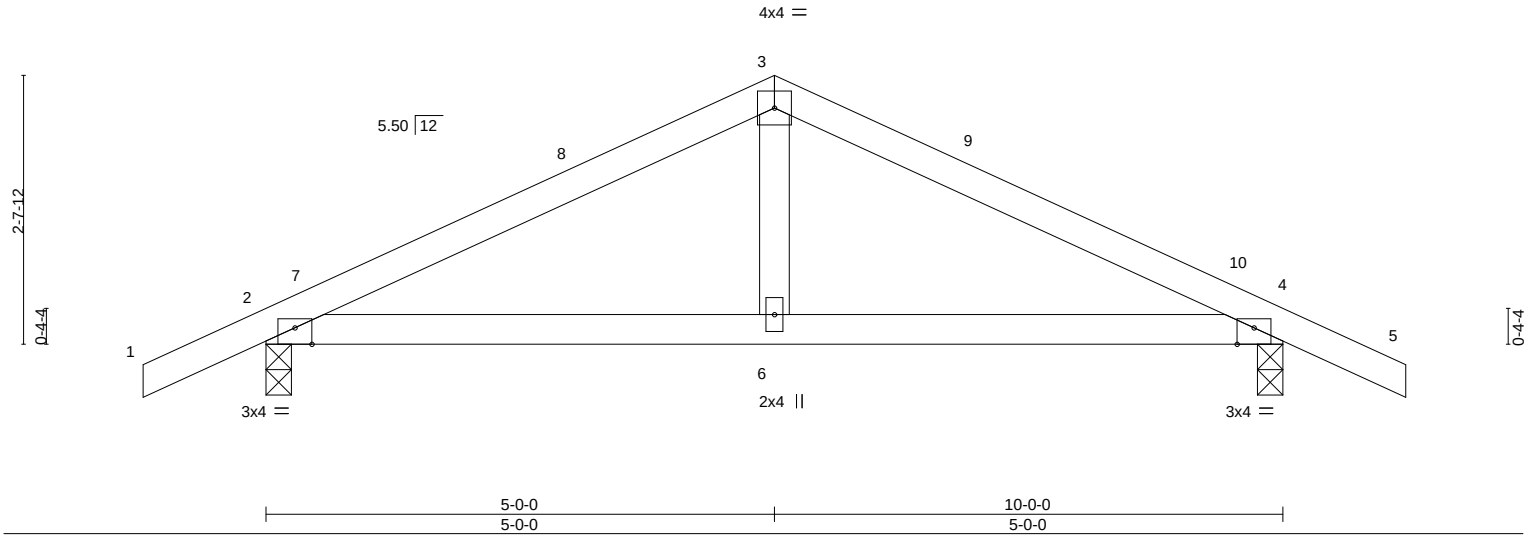
| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | C2 | COMMON | 4 | 1 | I54046240 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:50 2022 Page 1
ID:TBfIsx8xnbQ8q?qAEUg6cKzS70A-nyi3tvWL6In26G_aRZWcV8pu3Kqqqnp0VPPxuwygKf?

-1-2-8 | 5-0-0 | 10-0-0 | 11-2-8
1-2-8 | 5-0-0 | 5-0-0 | 1-2-8

Scale = 1:22.7




5-0-0 | 10-0-0
5-0-0 | 5-0-0

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

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.24 | Vert(LL) | -0.01 | 4-6 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.20 | Vert(CT) | -0.03 | 4-6 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.01 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.04 | 4-6 | >999 | 240 | Weight: 39 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 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 9-1-1 oc bracing.

**REACTIONS.** (size) 2=0-3-0, 4=0-3-0
Max Horz 2=-34(LC 13)
Max Uplift 2=-114(LC 8), 4=-114(LC 9)
Max Grav 2=470(LC 1), 4=470(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-554/617, 3-4=-554/617
BOT CHORD 2-6=-448/442, 4-6=-448/442
WEBS 3-6=-302/232

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 5-0-0, Exterior(2) 5-0-0 to 9-4-13, Interior(1) 9-4-13 to 11-2-8 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=114, 4=114.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | J1-GE | GABLE | 1 | 1 | I54046241 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:51 2022 Page 1

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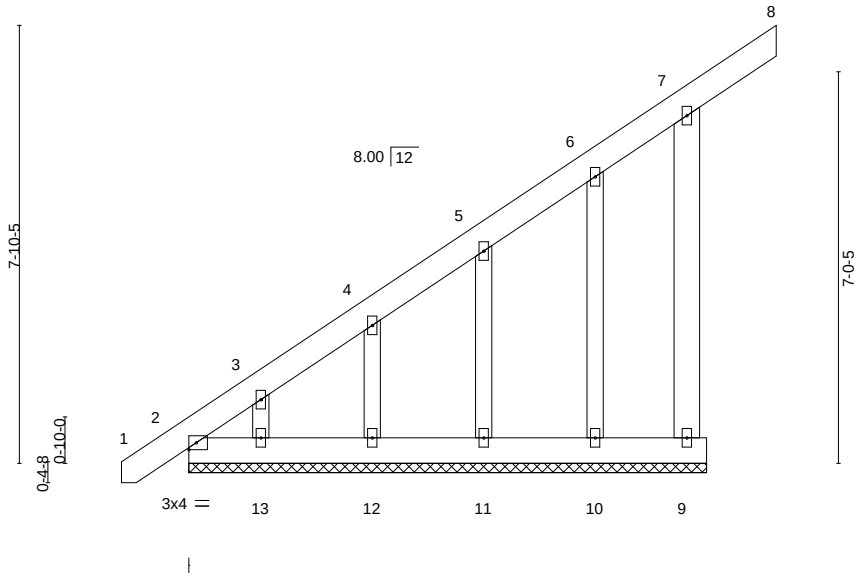
-1-2-8 9-3-8 10-6-8

1-2-8 9-3-8 1-3-0

Scale = 1:41.3




| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | 0.00 | 8 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.01 | Vert(CT) | 0.00 | 7 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 86 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x6 SP No.1 |
| OTHERS | 2x4 SP No.2 |

**BRACING-**

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

**REACTIONS.** All bearings 9-3-8.

(lb) - Max Horz 2=353(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 11, 12 except 9=-140(LC 12), 13=-139(LC 12)

Max Grav All reactions 250 lb or less at joint(s) 9, 2, 10, 11, 12, 13

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

TOP CHORD 2-3=-469/347, 3-4=-364/265, 4-5=-280/197, 7-9=-208/253

**NOTES-**

1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 11, 12 except (jt=lb) 9=140, 13=139.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | J2 | JACK-OPEN | 4 | 1 | I54046242 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:52 2022 Page 1
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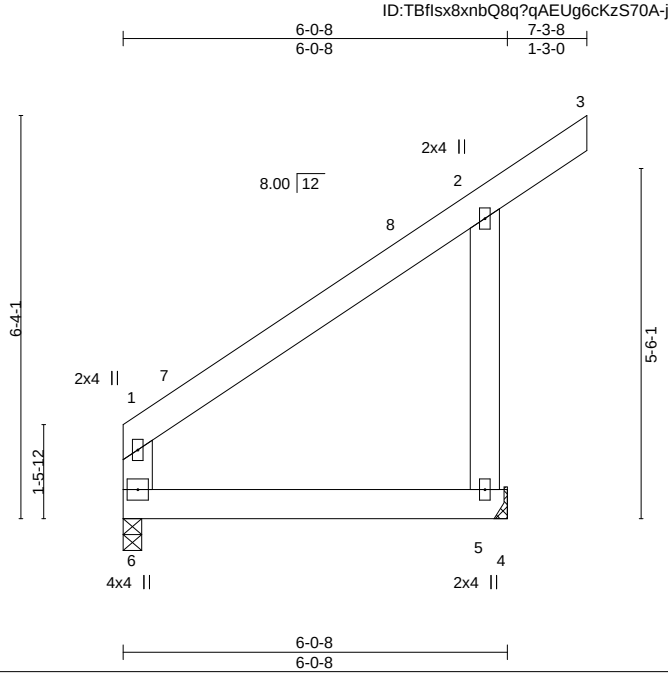


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.19 | Vert(LL) | -0.01 | 5-6 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.13 | Vert(CT) | -0.02 | 5-6 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | Wind(LL) | 0.01 | 5-6 | >999 | 240 | Weight: 47 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1

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

**REACTIONS.** (size) 6=0-3-8, 5=Mechanical
Max Horz 6=146(LC 12)
Max Uplift 5=-135(LC 12)
Max Grav 6=204(LC 1), 5=359(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-5=-347/349

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-2-12 to 4-7-9, Interior(1) 4-7-9 to 7-3-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=135.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | J3-GE | GABLE | 1 | 1 | I54046243 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:53 2022 Page 1
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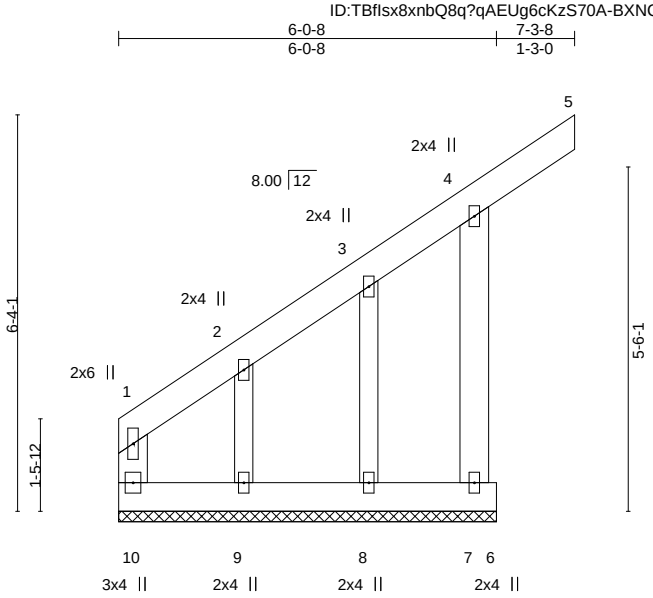


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.09 | Vert(LL) | 0.00 | 5 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | 0.00 | 4 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.04 | Horz(CT) | 0.00 | | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 55 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x6 SP No.1 |
| OTHERS | 2x4 SP No.2 |

**BRACING-**

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

**REACTIONS.** All bearings 6-0-8.
(lb) - Max Horz 10=213(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 10, 6, 8 except 9=-295(LC 12), 7=-156(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 6, 9, 8, 7 except 10=278(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-343/240
WEBS 4-7=-222/278

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 6, 8 except (jt=lb) 9=295, 7=156.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | M1-GE | GABLE | 2 | 1 | I54046244 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:54 2022 Page 1
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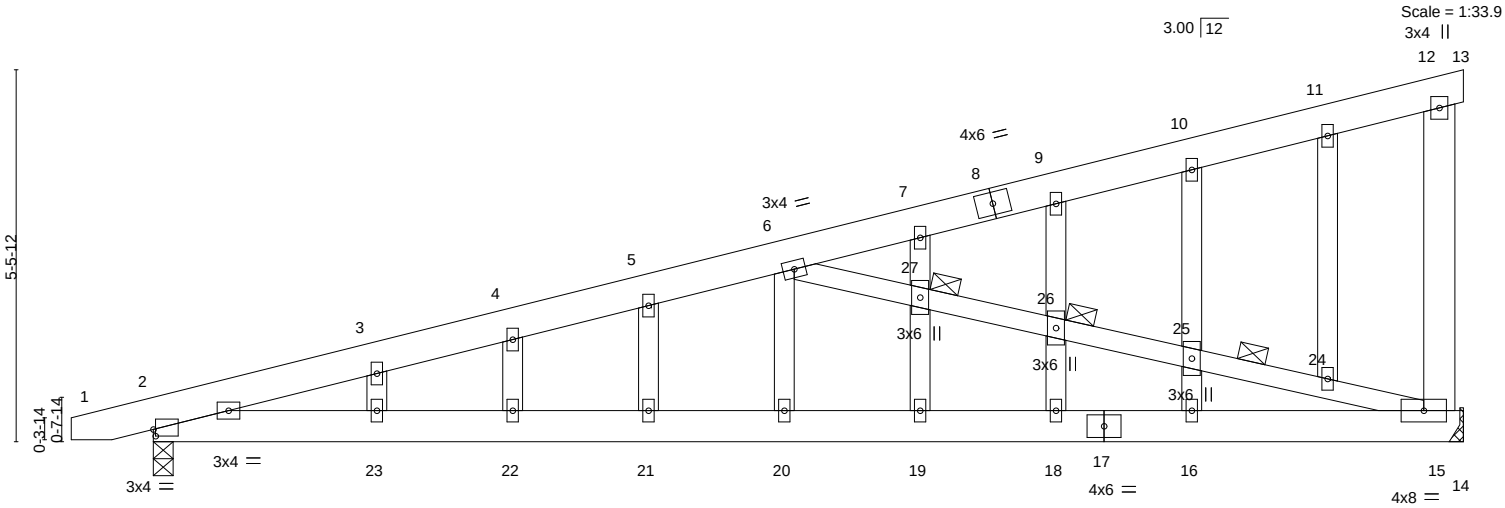
-1-2-8 1-2-8 | 6-7-3 6-7-3 | 9-3-8 2-8-5 | 19-2-10 9-11-2 | 19-3-8 0-0-14 | 21-2-0 1-10-8




7-1-6 7-1-6 | 9-3-8 2-2-2 | 19-3-8 10-0-0

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

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | -0.08 | 18 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.16 | 18-19 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.25 | Horz(CT) | 0.03 | 15 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.09 | 18 | >999 | 240 | Weight: 145 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 SP No.1 |
| BOT CHORD | 2x6 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* 12-15: 2x6 SP No.1 |
| OTHERS | 2x4 SP No.2 |

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-9-12 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 9-8-5 oc bracing. |
| WEBS | 1 Row at midpt 15-26 |
| JOINTS | 1 Brace at Jt(s): 26, 27 |

**REACTIONS.** (size) 15=Mechanical, 2=0-3-8
Max Horz 2=236(LC 8)
Max Uplift 15=-251(LC 12), 2=-238(LC 8)
Max Grav 15=778(LC 1), 2=816(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1744/443, 3-4=-1682/466, 4-5=-1666/484, 5-6=-1642/503
BOT CHORD 2-23=-642/1617, 22-23=-642/1617, 21-22=-642/1617, 20-21=-642/1617, 19-20=-642/1617, 18-19=-642/1617, 16-18=-642/1617, 15-16=-642/1617
WEBS 6-20=-106/362, 6-27=-1611/641, 26-27=-1576/627, 25-26=-1580/630, 24-25=-1587/631, 15-24=-1621/646

**NOTES-**

1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable studs spaced at 2-0-0 oc.
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 30.0psf 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) except (jt=lb) 15=251, 2=238.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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | M2 | JACK-CLOSED | 4 | 1 | I54046245 |
| | | | | | Job Reference (optional) |

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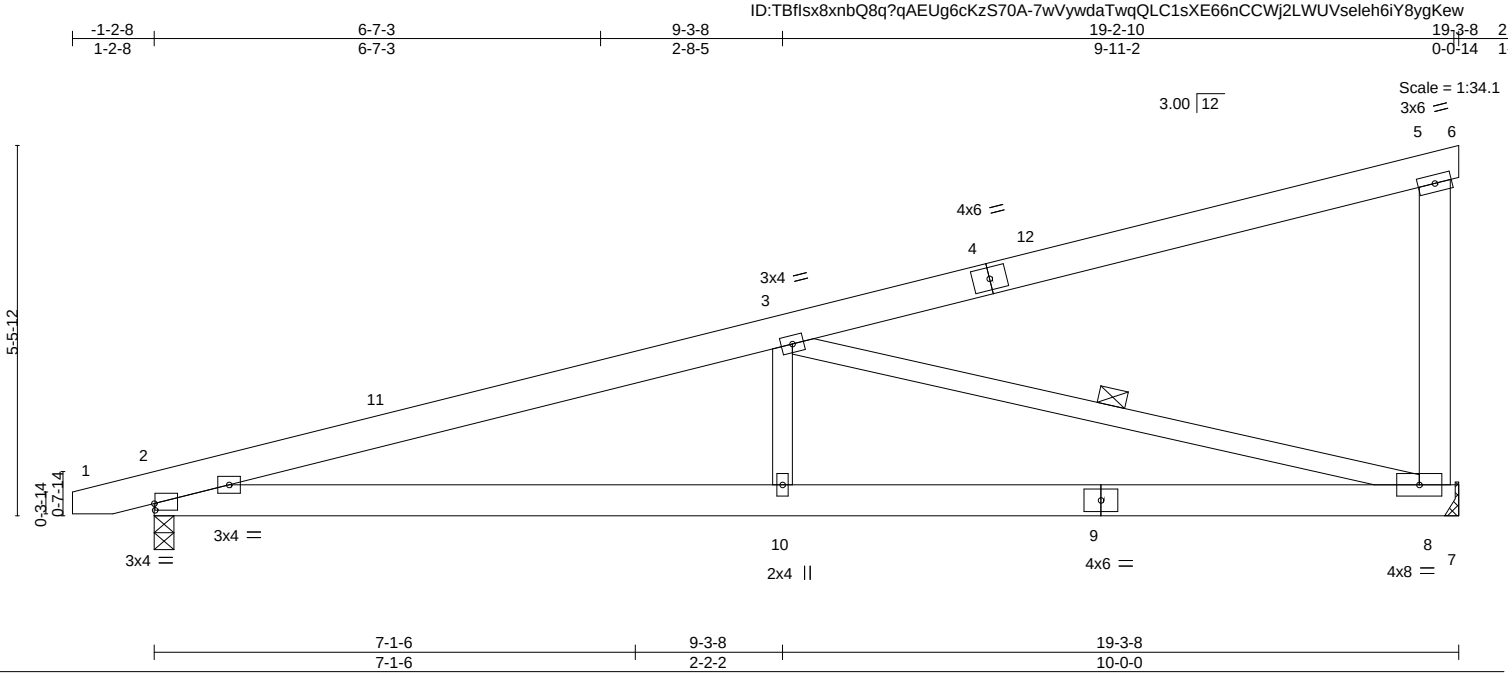


Plate Offsets (X,Y)-- [2:0-0-2,0-1-3]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | -0.07 | 2-10 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.36 | Vert(CT) | -0.16 | 2-10 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.72 | Horz(CT) | 0.03 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.06 | 2-10 | >999 | 240 | Weight: 122 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except*
5-8: 2x6 SP No.1

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

**REACTIONS.** (size) 8=Mechanical, 2=0-3-8
Max Horz 2=165(LC 8)
Max Uplift 8=-103(LC 12), 2=-98(LC 8)
Max Grav 8=778(LC 1), 2=816(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1758/239, 5-8=-268/189
BOT CHORD 2-10=-383/1636, 8-10=-383/1636
WEBS 3-10=0/418, 3-8=-1601/364

**NOTES-**
1) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-15 to 3-5-14, Interior(1) 3-5-14 to 19-3-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 8=103.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | P1-GE | GABLE | 1 | 1 | I54046246 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:56 2022 Page 1
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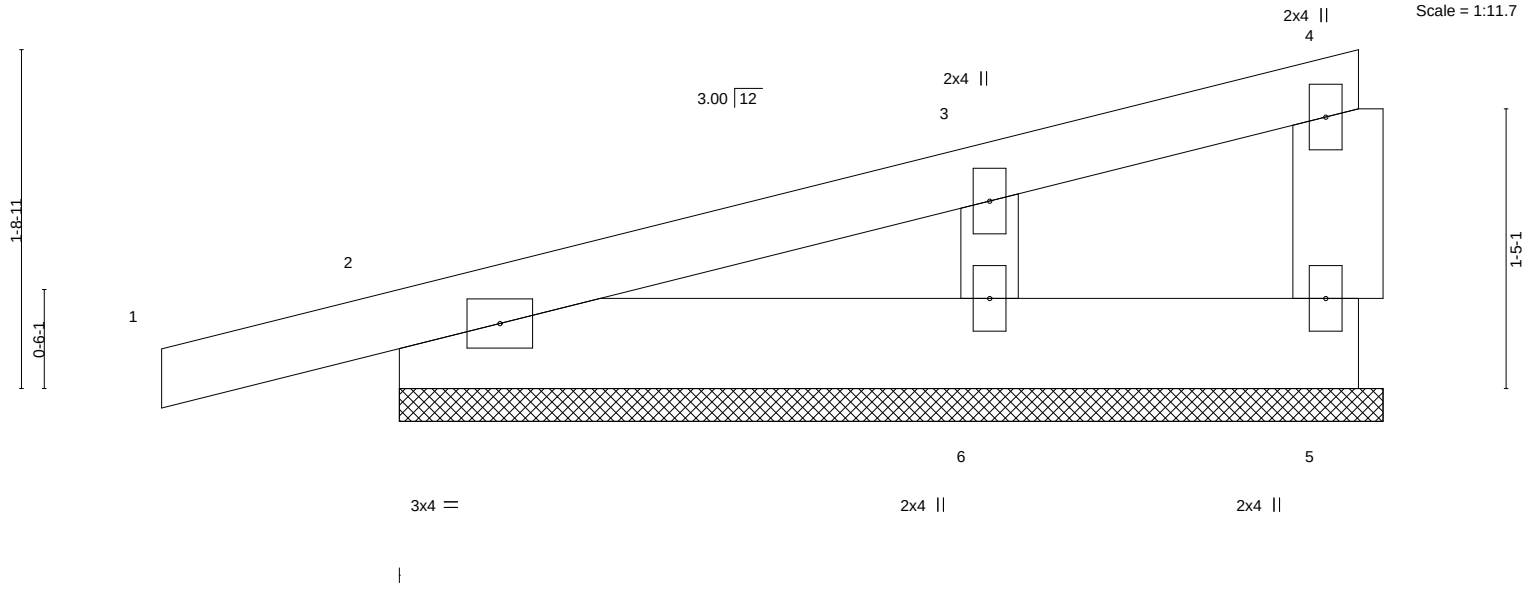
-1-2-8 5-0-0
1-2-8 5-0-0

Scale = 1:11.7




| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.07 | Vert(LL) | 0.00 | 1 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 1 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 24 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1
OTHERS 2x4 SP No.2

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

**REACTIONS.** (size) 5=5-0-0, 2=5-0-0, 6=5-0-0
Max Horz 2=73(LC 8)
Max Uplift 5=-17(LC 8), 2=-92(LC 8), 6=-71(LC 12)
Max Grav 5=40(LC 1), 2=189(LC 1), 6=225(LC 1)

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 2, 6.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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | P2 | MONOPITCH | 12 | 1 | I54046247 |
| | | | | | Job Reference (optional) |

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-1-2-8 5-0-0
1-2-8 5-0-0

Scale: 1"=1'

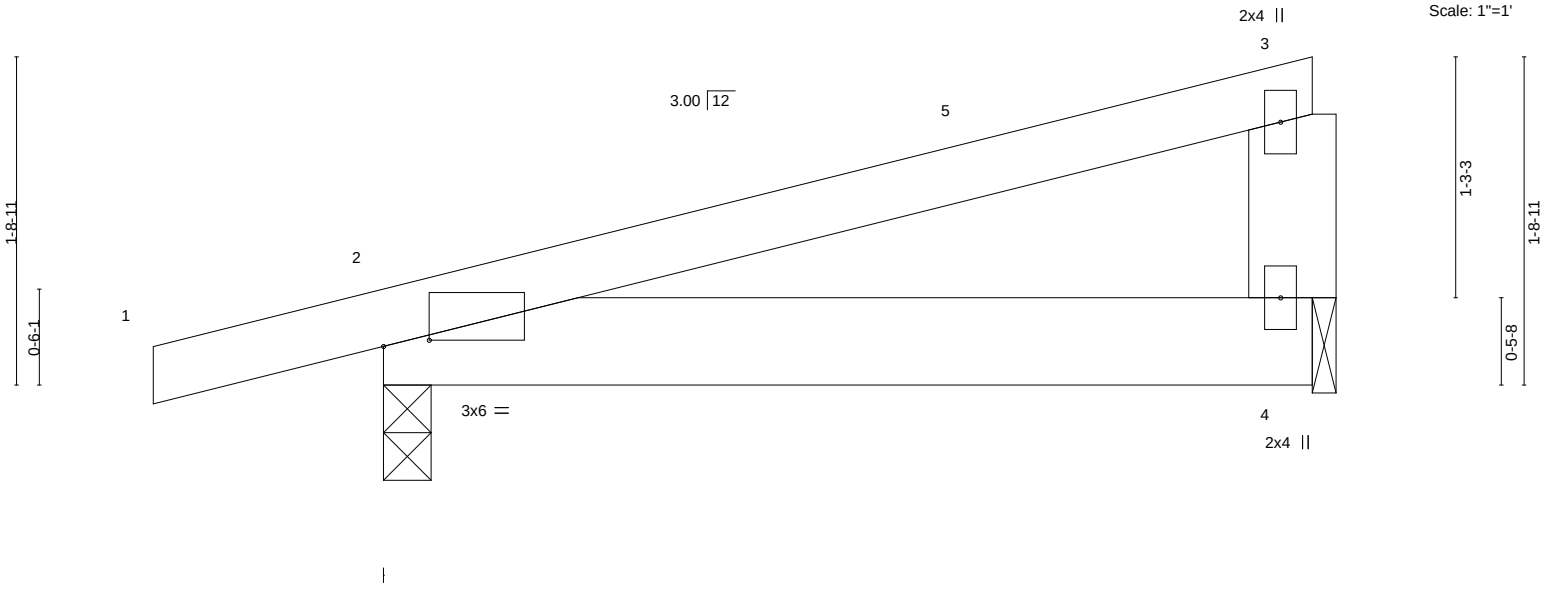


Plate Offsets (X,Y)-- [2:0-2-14,0-0-6]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.26 | Vert(LL) | -0.01 | 2-4 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | -0.01 | 2-4 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-P | | Wind(LL) | 0.01 | 2-4 | >999 | 240 | Weight: 23 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1

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

**REACTIONS.** (size) 2=0-3-0, 4=0-1-8
Max Horz 2=51(LC 8)
Max Uplift 2=-121(LC 8), 4=-71(LC 8)
Max Grav 2=277(LC 1), 4=174(LC 1)

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-2-8 to 3-2-5, Interior(1) 3-2-5 to 4-9-4 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) 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.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=121.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA1 | GABLE | 1 | 1 | I54046248 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:58 2022 Page 1
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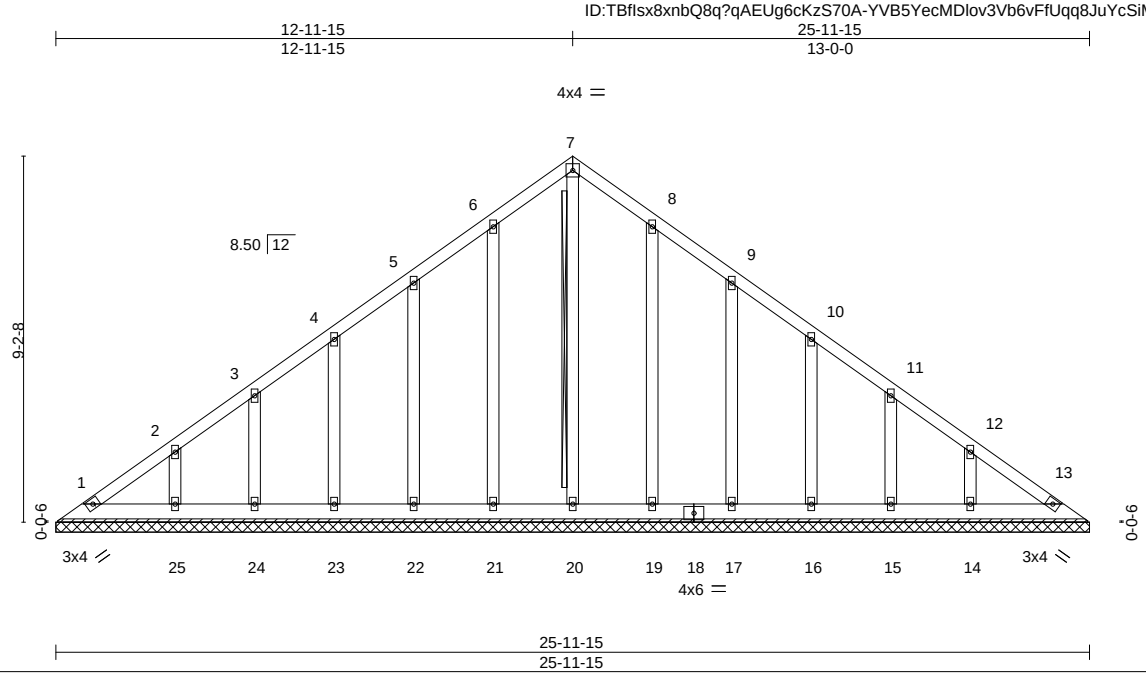


Plate Offsets (X,Y)-- [8:0-0-0,0-0-0], [9:0-0-0,0-0-0], [10:0-0-0,0-0-0], [11:0-0-0,0-0-0], [12:0-0-0,0-0-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.05 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.14 | Horz(CT) | 0.01 | 13 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 181 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
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.
WEBS T-Brace: 2x4 SPF No.2 - 7-20
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
Brace must cover 90% of web length.

**REACTIONS.** All bearings 25-11-15.
(lb) - Max Horz 1=-264(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 13, 21, 22, 23, 24, 19, 17, 16, 15 except 25=-126(LC 12), 14=-124(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 13, 20, 21, 22, 23, 24, 25, 19, 17, 16, 15, 14

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-286/197

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 13, 21, 22, 23, 24, 19, 17, 16, 15 except (jt=lb) 25=126, 14=124.
8) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


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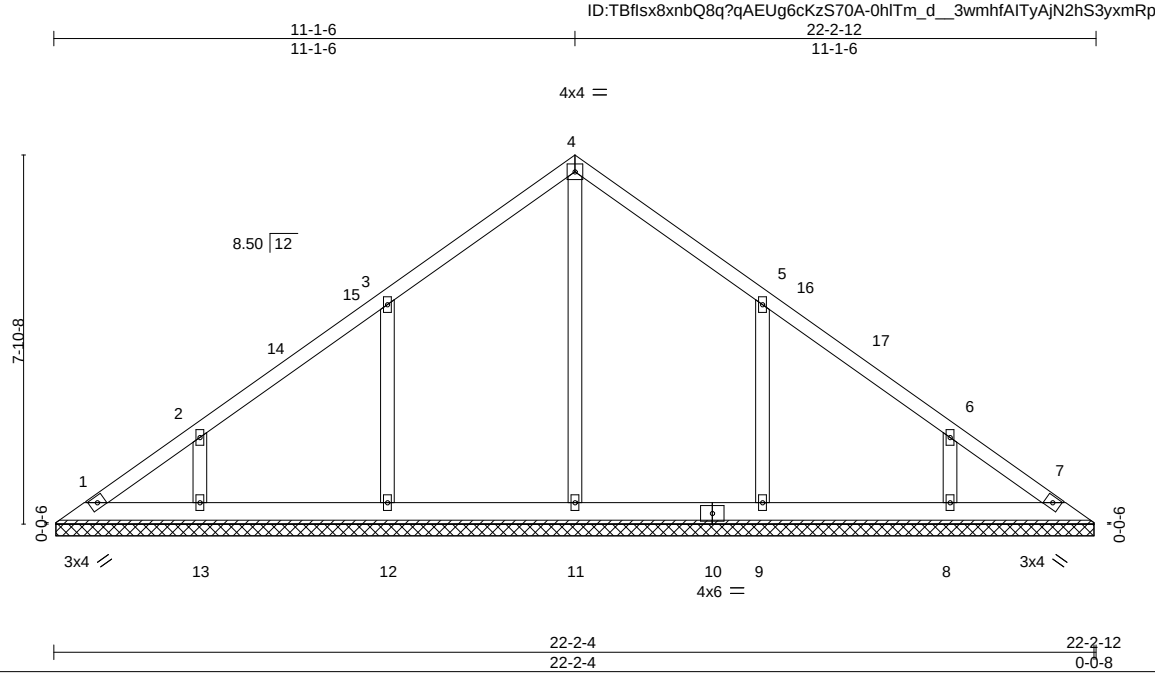
| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA2 | VALLEY | 1 | 1 | I54046249 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:59 2022 Page 1
ID:TBfIsx8xnbQ8q?qAEUg6cKzS70A-0hlTm_d__3wmhfAlTyAjN2hS3yxmRpVKZJ4whvygKes




| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.15 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.00 | 7 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 118 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 22-1-11.
(lb) - Max Horz 1=-179(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 13, 8 except 12=-113(LC 12), 9=-113(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 11=434(LC 22), 12=462(LC 19), 13=293(LC 19), 9=462(LC 20), 8=292(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-12=-326/218, 2-13=-263/189, 5-9=-326/218, 6-8=-263/189

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-8-7 to 5-1-3, Interior(1) 5-1-3 to 11-1-6, Exterior(2) 11-1-6 to 15-6-3, Interior(1) 15-6-3 to 21-6-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 13, 8 except (jt=lb) 12=113, 9=113.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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA3 | VALLEY | 1 | 1 | I54046250 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:54:01 2022 Page 1

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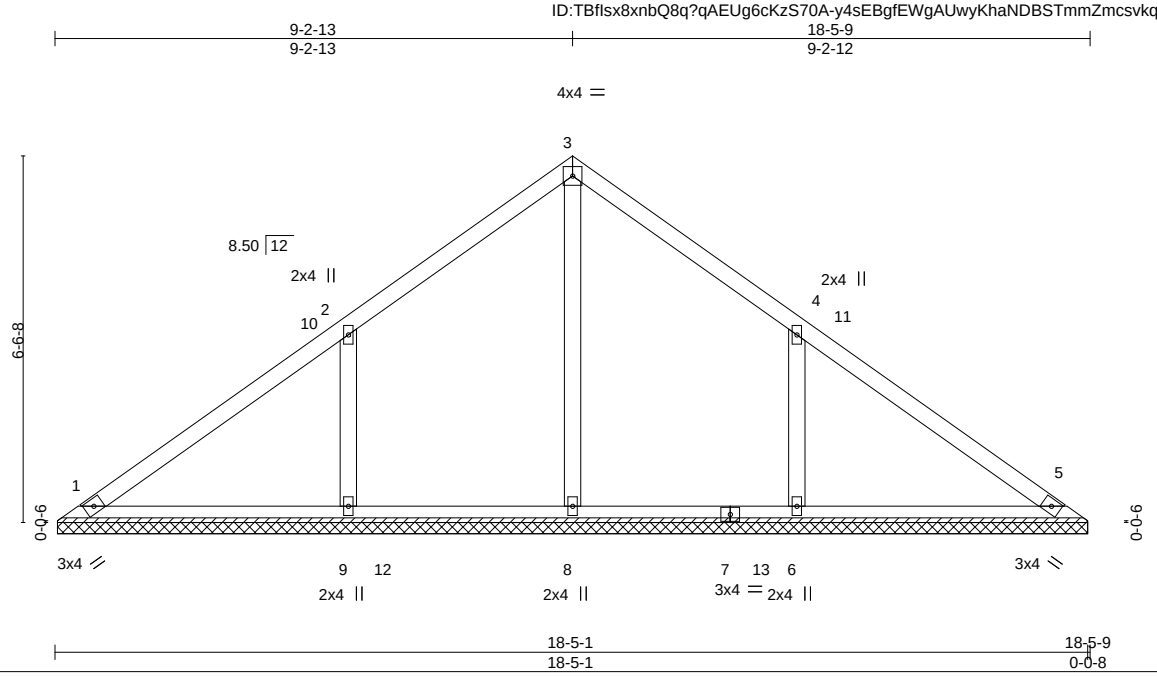


Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.22 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.10 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 77 lb | FT = 20% |

**LUMBER-**

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

**BRACING-**

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

**REACTIONS.** All bearings 18-4-8.
(lb) - Max Horz 1=149(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-136(LC 12), 6=-136(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=408(LC 22), 9=516(LC 19), 6=516(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-388/249, 4-6=-388/249

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-9 to 4-10-6, Interior(1) 4-10-6 to 9-2-13, Exterior(2) 9-2-13 to 13-7-9, Interior(1) 13-7-9 to 18-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=136, 6=136.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA4 | VALLEY | 1 | 1 | I54046251 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:54:02 2022 Page 1
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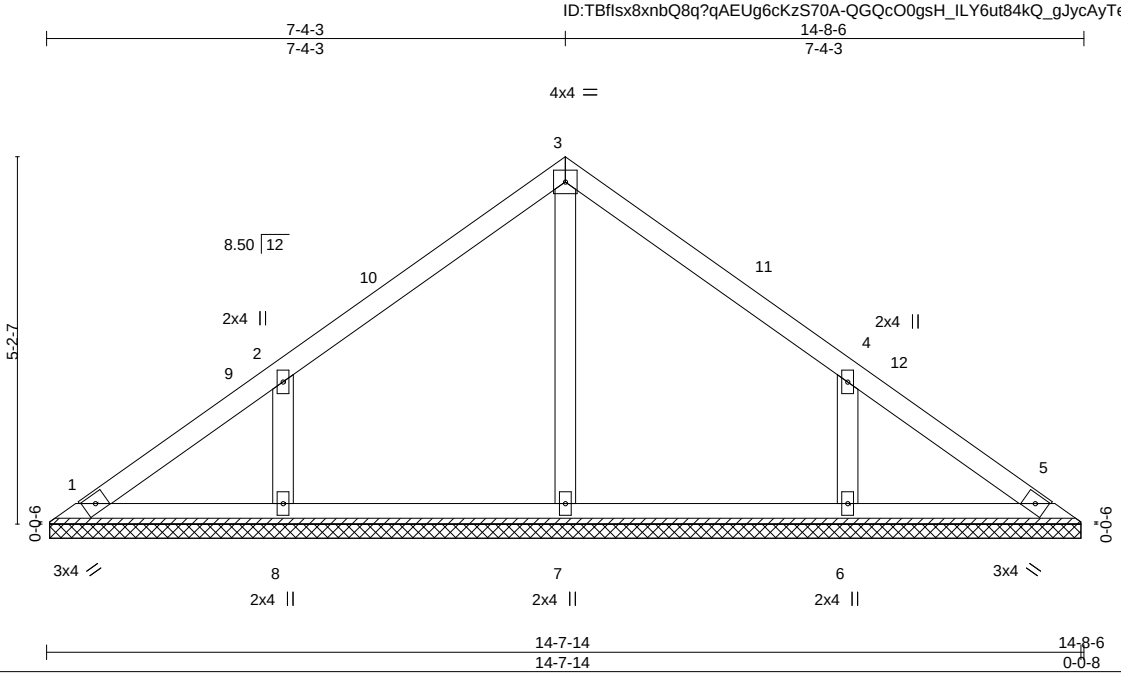


Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

| LOADING | (psf) | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.14 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 59 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

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

**REACTIONS.** All bearings 14-7-5.
(lb) - Max Horz 1=-117(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-108(LC 12), 6=-107(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=252(LC 1), 8=351(LC 19), 6=351(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-305/211, 4-6=-305/211

**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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-9 to 4-10-6, Interior(1) 4-10-6 to 7-4-3, Exterior(2) 7-4-3 to 11-9-0, Interior(1) 11-9-0 to 14-2-13 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 8=108, 6=107.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA5 | VALLEY | 1 | 1 | I54046252 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:54:03 2022 Page 1
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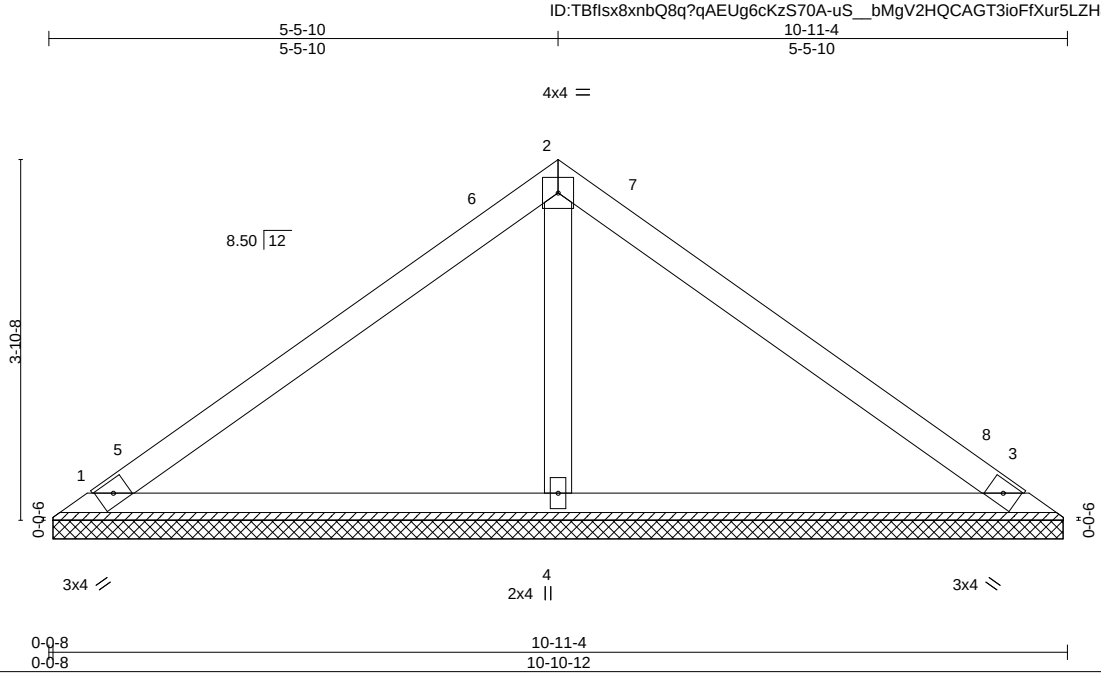


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.26 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 39 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
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=10-10-3, 3=10-10-3, 4=10-10-3
Max Horz 1=-85(LC 8)
Max Uplift 1=-25(LC 12), 3=-33(LC 13)
Max Grav 1=202(LC 1), 3=203(LC 1), 4=395(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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-9 to 4-10-6, Interior(1) 4-10-6 to 5-5-10, Exterior(2) 5-5-10 to 9-10-7, Interior(1) 9-10-7 to 10-5-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) Non Standard bearing condition. Review required.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA6 | VALLEY | 1 | 1 | I54046253 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:54:04 2022 Page 1
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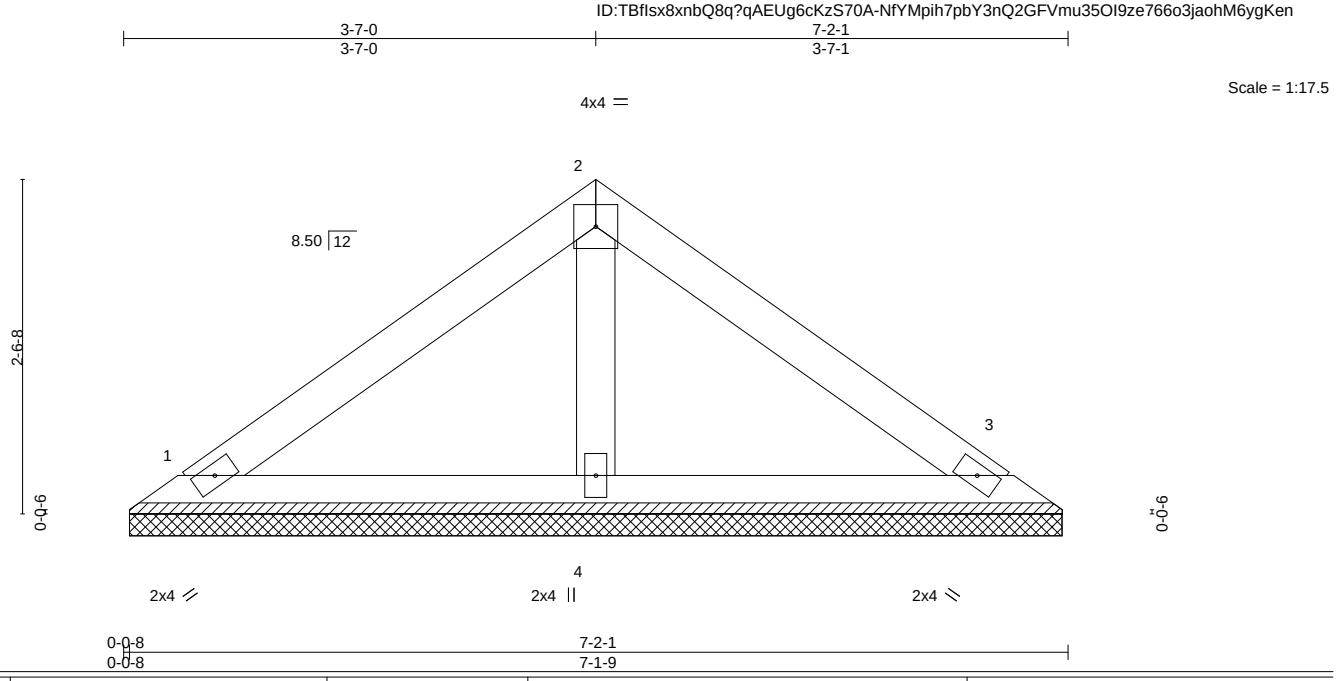


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.13 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 25 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
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=7-1-0, 3=7-1-0, 4=7-1-0
Max Horz 1=-53(LC 10)
Max Uplift 1=-22(LC 12), 3=-27(LC 13)
Max Grav 1=138(LC 1), 3=138(LC 1), 4=223(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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
6) Non Standard bearing condition. Review required.


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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1312 | VA7 | VALLEY | 1 | 1 | I54046254 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:54:04 2022 Page 1
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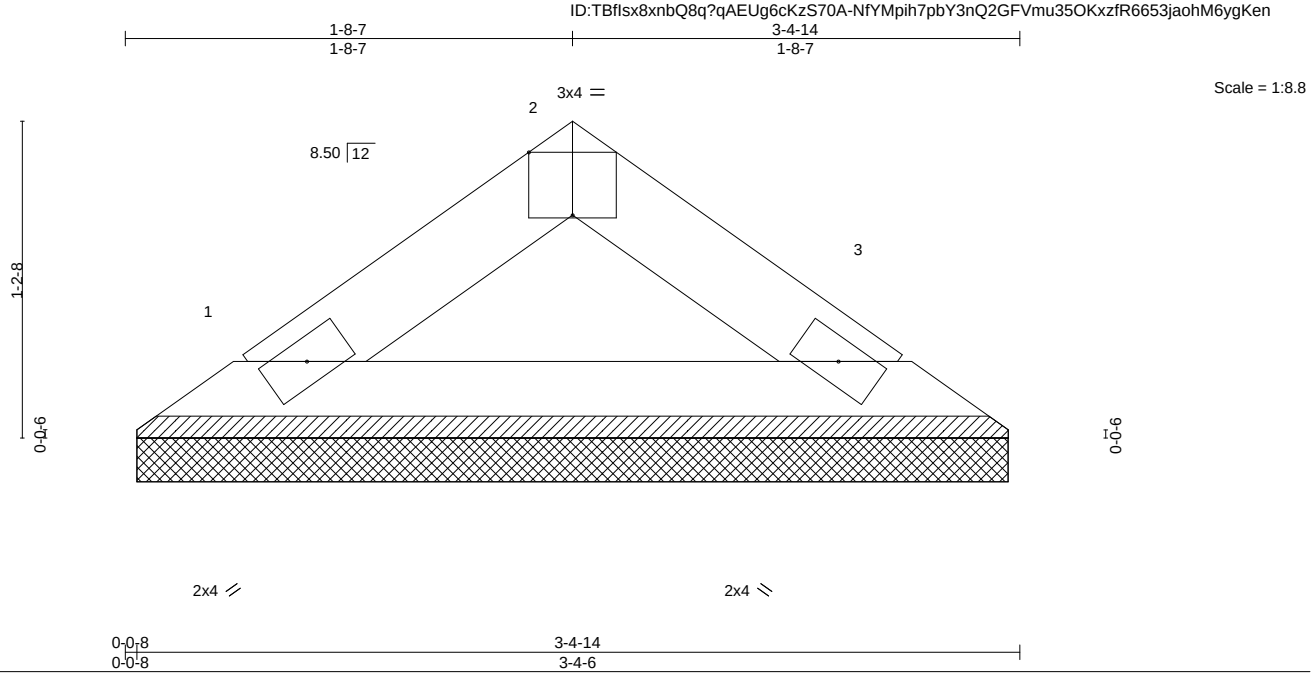


Plate Offsets (X,Y)-- [2:0-2-0,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.02 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 10 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 3-4-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=3-3-13, 3=3-3-13
Max Horz 1=-21(LC 10)
Max Uplift 1=-5(LC 12), 3=-5(LC 13)
Max Grav 1=99(LC 1), 3=99(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=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Gable requires continuous bottom chord bearing.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.


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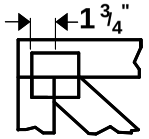
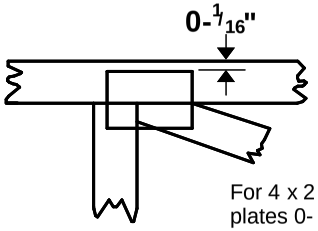
# Symbols

## 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.

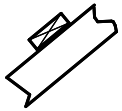
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

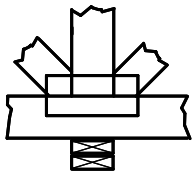
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

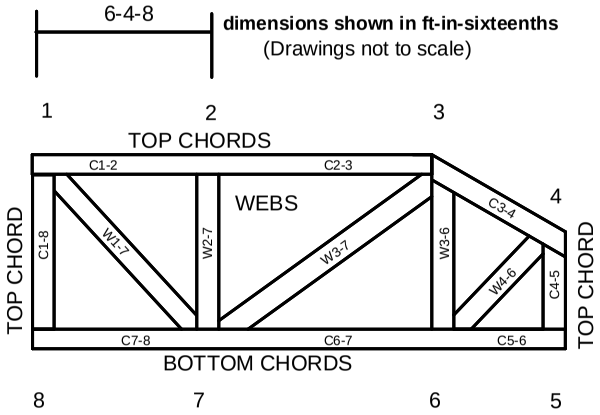


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**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 BY TRENCO
A MiTek Affiliate

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

# General Safety Notes

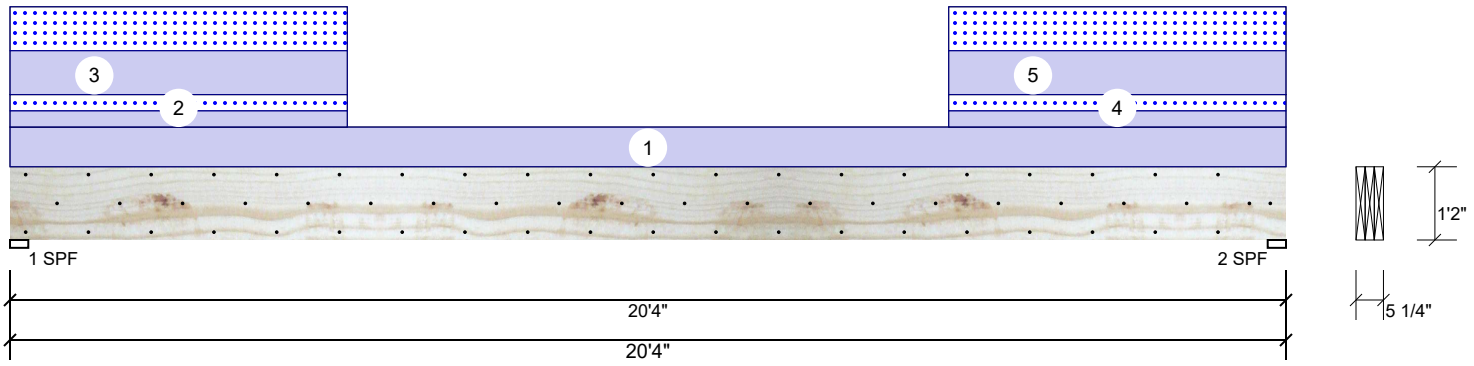
Failure to Follow Could Cause Property Damage or Personal Injury

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.

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM1 Kerto-S LVL 1.750" X 14.000" 3-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 3 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC 2012 |
| Deflection LL: | 480 | Load Sharing: | Yes |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 2362 | 976 | 0 | 0 |
| 2 | Vertical | 0 | 2362 | 976 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF | 3.500" | Vert | 43% | 2362 / 976 | 3337 | L | D+S |
| 2 - SPF | 3.500" | Vert | 43% | 2362 / 976 | 3337 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 9135 ft-lb | 10'2" | 37907 ft-lb | 0.241 (24%) | D | Uniform |
| Unbraced | 11538 ft-lb | 10'2" | 11541 ft-lb | 1.000 (100%) | D+S | L |
| Shear | 2628 lb | 18'10 1/2" | 18032 lb | 0.146 (15%) | D+S | L |
| LL Defl inch | 0.085 (L/2795) | 10'2 1/16" | 0.497 (L/480) | 0.172 (17%) | S | L |
| TL Defl inch | 0.381 (L/627) | 10'2 1/16" | 0.662 (L/360) | 0.574 (57%) | D+S | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at a maximum of 15'1 11/16" o.c.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | WALL |
| 2 | Part. Uniform | 0-0-0 to 5-4-8 | | Top | 49 PLF | 0 PLF | 49 PLF | 0 PLF | 0 PLF | J2 |
| 3 | Tie-In | 0-0-0 to 5-4-8 | 6-7-8 | Top | 20 PSF | 0 PSF | 20 PSF | 0 PSF | 0 PSF | STICK FRAMING |
| 4 | Part. Uniform | 14-11-8 to 20-4-0 | | Top | 49 PLF | 0 PLF | 49 PLF | 0 PLF | 0 PLF | J2 |

Continued on page 2...

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

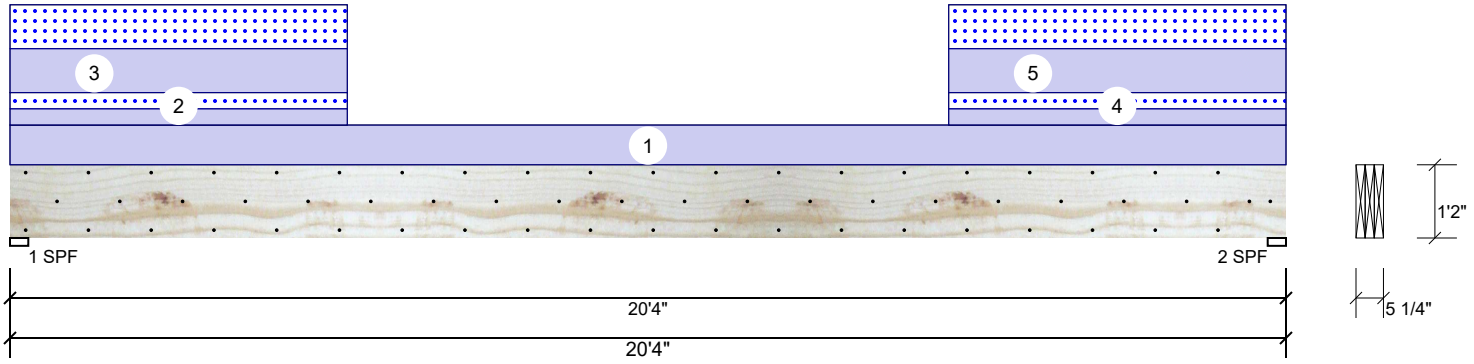
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM1 Kerto-S LVL 1.750" X 14.000" 3-Ply - PASSED

Level: Level




...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Tie-In | 14-11-8 to 20-4-0 | 6-7-8 | Top | 20 PSF | 0 PSF | 20 PSF | 0 PSF | 0 PSF | STICK FRAMING |
| | Self Weight | | | | 16 PLF | | | | | |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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# BM1 Kerto-S LVL 1.750" X 14.000" 3-Ply - PASSED

Level: Level


## Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 245.6 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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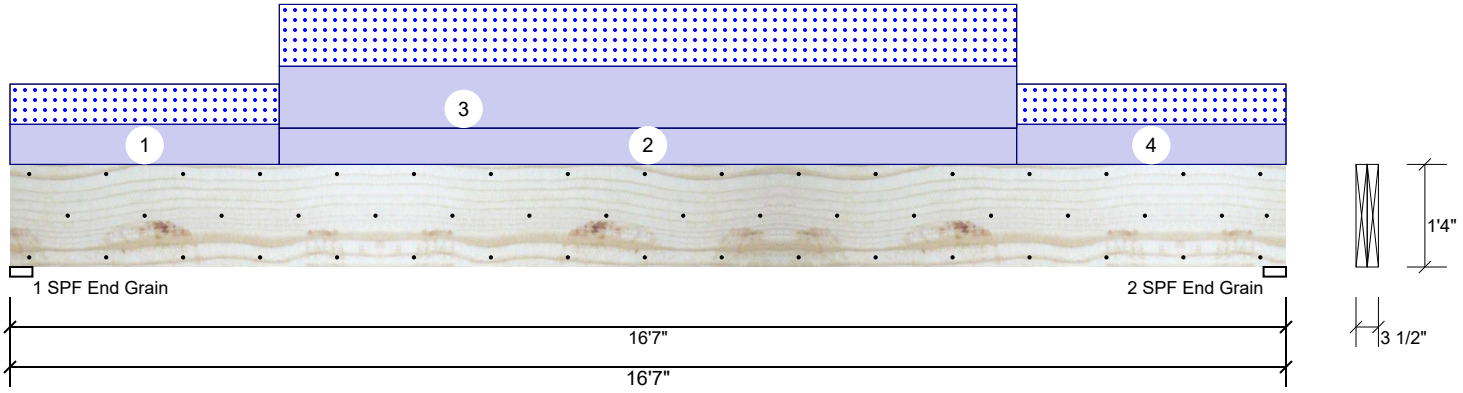
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# GDH Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Header | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC 2012 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Header Supports Glass: | No |
| Importance: | Normal - II | Deck: | Not Checked |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 2119 | 1441 | 0 | 0 |
| 2 | Vertical | 0 | 2119 | 1441 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 35% | 2119 / 1441 | 3561 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 35% | 2119 / 1441 | 3561 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 16195 ft-lb | 8'3 1/2" | 39750 ft-lb | 0.407 (41%) | D+S | L |
| Unbraced | 16195 ft-lb | 8'3 1/2" | 39750 ft-lb | 0.407 (41%) | D+S | L |
| Shear | 3126 lb | 14'11 1/2" | 13739 lb | 0.228 (23%) | D+S | L |
| LL Defl inch | 0.135 (L/1439) | 8'3 9/16" | 0.404 (L/480) | 0.333 (33%) | S | L |
| TL Defl inch | 0.347 (L/559) | 8'3 9/16" | 0.538 (L/360) | 0.644 (64%) | D+S | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must be laterally braced at bearings.
8 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Tie-In | 0-0-0 to 3-6-0 | 6-7-8 | Top | 20 PSF | 0 PSF | 20 PSF | 0 PSF | 0 PSF | STICK FRAMING |
| 2 | Part. Uniform | 3-6-0 to 13-1-0 | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | DORMER WALL |
| 3 | Part. Uniform | 3-6-0 to 13-1-0 | | Top | 204 PLF | 0 PLF | 204 PLF | 0 PLF | 0 PLF | M2 |
| 4 | Tie-In | 13-1-0 to 16-7-0 | 6-7-8 | Top | 20 PSF | 0 PSF | 20 PSF | 0 PSF | 0 PSF | STICK FRAMING |
| | Self Weight | | | | 12 PLF | | | | | |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

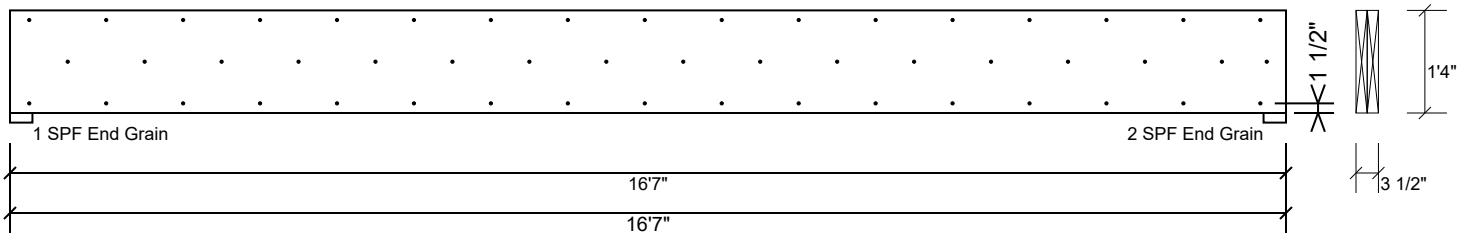
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# GDH Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 245.6 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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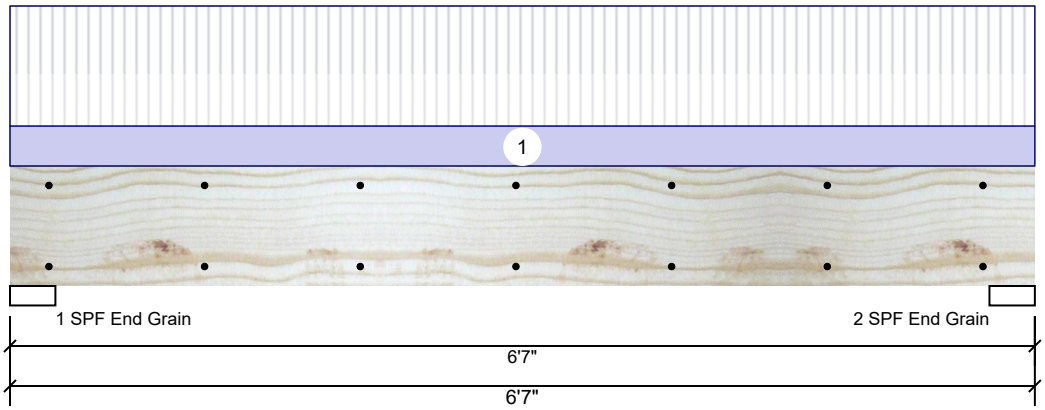
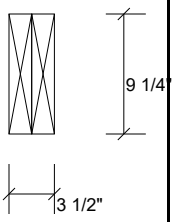
| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC 2012 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 2670 | 912 | 0 | 0 | 0 |
| 2 | Vertical | 2670 | 912 | 0 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 35% | 912 / 2670 | 3582 | L | D+L |
| 2 - SPF End Grain | 3.500" | Vert | 35% | 912 / 2670 | 3582 | L | D+L |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 5103 ft-lb | 3'3 1/2" | 12542 ft-lb | 0.407 (41%) | D+L | L |
| Unbraced | 5103 ft-lb | 3'3 1/2" | 9934 ft-lb | 0.514 (51%) | D+L | L |
| Shear | 2431 lb | 1' 3/4" | 6907 lb | 0.352 (35%) | D+L | L |
| LL Defl inch | 0.069 (L/1063) | 3'3 1/2" | 0.153 (L/480) | 0.452 (45%) | L | L |
| TL Defl inch | 0.093 (L/792) | 3'3 1/2" | 0.204 (L/360) | 0.455 (45%) | D+L | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at end bearings.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 270 PLF | 811 PLF | 0 PLF | 0 PLF | 0 PLF | F2 |
| | Self Weight | | | | 7 PLF | | | | | |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

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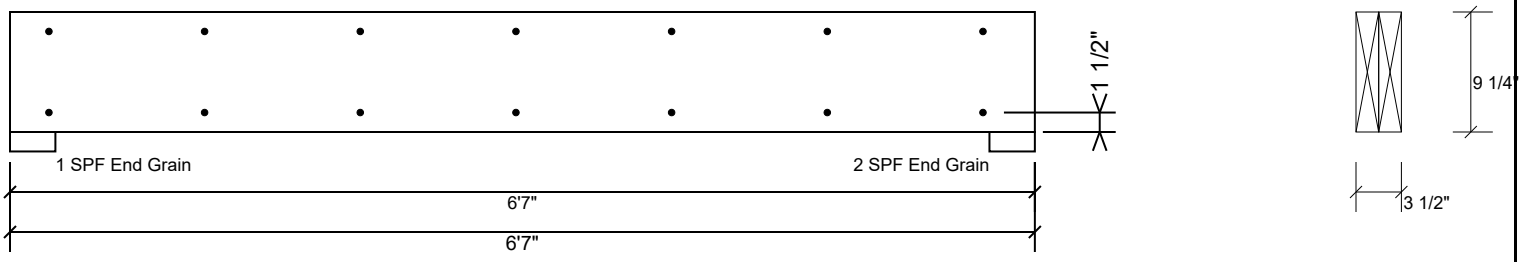
# BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 163.7 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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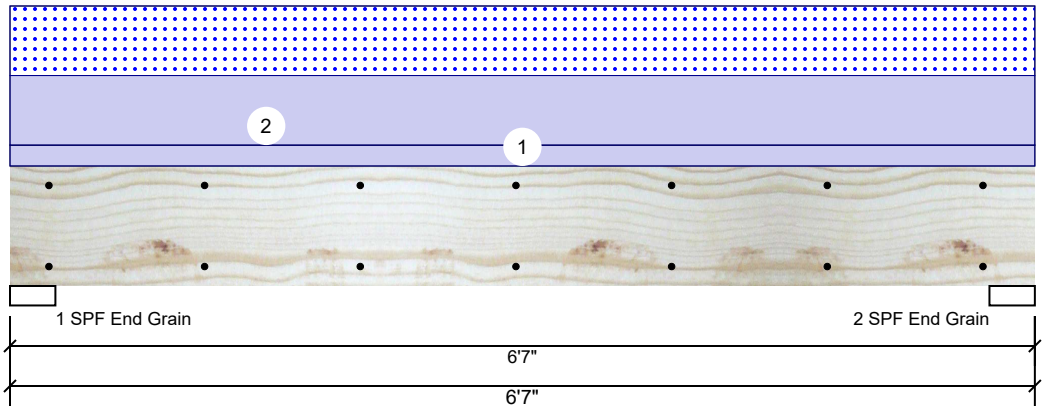
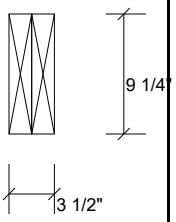
| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC 2012 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 1732 | 1313 | 0 | 0 |
| 2 | Vertical | 0 | 1732 | 1313 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 30% | 1732 / 1313 | 3045 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 30% | 1732 / 1313 | 3045 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 4339 ft-lb | 3'3 1/2" | 14423 ft-lb | 0.301 (30%) | D+S | L |
| Unbraced | 4339 ft-lb | 3'3 1/2" | 10451 ft-lb | 0.415 (42%) | D+S | L |
| Shear | 2068 lb | 1' 3/4" | 7943 lb | 0.260 (26%) | D+S | L |
| LL Defl inch | 0.034 (L/2160) | 3'3 1/2" | 0.153 (L/480) | 0.222 (22%) | S | L |
| TL Defl inch | 0.079 (L/932) | 3'3 1/2" | 0.204 (L/360) | 0.386 (39%) | D+S | L |

## Design Notes

1. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2. Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3. Refer to last page of calculations for fasteners required for specified loads.
4. Girders are designed to be supported on the bottom edge only.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at end bearings.
7. Bottom must be laterally braced at end bearings.
8. Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | WALL |
| 2 | Uniform | | | Top | 399 PLF | 0 PLF | 399 PLF | 0 PLF | 0 PLF | A2 |
| | Self Weight | | | | 7 PLF | | | | | |

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

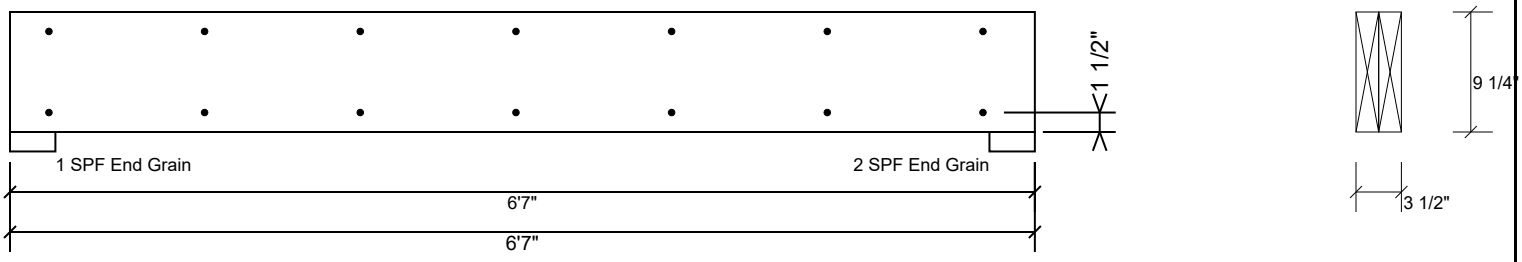
**Manufacturer Info**

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

# BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 163.7 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

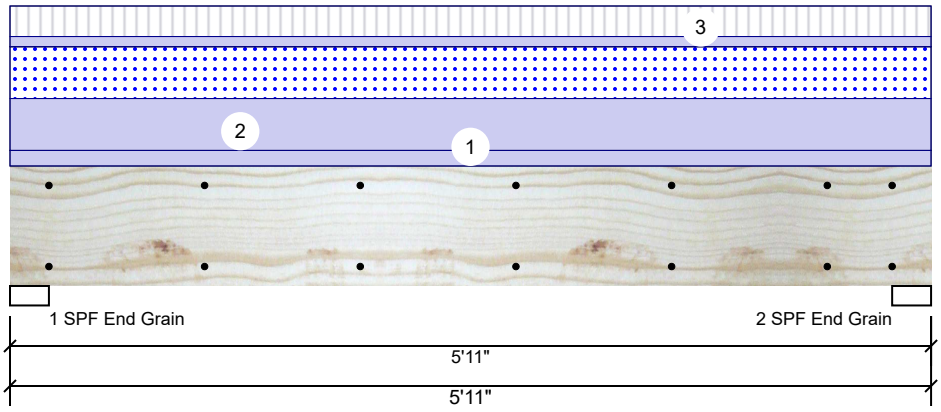
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

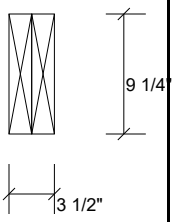
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM4 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Member Information

| | | | |
|---|---|---|---|
| Type: | Girder | Application: | Floor |
| Plies: | 2 | Design Method: | ASD |
| Moisture Condition: | Dry | Building Code: | IBC 2012 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 695 | 1787 | 1180 | 0 | 0 |
| 2 | Vertical | 695 | 1787 | 1180 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.000" | Vert | 36% | 1787 / 1407 | 3194 | L | D+0.75(L+S) |
| 2 - SPF End Grain | 3.000" | Vert | 36% | 1787 / 1407 | 3194 | L | D+0.75(L+S) |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 4145 ft-lb | 2'11 1/2" | 14423 ft-lb | 0.287 (29%) | D+0.75(L+S) | L |
| Unbraced | 4145 ft-lb | 2'11 1/2" | 11027 ft-lb | 0.376 (38%) | D+0.75(L+S) | L |
| Shear | 2097 lb | 4'10 3/4" | 7943 lb | 0.264 (26%) | D+0.75(L+S) | L |
| LL Defl inch | 0.028 (L/2346) | 2'11 1/2" | 0.139 (L/480) | 0.205 (20%) | 0.75(L+S) | L |
| TL Defl inch | 0.064 (L/1033) | 2'11 1/2" | 0.185 (L/360) | 0.348 (35%) | D+0.75(L+S) | L |

## Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
3 Refer to last page of calculations for fasteners required for specified loads.
4 Girders are designed to be supported on the bottom edge only.
5 Top loads must be supported equally by all plies.
6 Top must be laterally braced at end bearings.
7 Bottom must be laterally braced at end bearings.
8 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | WALL |
| 2 | Uniform | | | Top | 399 PLF | 0 PLF | 399 PLF | 0 PLF | 0 PLF | A2 |
| 3 | Uniform | | | Top | 78 PLF | 235 PLF | 0 PLF | 0 PLF | 0 PLF | F2 |
| | Self Weight | | | | 7 PLF | | | | | |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

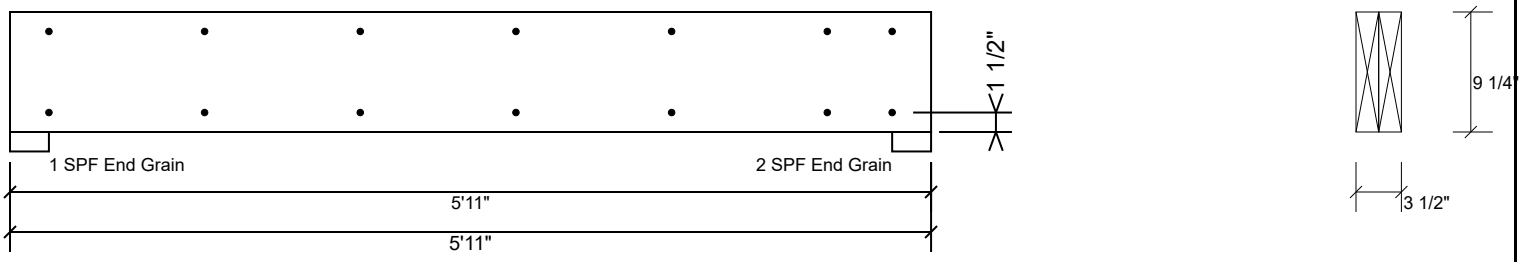
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

| | | | |
|---|---|---|---|
| Client: | | Date: | 9/6/2022 |
| Project: | | Input by: | Neal Baggett |
| Address: | | Job Name: | 12 LIBERTY MEADOWS |
| | | Project #: | |

# BM4 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

| | |
|---|---|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 163.7 PLF |
| Yield Limit per Fastener | 81.9 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

### Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

**Manufacturer Info**

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Fayetteville, NC
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28314
910-864-TRUS

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0322-1313
Precision/12 Liberty Meadows/Harnett

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: I54046255 thru I54046264

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

North Carolina COA: C-0844


September 7,2022

Gilbert, Eric

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

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | ET1 | GABLE | 1 | 1 | I54046255 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:48 2022 Page 1
ID:TBfIsx8xnbQ8q?qAEUg6cKzS70A-ROUnF36ZYs93k7FNuRlYmTkauWCIMtdj15wrp2ygKf1

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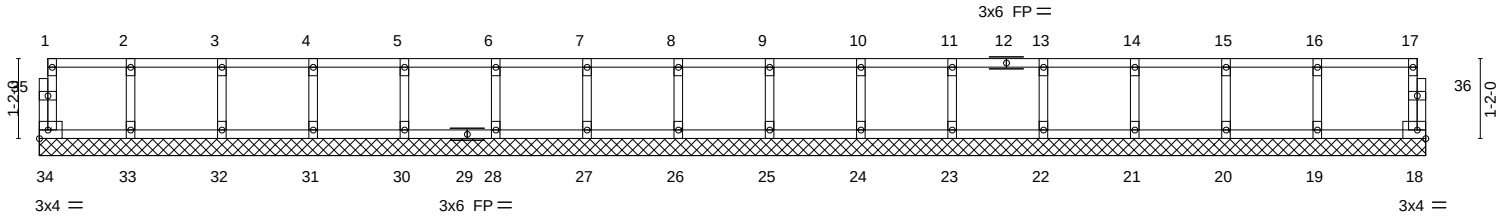


| 1-4-0 | 2-8-0 | 4-0-0 | 5-4-0 | 6-8-0 | 8-0-0 | 9-4-0 | 10-8-0 | 12-0-0 | 13-4-0 | 14-8-0 | 16-0-0 | 17-4-0 | 18-8-0 | 20-3-0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-7-0 |

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.09 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.01 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 18 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 84 lb | FT = 20%F, 11%E |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.1(flat) |
| BOT CHORD | 2x4 SP No.1(flat) |
| WEBS | 2x4 SP No.3(flat) |
| OTHERS | 2x4 SP No.3(flat) |

**BRACING-**

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

**REACTIONS.** All bearings 20-3-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 34, 18, 33, 32, 31, 30, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19

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

**NOTES-**
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.


September 7,2022



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

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | ET2 | GABLE | 1 | 1 | I54046256 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:49 2022 Page 1
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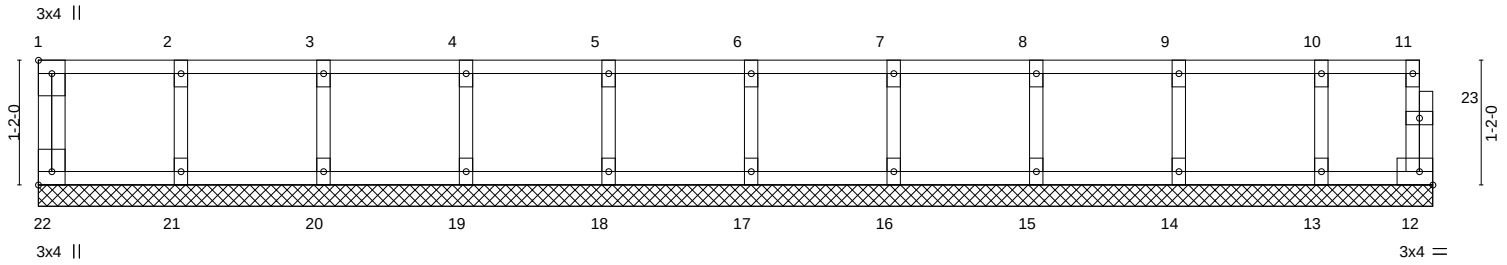


| 1-4-0 | 2-8-0 | 4-0-0 | 5-4-0 | 6-8-0 | 8-0-0 | 9-4-0 | 10-8-0 | 12-0-0 | 13-0-8 |
|---|---|---|---|---|---|---|---|---|---|
| 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-0-8 |

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [22:Edge,0-1-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.01 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 12 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 56 lb | FT = 20%F, 11%E |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.1(flat) |
| BOT CHORD | 2x4 SP No.1(flat) |
| WEBS | 2x4 SP No.3(flat) |
| OTHERS | 2x4 SP No.3(flat) |

**BRACING-**

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

**REACTIONS.** All bearings 13-0-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 22, 12, 21, 20, 19, 18, 17, 16, 15, 14, 13

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

**NOTES-**
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.


September 7,2022



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

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | ET3 | GABLE | 1 | 1 | I54046257 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:50 2022 Page 1
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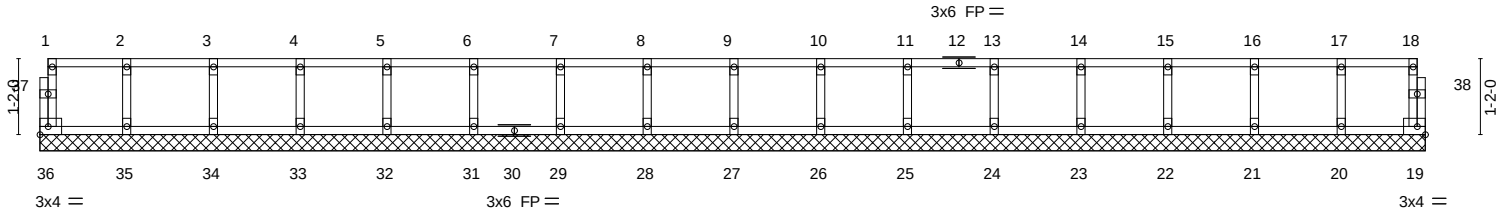


| 1-4-0 | 2-8-0 | 4-0-0 | 5-4-0 | 6-8-0 | 8-0-0 | 9-4-0 | 10-8-0 | 12-0-0 | 13-4-0 | 14-8-0 | 16-0-0 | 17-4-0 | 18-8-0 | 20-0-0 | 21-3-8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-4-0 | 1-3-8 |

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.06 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.01 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.03 | Horz(CT) | 0.00 | 19 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 88 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

**REACTIONS.** All bearings 21-3-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 36, 19, 35, 34, 33, 32, 31, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20

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

**NOTES-**
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
5) Gable studs spaced at 1-4-0 oc.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.


September 7,2022



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

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F1 | Floor | 1 | 1 | I54046258<br>Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:52 2022 Page 1
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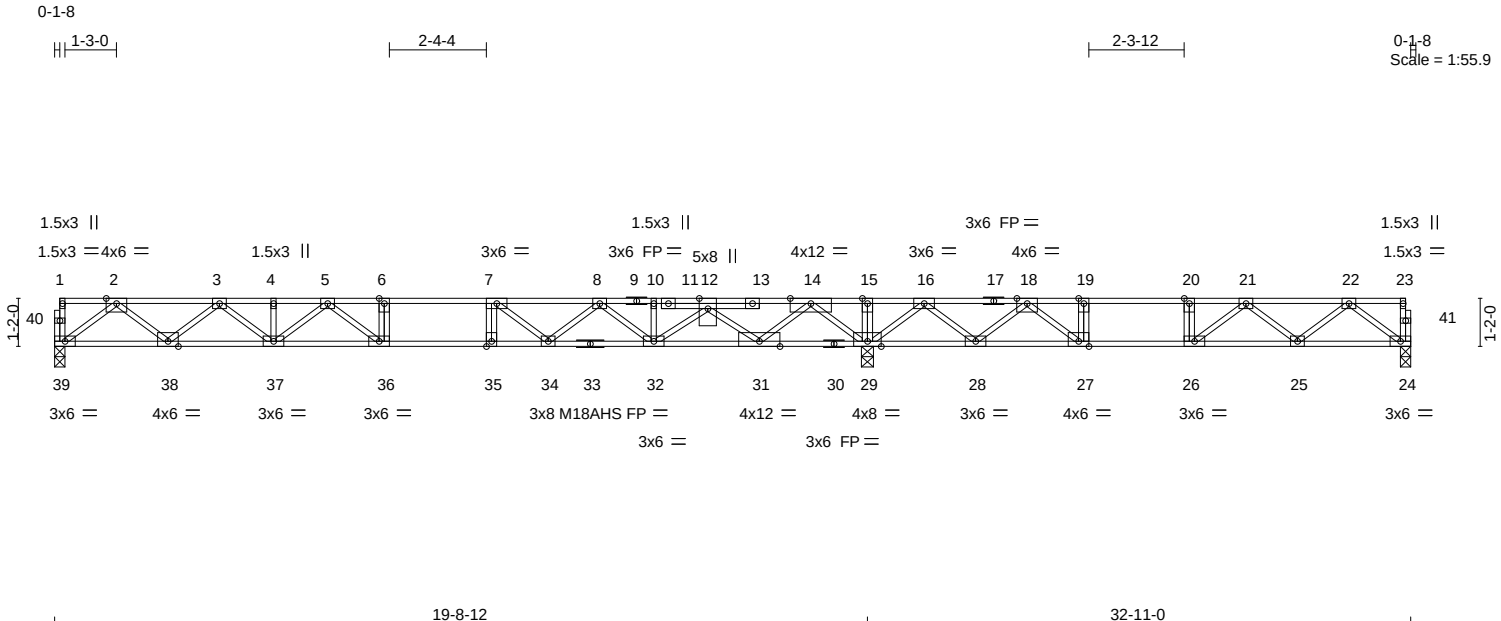


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.90 | Vert(LL) | -0.30 | 35-36 | >794 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.63 | Vert(CT) | -0.40 | 35-36 | >588 | 360 | M18AHS | 186/179 |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.91 | Horz(CT) | 0.06 | 29 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 171 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** (size) 39=0-3-0, 29=0-3-8, 24=0-3-0
Max Uplift 24=-19(LC 3)
Max Grav 39=996(LC 10), 29=2477(LC 1), 24=575(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2122/0, 3-4=-3562/0, 4-5=-3562/0, 5-6=-4322/0, 6-7=-4322/0, 7-8=-3933/0, 8-10=-2881/0, 10-12=-2889/0, 12-14=-675/26, 14-15=0/3175, 15-16=0/3175, 16-18=-12/1785, 18-19=-1342/734, 19-20=-1342/734, 20-21=-1342/734, 21-22=-1089/108
BOT CHORD 38-39=0/1252, 37-38=0/2958, 36-37=0/4008, 35-36=0/4322, 34-35=0/4322, 32-34=0/3557, 31-32=0/2195, 29-31=-1288/0, 28-29=-2155/0, 27-28=-1356/702, 26-27=-734/1342, 25-26=-286/1388, 24-25=-42/705
WEBS 2-39=-1569/0, 2-38=0/1132, 3-38=-1088/0, 3-37=0/771, 14-29=-2368/0, 14-31=0/1920, 12-31=-1974/0, 12-32=0/919, 8-32=-898/0, 8-34=0/586, 5-37=-569/0, 5-36=-12/676, 6-36=-294/0, 7-34=-741/0, 16-29=-1459/0, 16-28=0/1007, 18-28=-1102/0, 22-24=-882/54, 22-25=-86/499, 21-25=-390/232, 21-26=-562/0, 18-27=0/1258, 19-27=-533/0

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x4 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 24.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 413 lb down at 15-9-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 24-39=-10, 1-23=-100
Concentrated Loads (lb)
Vert: 12=-333(F)


September 7,2022



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F2 | Floor | 5 | 1 | I54046259 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:54 2022 Page 1
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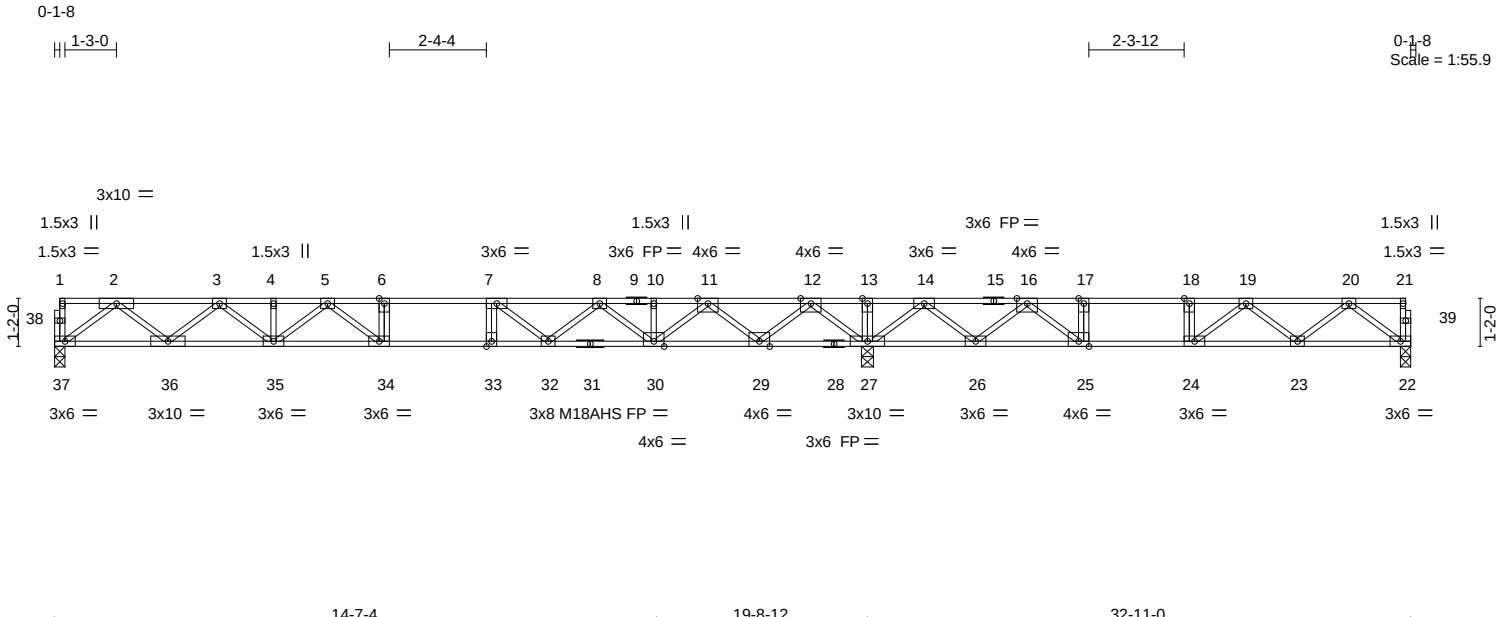


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.70 | Vert(LL) | -0.27 | 34 | >858 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.65 | Vert(CT) | -0.38 | 34 | >627 | 360 | M18AHS | 186/179 |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.70 | Horz(CT) | 0.05 | 22 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 167 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** (size) 37=0-3-0, 27=0-3-8, 22=0-3-0
Max Grav 37=953(LC 10), 27=2150(LC 1), 22=621(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2014/0, 3-4=-3356/0, 4-5=-3356/0, 5-6=-3950/0, 6-7=-3950/0, 7-8=-3454/0, 8-10=-2300/0, 10-11=-2300/0, 11-12=-379/347, 12-13=0/2735, 13-14=0/2735, 14-16=-486/1427, 16-17=-1633/515, 17-18=-1633/515, 18-19=-1633/515, 19-20=-1198/26
BOT CHORD 36-37=0/1196, 35-36=0/2803, 34-35=0/3743, 33-34=0/3950, 32-33=0/3950, 30-32=0/3014, 29-30=-29/1454, 27-29=-1220/0, 26-27=-1763/0, 25-26=-1049/1109, 24-25=-515/1633, 23-24=-155/1563, 22-23=0/765
WEBS 2-37=-1497/0, 2-36=0/1065, 3-36=-1027/0, 3-35=0/705, 12-27=-1900/0, 12-29=0/1468, 11-29=-1445/0, 11-30=0/1128, 8-30=-947/0, 8-32=0/684, 5-35=-495/0, 5-34=-175/543, 7-32=-902/0, 14-27=-1409/0, 14-26=0/960, 16-26=-1036/0, 20-22=-957/0, 20-23=-38/563, 19-23=-475/168, 19-24=-452/87, 16-25=0/1148, 17-25=-491/0

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x4 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F3 | FLOOR | 13 | 1 | I54046260 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:55 2022 Page 1
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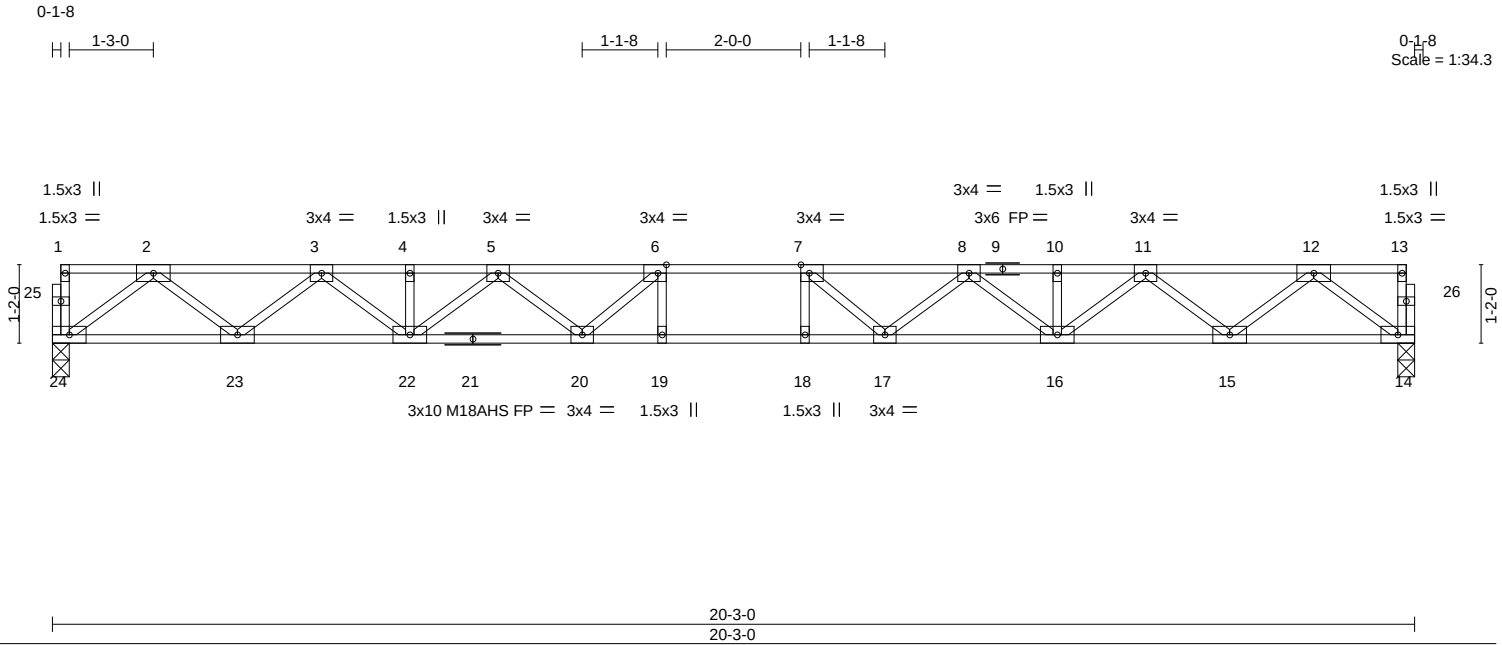


Plate Offsets (X,Y)-- [6:0-1-8,Edge], [7:0-1-8,Edge]

| LOADING (psf) | | SPACING- | 1-7-3 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.27 | Vert(LL) | -0.30 | 18-19 | >801 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.55 | Vert(CT) | -0.41 | 18-19 | >581 | 360 | M18AHS | 186/179 |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.49 | Horz(CT) | 0.07 | 14 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 102 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

**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) 24=0-3-0, 14=0-3-0
Max Grav 24=874(LC 1), 14=874(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1894/0, 3-4=-3231/0, 4-5=-3231/0, 5-6=-3966/0, 6-7=-4188/0, 7-8=-3966/0, 8-10=-3231/0, 10-11=-3231/0, 11-12=-1894/0
BOT CHORD 23-24=0/1104, 22-23=0/2656, 20-22=0/3714, 19-20=0/4188, 18-19=0/4188, 17-18=0/4188, 16-17=0/3714, 15-16=0/2656, 14-15=0/1104
WEBS 2-24=-1383/0, 2-23=0/1028, 3-23=-993/0, 3-22=0/734, 12-14=-1383/0, 12-15=0/1028, 11-15=-993/0, 11-16=0/734, 5-22=-617/0, 5-20=0/453, 8-16=-617/0, 8-17=0/453, 7-17=-555/72, 6-20=-555/72

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x6 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F4 | Floor | 11 | 1 | I54046261 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:56 2022 Page 1
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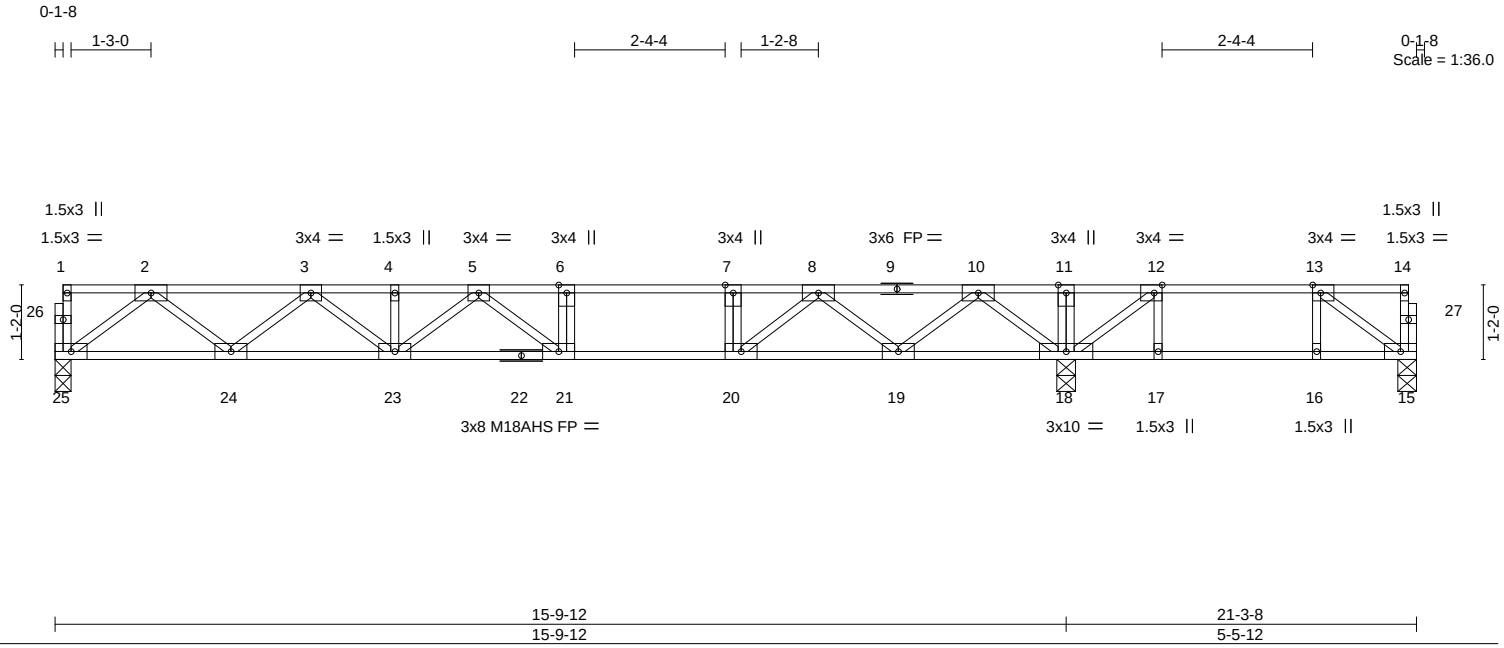


Plate Offsets (X,Y)-- [12:0-1-8,Edge], [13:0-1-8,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.67 | Vert(LL) | -0.26 | 21-23 | >724 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.62 | Vert(CT) | -0.35 | 21-23 | >535 | 360 | M18AHS | 186/179 |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.49 | Horz(CT) | 0.04 | 15 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 108 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP 2400F 2.0E(flat)
BOT CHORD 2x4 SP 2400F 2.0E(flat)
WEBS 2x4 SP No.3(flat)

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

**REACTIONS.** (size) 25=0-3-0, 18=0-3-8, 15=0-3-8
Max Grav 25=837(LC 10), 18=1251(LC 9), 15=267(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1720/0, 3-4=-2792/0, 4-5=-2792/0, 5-6=-2928/0, 6-7=-2928/0, 7-8=-2928/0, 8-10=-1500/0, 10-11=0/406, 11-12=0/406, 12-13=-283/78
BOT CHORD 24-25=0/1041, 23-24=0/2381, 21-23=0/3024, 20-21=0/2928, 19-20=0/2225, 18-19=0/810, 17-18=-78/283, 16-17=-78/283, 15-16=-78/283
WEBS 2-25=-1303/0, 2-24=0/883, 3-24=-861/0, 3-23=0/525, 5-23=-296/0, 5-21=-310/289, 7-20=-456/0, 10-18=-1382/0, 10-19=0/910, 8-19=-962/0, 12-18=-670/0, 13-15=-346/99, 8-20=0/1032

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 3x6 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F5-GR | GABLE | 1 | 1 | I54046262<br>Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:57 2022 Page 1
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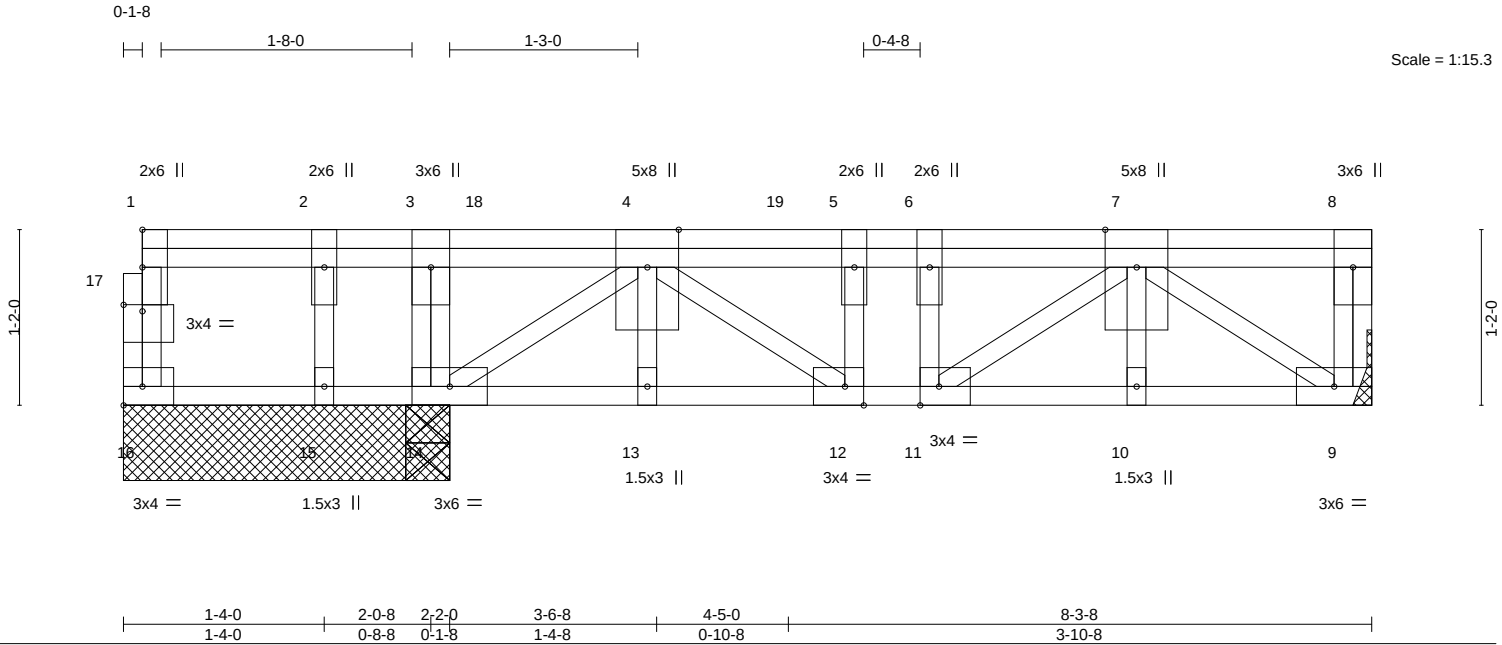


Plate Offsets (X,Y)-- [11:0-1-8,Edge], [12:0-1-8,Edge], [17:0-1-8,0-0-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.16 | Vert(LL) | -0.01 | 12 | >999 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.25 | Vert(CT) | -0.02 | 12 | >999 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.27 | Horz(CT) | 0.01 | 9 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 58 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

**REACTIONS.** All bearings 2-2-0 except (jt=length) 9=Mechanical.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 15
Max Grav All reactions 250 lb or less at joint(s) 15 except 16=256(LC 4), 9=793(LC 4), 14=1115(LC 4), 14=1106(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 4-5=-1242/0, 5-6=-1242/0, 6-7=-1242/0
BOT CHORD 13-14=0/862, 12-13=0/862, 11-12=0/1242, 10-11=0/940, 9-10=0/940
WEBS 3-14=-485/0, 4-14=-1024/0, 7-9=-1137/0, 7-11=0/371, 4-12=0/471, 5-12=-264/0

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable studs spaced at 1-4-0 oc.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 173 lb down at 0-2-4, 141 lb down at 2-5-4, and 166 lb down at 4-5-4, and 166 lb down at 6-5-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 9-16=-10, 1-8=-220
Concentrated Loads (lb)
Vert: 1=-123(F) 7=-86(F) 18=-86(F) 19=-86(F)


September 7,2022



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| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F6 | FLOOR | 4 | 1 | I54046263 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:58 2022 Page 1
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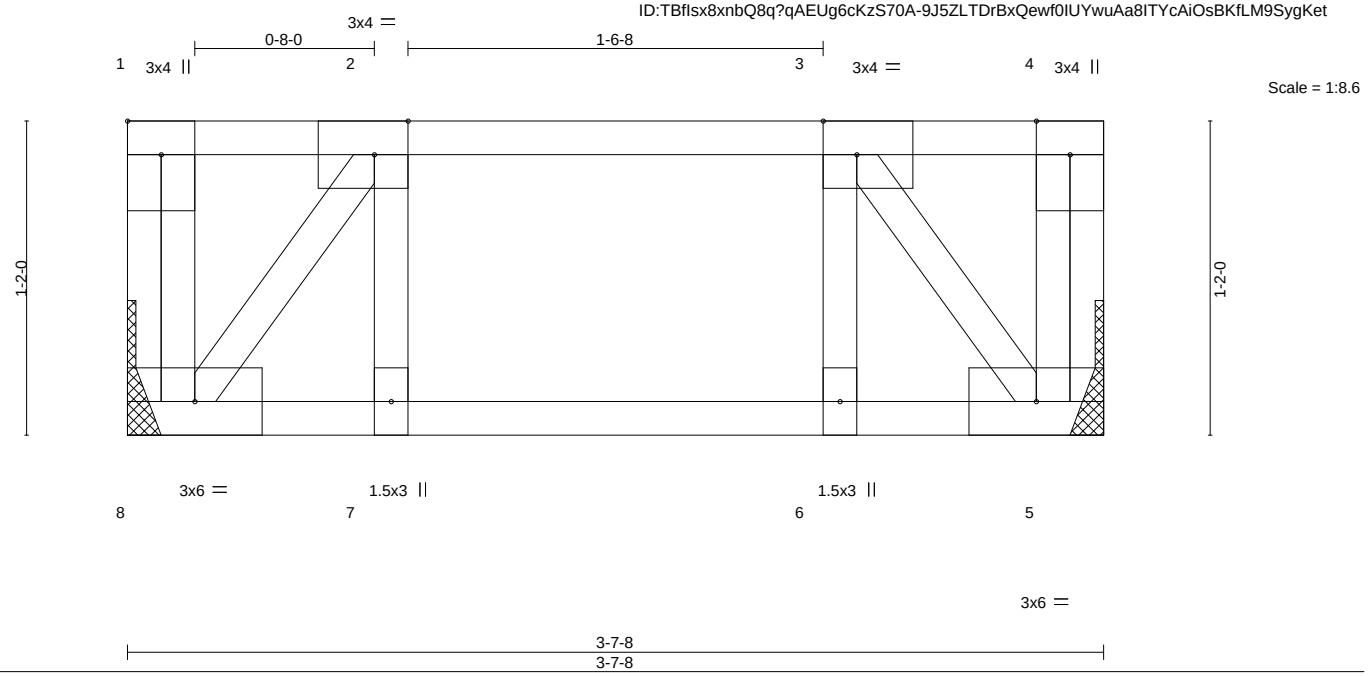


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [2:0-1-8,Edge], [3:0-1-8,Edge]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.08 | Vert(LL) | -0.00 | 7 | >999 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.04 | Vert(CT) | -0.00 | 7 | >999 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 22 lb | FT = 20%F, 11%E |

**LUMBER-**
TOP CHORD 2x4 SP No.1(flat)
BOT CHORD 2x4 SP No.1(flat)
WEBS 2x4 SP No.3(flat)

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 3-7-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 5=Mechanical, 8=Mechanical
Max Grav 5=186(LC 1), 8=186(LC 1)

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

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Refer to girder(s) for truss to truss connections.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.


September 7,2022



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/12 Liberty Meadows/Harnett |
|---|---|---|---|---|---|
| J0322-1313 | F7-GR | GABLE | 1 | 1 | I54046264 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Sep 6 13:53:59 2022 Page 1
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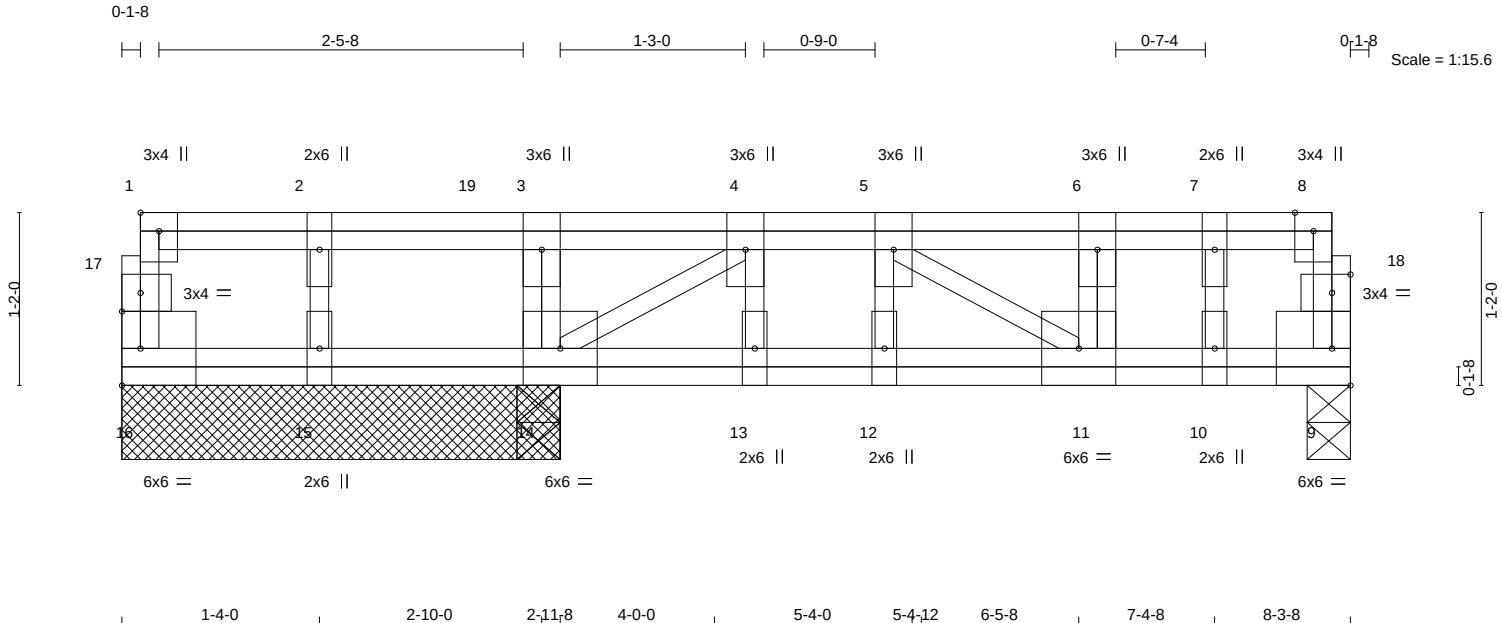


| 1-4-0 | 2-10-0 | 2-11-8 | 4-0-0 | 5-4-0 | 5-4-12 | 6-5-8 | 7-4-8 | 8-3-8 |
|---|---|---|---|---|---|---|---|---|
| 1-4-0 | 1-6-0 | 0-1-8 | 1-0-8 | 1-4-0 | 0-0-12 | 1-0-12 | 0-11-0 | 0-11-0 |

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [17:0-1-8,0-1-8], [18:0-1-8,0-1-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 40.0 | Plate Grip DOL | 1.00 | TC | 0.54 | Vert(LL) | -0.08 | 11-12 | >797 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.67 | Vert(CT) | -0.11 | 11-12 | >570 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.21 | Horz(CT) | 0.00 | 9 | n/a | n/a | | |
| BCDL | 5.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 65 lb | FT = 20%F, 11%E |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.1(flat) |
| BOT CHORD | 2x4 SP No.1(flat) |
| WEBS | 2x4 SP No.3(flat) |
| OTHERS | 2x4 SP No.3(flat) |

**BRACING-**

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

**REACTIONS.** All bearings 2-11-8 except (jt=length) 9=0-3-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 15 except 16=280(LC 4), 14=1199(LC 1), 14=1199(LC 1), 14=1199(LC 1), 9=630(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-9=-410/0, 4-5=-778/0
BOT CHORD 13-14=0/778, 12-13=0/778, 11-12=0/778
WEBS 4-14=-905/0, 5-11=-892/0, 2-15=-257/0, 3-14=-550/0

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) Plates checked for a plus or minus 1 degree rotation about its center.
3) Gable studs spaced at 1-4-0 oc.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.
6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 173 lb down at 0-2-4, 141 lb down at 2-5-4, and 166 lb down at 4-5-4, and 166 lb down at 6-5-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
7) 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 + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 9-16=-10, 1-8=-220
Concentrated Loads (lb)
Vert: 1=-123(B) 4=-86(B) 6=-86(B) 19=-86(B)


September 7,2022




ENGINEERING BY TRENCO
A MiTek Affiliate
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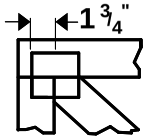
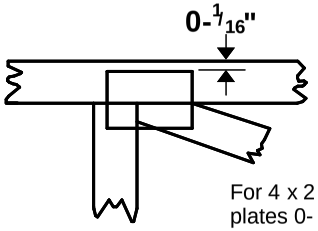
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION




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




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

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

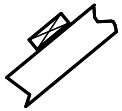
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

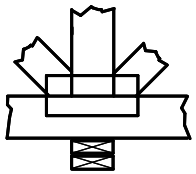
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

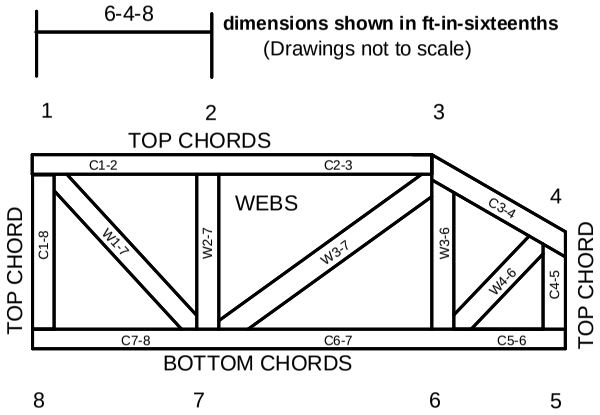


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

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

# Numbering System




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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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



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

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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