ENGINEERING BY
TRENCO
A MiTek Affiliate

RE: J0820-3990
Precision/Lot 38 Summerlin/Harnett

**Trenco**
818 Soundside Rd
Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0820-3990
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2015/TPI2014 Design Program: MiTek 20/20 8.3
Wind Code: N/A Wind Speed: N/A mph
Roof Load: N/A psf Floor Load: 55.0 psf

This package includes 12 individual, dated Truss Design Drawings and 0 Additional Drawings.

| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 1 | E14950659 | ET1 | 10/21/2020 |
| 2 | E14950660 | ET2 | 10/21/2020 |
| 3 | E14950661 | ET3 | 10/21/2020 |
| 4 | E14950662 | F1 | 10/21/2020 |
| 5 | E14950663 | F2 | 10/21/2020 |
| 6 | E14950664 | F3 | 10/21/2020 |
| 7 | E14950665 | F4 | 10/21/2020 |
| 8 | E14950666 | F5 | 10/21/2020 |
| 9 | E14950667 | F6 | 10/21/2020 |
| 10 | E14950668 | F7 | 10/21/2020 |
| 11 | E14950669 | F8 | 10/21/2020 |
| 12 | E14950670 | F9-GR | 10/21/2020 |

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844


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

October 21, 2020



Gilbert, Eric

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | ET1 | GABLE | 1 | 1 | E14950659 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:31 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-OHVh2HTzgEP9jn8jwItevlFM9fgkNf5Q7GGs8SyVreI

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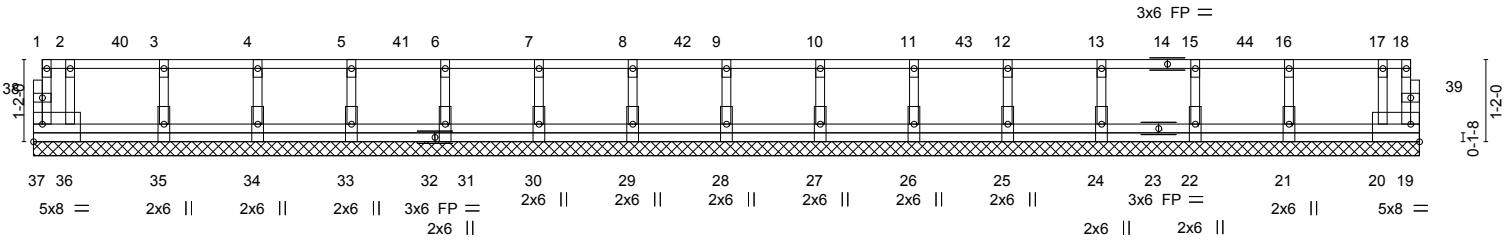
Scale = 1:32.8




| 0-6-4 | 1-10-4 | 3-2-4 | 4-6-4 | 5-10-4 | 7-2-4 | 8-6-4 | 9-10-4 | 11-2-4 | 12-6-4 | 13-10-4 | 15-2-4 | 16-6-4 | 17-10-4 | 19-2-4 | 19-8-8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-6-4 | 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 | 0-6-4 |

Plate Offsets (X,Y)-- [20:Edge,0-3-0], [20:0-0-12,0-0-0], [36:0-0-12,0-0-0], [37:Edge,0-3-0]

| 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 | 0.10 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.00 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.04 | Horz(CT) | 0.00 | 19 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 109 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 19-8-8.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) 37
Max Grav All reactions 250 lb or less at joint(s) 28, 29, 30, 31, 33, 34, 35, 36, 27, 26, 25, 24, 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 37.
7) 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.

**LOAD CASE(S)** Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 19-37=-10, 1-18=-100
Concentrated Loads (lb)
Vert: 18=-72 7=-64 4=-64 10=-64 13=-64 40=-64 41=-64 42=-64 43=-64 44=-64


October 7,2020

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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | ET2 | Floor Supported Gable | 1 | 1 | E14950660 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:32 2020 Page 1
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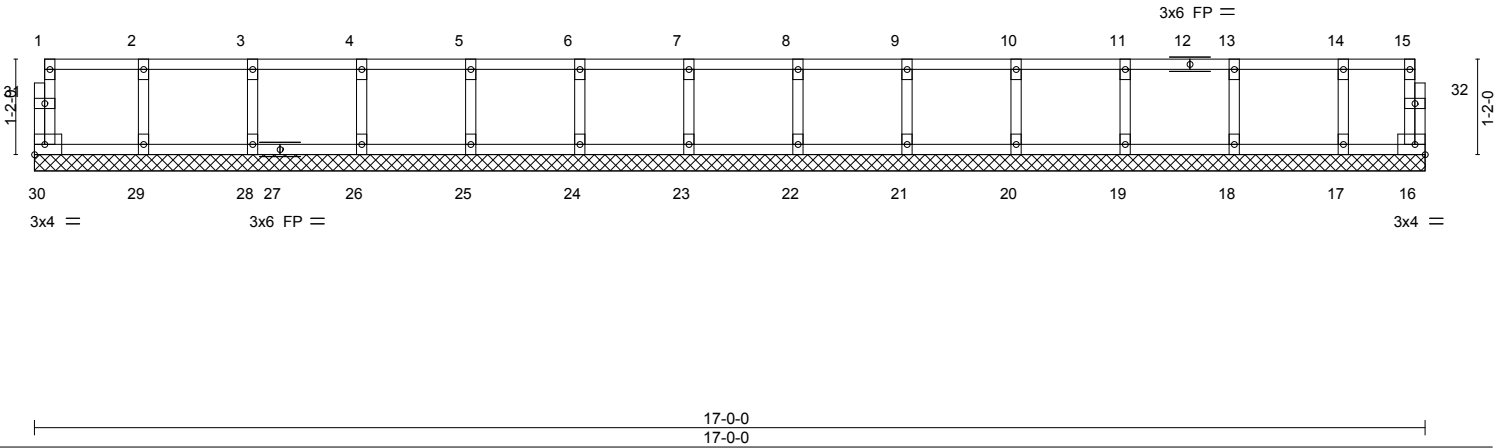
0-1-8 0-1-8

Scale = 1:28.2




| 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 | 16 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 71 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 17-0-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 30, 16, 29, 28, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17

**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.


October 7,2020

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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | ET3 | Floor Supported Gable | 1 | 1 | E14950661 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:33 2020 Page 1
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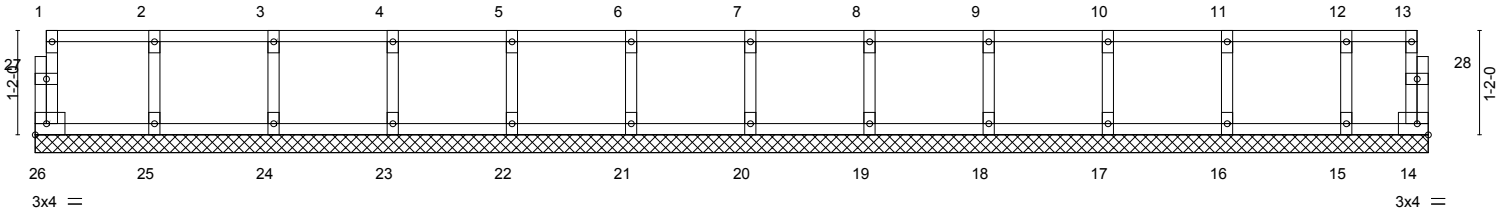
0-1-8 0-1-8

Scale = 1:25.8




15-7-0
15-7-0

| 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 | 0.06 | 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 | 14 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-R | | | | | | | Weight: 66 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 15-7-0.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 26, 14, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15

**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.


October 7,2020

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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F1 | GABLE | 1 | 1 | E14950662 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:34 2020 Page 1
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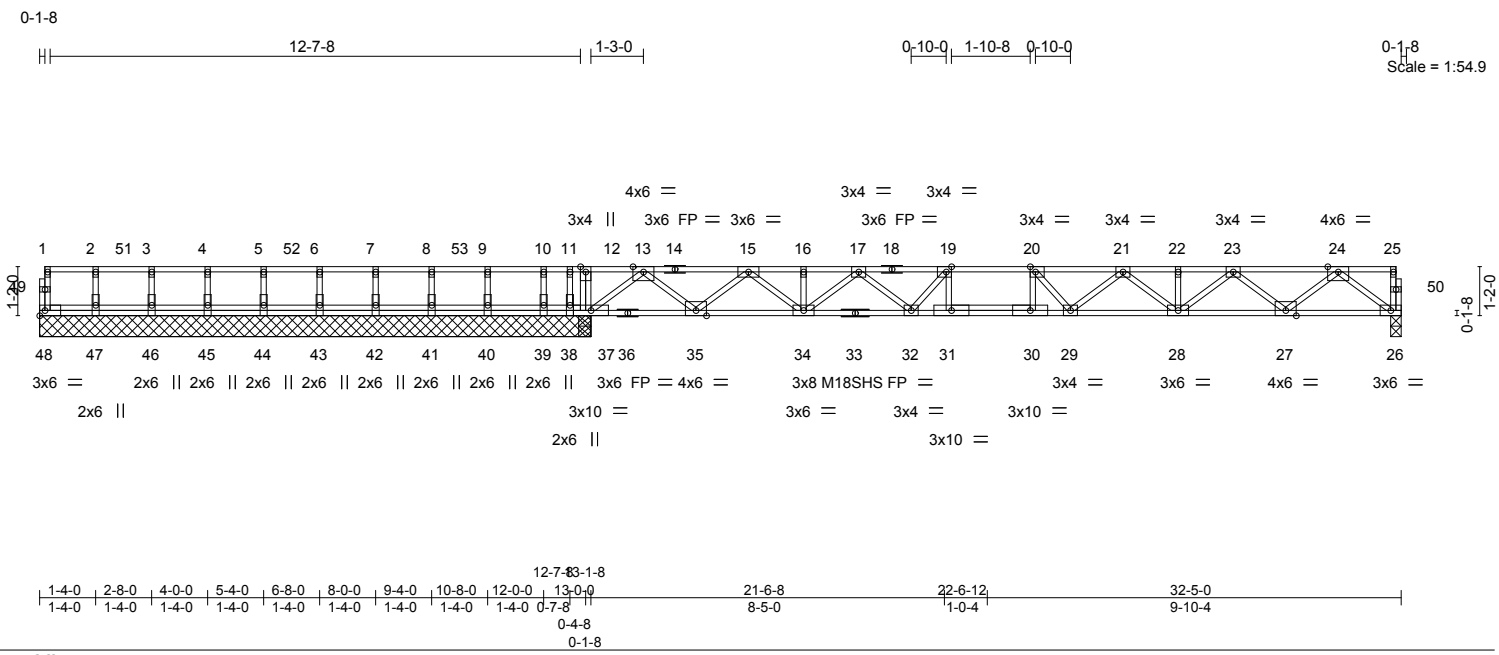


Plate Offsets (X,Y)-- [19:0-1-8,Edge], [20:0-1-8,Edge]

| 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 | 0.31 | Vert(LL) | -0.31 | 30-31 | >751 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.51 | Vert(CT) | -0.43 | 30-31 | >547 | 360 | M18SHS | 244/190 |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.58 | Horz(CT) | 0.07 | 26 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 174 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)
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 6-0-0 oc bracing.

**REACTIONS.** All bearings 13-1-8 except (jt=length) 26=0-3-0.
(lb) - Max Uplift All uplift 100 lb or less at joint(s) except 38=-349(LC 4)
Max Grav All reactions 250 lb or less at joint(s) 48, 47, 46, 45, 44, 43, 42, 41, 40, 39 except 37=1542(LC 1), 37=1542(LC 1), 26=1053(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 13-15=-2202/0, 15-16=-3838/0, 16-17=-3838/0, 17-19=-4665/0, 19-20=-4845/0, 20-21=-4674/0, 21-22=-3843/0, 22-23=-3843/0, 23-24=-2267/0
BOT CHORD 35-37=0/1333, 34-35=0/3149, 32-34=0/4380, 31-32=0/4845, 30-31=0/4845, 29-30=0/4845, 28-29=0/4386, 27-28=0/3172, 26-27=0/1328
WEBS 12-37=-265/0, 13-37=-1547/0, 13-35=0/1135, 15-35=-1233/0, 15-34=0/881, 24-26=-1663/0, 24-27=0/1223, 23-27=-1178/0, 23-28=0/856, 21-28=-693/0, 21-29=0/376, 17-34=-692/0, 17-32=0/371, 19-32=-277/0, 20-29=-263/0

**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 1.5x3 MT20 unless otherwise indicated.
4) Plates checked for a plus or minus 1 degree rotation about its center.
5) Gable studs spaced at 1-4-0 oc.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 38.
7) 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.
8) CAUTION, Do not erect truss backwards.

**LOAD CASE(S)** Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 26-48=-10, 1-25=-100
Concentrated Loads (lb)
Vert: 4=-85 7=-85 10=-85 51=-85 52=-85 53=-85


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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F2 | Floor | 1 | 1 | E14950663 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:35 2020 Page 1
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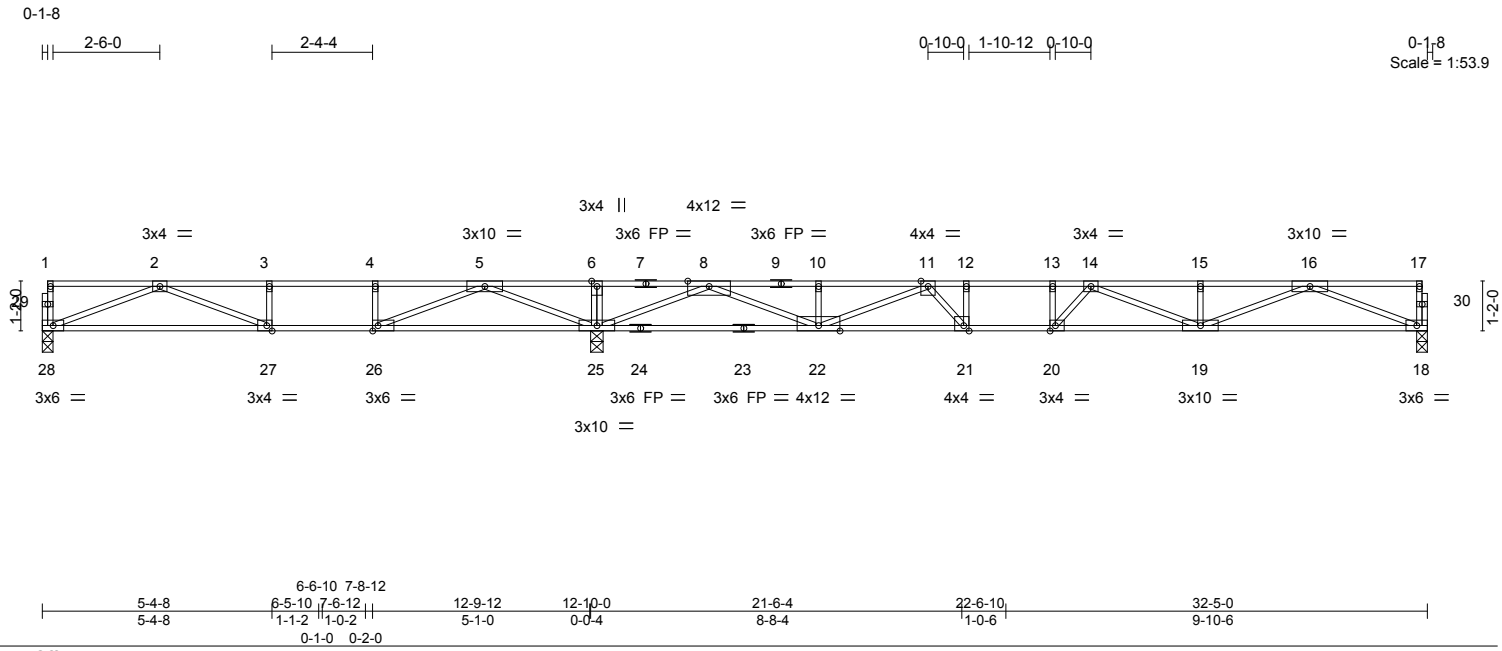





Plate Offsets (X,Y)-- [20:0-1-8,Edge], [21:0-1-8,Edge], [26:0-1-8,Edge], [27:0-1-8,Edge]

| 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 | 0.64 | Vert(LL) | -0.33 | 19-20 | >711 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.52 | Vert(CT) | -0.44 | 19-20 | >524 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.98 | Horz(CT) | 0.06 | 18 | n/a | n/a | | |
| BCDL | 5.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 155 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) 28=0-3-0, 25=0-3-8, 18=0-3-0
Max Grav 28=623(LC 3), 25=2067(LC 1), 18=965(LC 7)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1673/317, 3-4=-1673/317, 4-5=-1673/317, 5-6=0/2340, 6-8=0/2340, 8-10=-2690/0, 10-11=-2690/0, 11-12=-4029/0, 12-13=-4029/0, 13-14=-4029/0, 14-15=-3473/0, 15-16=-3473/0
BOT CHORD 27-28=-1/1256, 26-27=-317/1673, 25-26=-1085/690, 22-25=-213/874, 21-22=0/3740, 20-21=0/4029, 19-20=0/4054, 18-19=0/2118
WEBS 6-25=-315/0, 2-28=-1345/1, 2-27=-341/450, 5-25=-1924/0, 5-26=0/1469, 4-26=-441/0, 8-25=-2747/0, 8-22=0/2065, 10-22=-279/0, 16-18=-2272/0, 16-19=0/1462, 15-19=-251/0, 14-19=-628/0, 11-22=-1253/0, 11-21=0/820, 12-21=-502/0, 14-20=-412/340

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
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.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F3 | Floor Girder | 1 | 1 | E14950664 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:37 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-CRtyJKXkG4AIRibtGY_380VA14YhnBJIWCjAL6yVreC

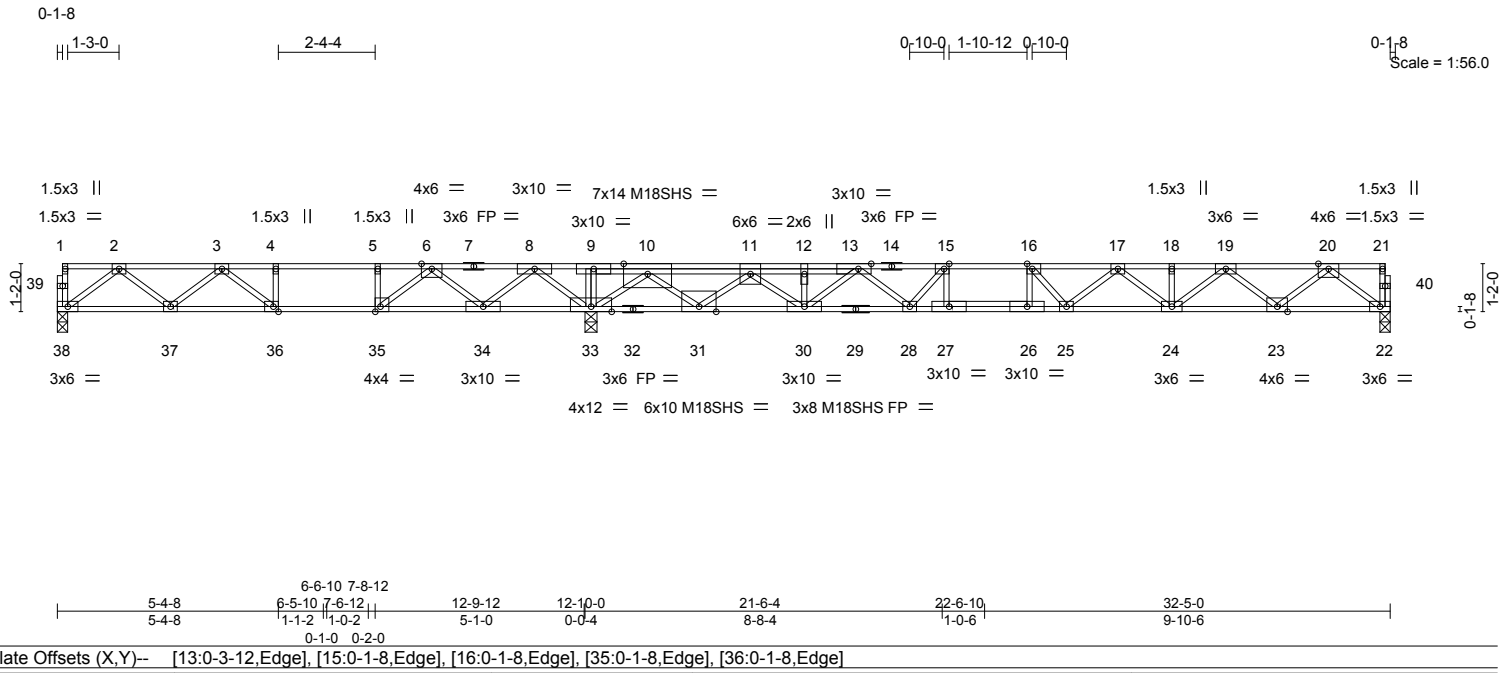


Plate Offsets (X,Y)-- [13:0-3-12,Edge], [15:0-1-8,Edge], [16:0-1-8,Edge], [35:0-1-8,Edge], [36:0-1-8,Edge]

| 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 | 0.97 | Vert(LL) | -0.31 | 26-27 | >737 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.74 | Vert(CT) | -0.43 | 26 | >542 | 360 | M18SHS | 244/190 |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.76 | Horz(CT) | 0.06 | 22 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 173 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) *Except*
10-31: 2x4 SP No.2(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) 38=0-3-0, 33=0-3-8, 22=0-3-0
Max Uplift 38=-67(LC 4)
Max Grav 38=512(LC 3), 33=2984(LC 1), 22=1064(LC 4)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-939/222, 3-4=-973/1005, 4-5=-973/1005, 5-6=-973/1005, 6-8=0/2192, 8-9=0/3914, 9-10=0/3910, 10-11=-1377/0, 11-12=-4224/0, 12-13=-4224/0, 13-15=-4836/0, 15-16=-4935/0, 16-17=-4761/0, 17-18=-3898/0, 18-19=-3898/0, 19-20=-2295/0
BOT CHORD 37-38=-104/624, 36-37=-467/1153, 35-36=-1005/973, 34-35=-1701/253, 33-34=-2609/0, 31-33=-1279/0, 30-31=0/3453, 28-30=0/4622, 27-28=0/4935, 26-27=0/4935, 25-26=0/4935, 24-25=0/4453, 23-24=0/3213, 22-23=0/1343
WEBS 2-38=-779/132, 2-37=-154/410, 3-37=-279/318, 3-36=-699/0, 4-36=0/280, 8-33=-1752/0, 8-34=0/1059, 6-34=-1178/0, 6-35=0/1346, 5-35=-583/0, 20-22=-1682/0, 20-23=0/1240, 19-23=-1195/0, 19-24=0/874, 10-33=-3235/0, 10-31=0/2703, 11-31=-2689/0, 11-30=0/1010, 13-30=-579/0, 13-28=-81/402, 17-24=-709/0, 17-25=0/540, 16-25=-607/79, 16-26=-242/250, 15-28=-441/243, 15-27=-255/237

**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 67 lb uplift at joint 38.
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) 983 lb down at 16-10-4 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: 22-38=-10, 1-21=-100


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Continued on page 2



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**LOAD CASE(S)** Standard
Concentrated Loads (lb)
Vert: 11=-903(B)

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F4 | Floor | 6 | 1 | E14950665 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:37 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-CRtyJKXkG4AIRibtGY_380VJ74Y9nE_IWCjAL6yVreC

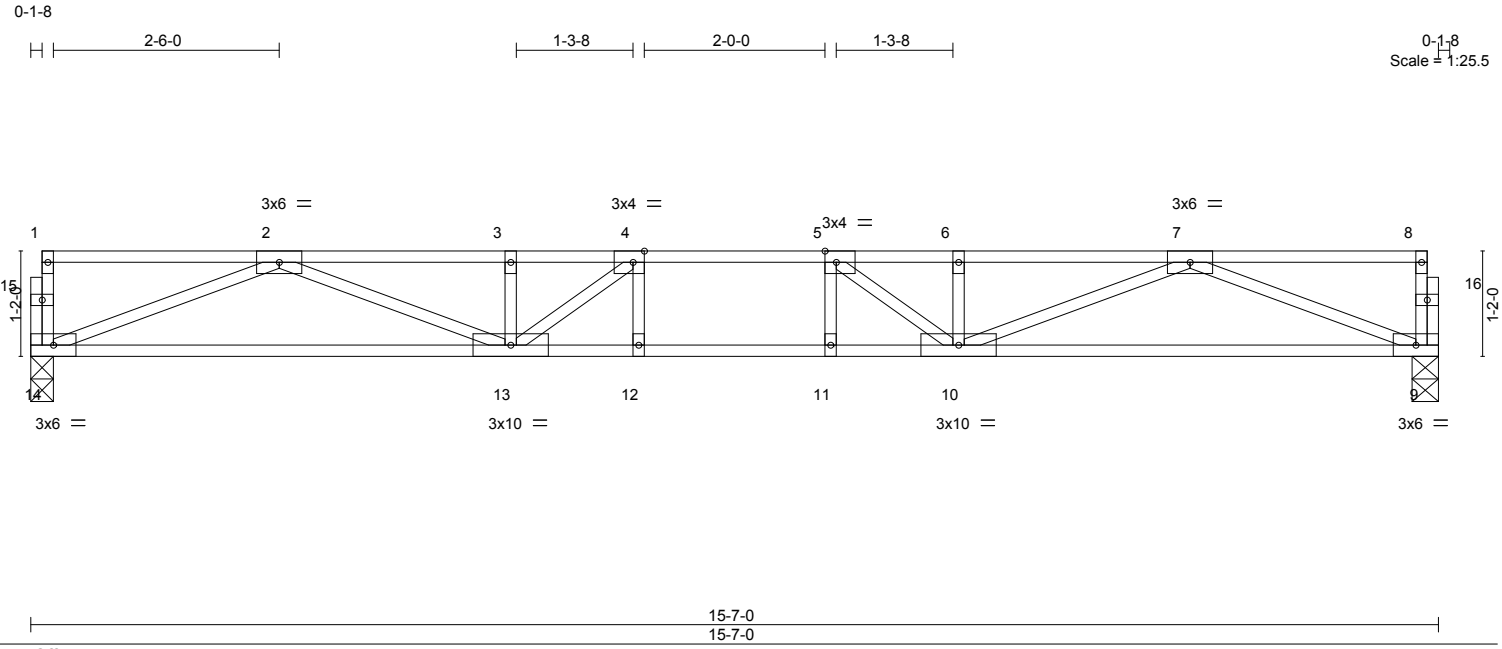


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]

| 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 | 0.39 | Vert(LL) | -0.19 | 11-12 | >982 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.71 | Vert(CT) | -0.26 | 11-12 | >704 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.53 | Horz(CT) | 0.05 | 9 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 77 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 14=0-3-0, 9=0-3-8
Max Grav 14=837(LC 1), 9=837(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2816/0, 3-4=-2816/0, 4-5=-3056/0, 5-6=-2816/0, 6-7=-2816/0
BOT CHORD 13-14=0/1801, 12-13=0/3056, 11-12=0/3056, 10-11=0/3056, 9-10=0/1801
WEBS 2-14=-1931/0, 2-13=0/1095, 7-9=-1931/0, 7-10=0/1095, 5-10=-589/60, 4-13=-589/60

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
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.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F5 | Floor | 10 | 1 | E14950666 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:38 2020 Page 1
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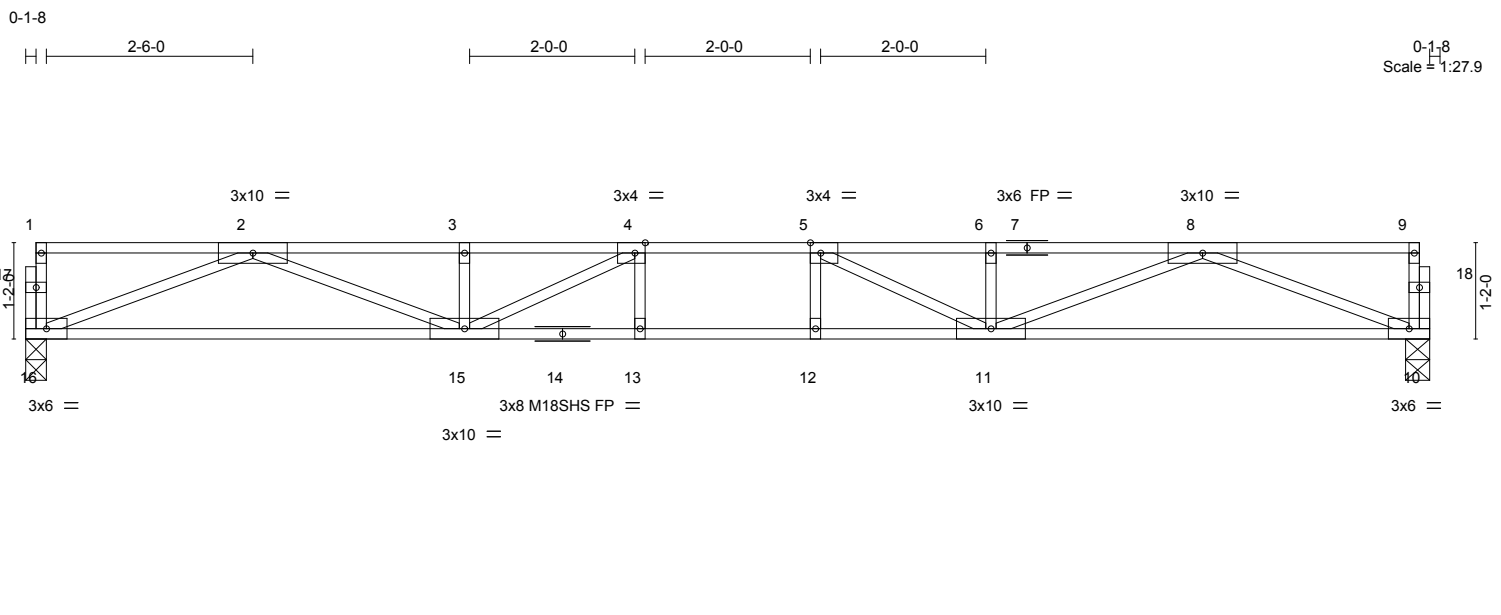


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]

| 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 | 0.45 | Vert(LL) | -0.26 | 12-13 | >774 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.84 | Vert(CT) | -0.36 | 12-13 | >558 | 360 | M18SHS | 244/190 |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.63 | Horz(CT) | 0.06 | 10 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 83 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 16=0-3-0, 10=0-3-8
Max Grav 16=915(LC 1), 10=915(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3211/0, 3-4=-3211/0, 4-5=-3659/0, 5-6=-3211/0, 6-8=-3211/0
BOT CHORD 15-16=0/1994, 13-15=0/3659, 12-13=0/3659, 11-12=0/3659, 10-11=0/1994
WEBS 2-16=-2138/0, 2-15=0/1314, 3-15=-273/17, 8-10=-2138/0, 8-11=0/1314, 6-11=-273/17, 5-11=-800/0, 4-15=-800/0

**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 1.5x3 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.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F6 | Floor | 2 | 1 | E14950667 |
| | | | | | Job Reference (optional) |

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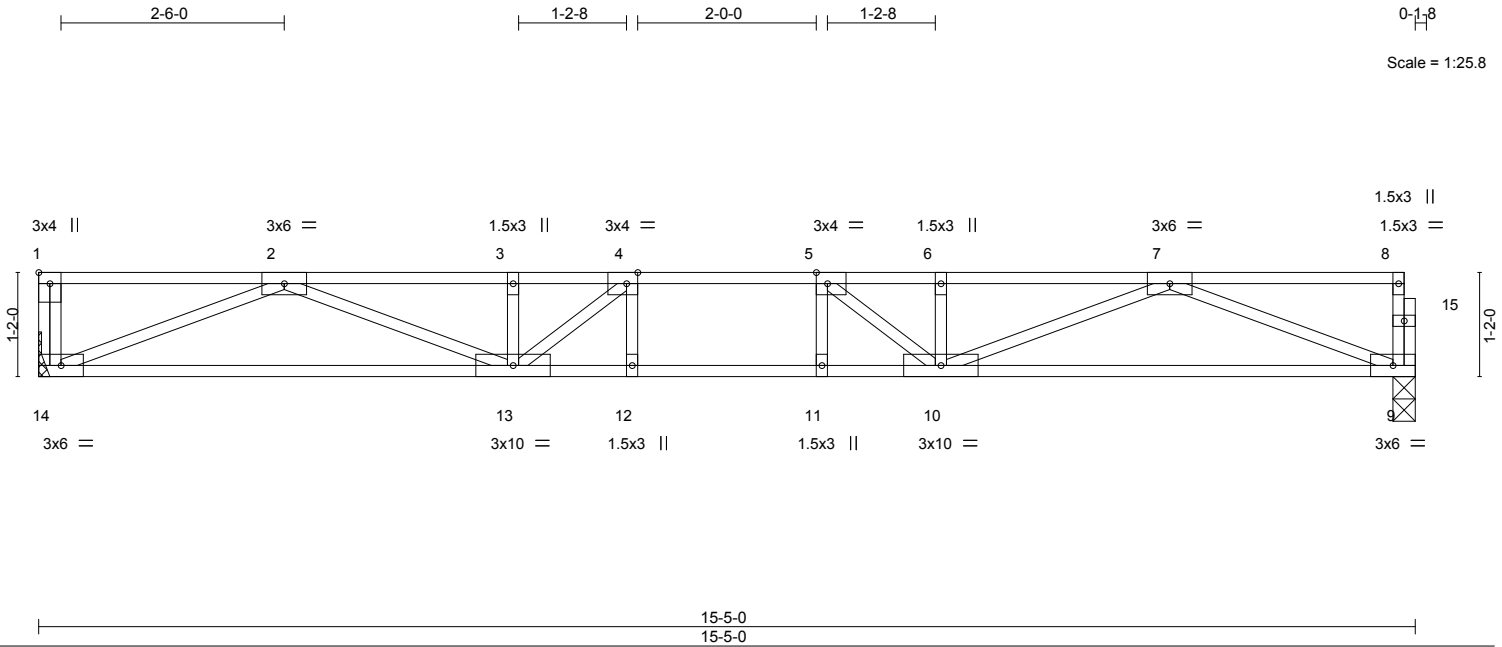


Plate Offsets (X,Y)-- [1:Edge,0-1-8], [4:0-1-8,Edge], [5:0-1-8,Edge]

| 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 | 0.39 | Vert(LL) | -0.18 | 11-12 | >999 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.69 | Vert(CT) | -0.25 | 11-12 | >724 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.52 | Horz(CT) | 0.05 | 9 | n/a | n/a | | |
| BCDL | 5.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 77 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 14=Mechanical, 9=0-3-0
Max Grav 14=834(LC 1), 9=828(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2769/0, 3-4=-2769/0, 4-5=-2989/0, 5-6=-2770/0, 6-7=-2770/0
BOT CHORD 13-14=0/1781, 12-13=0/2989, 11-12=0/2989, 10-11=0/2989, 9-10=0/1779
WEBS 2-14=-1916/0, 2-13=0/1067, 7-9=-1907/0, 7-10=0/1070, 5-10=-568/70, 4-13=-568/69

**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.
5) CAUTION, Do not erect truss backwards.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F7 | Floor | 4 | 1 | E14950668 |
| | | | | | Job Reference (optional) |

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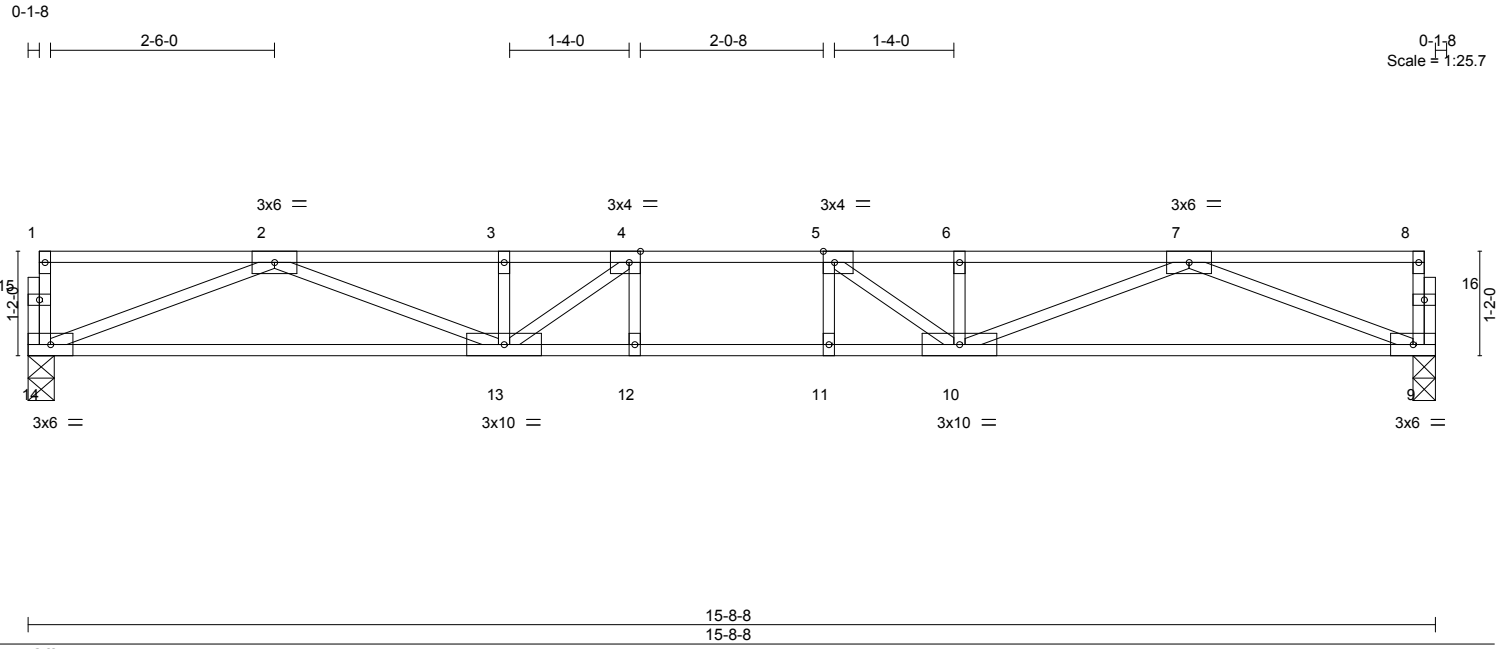


Plate Offsets (X,Y)-- [4:0-1-8,Edge], [5:0-1-8,Edge]

| 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 | 0.41 | Vert(LL) | -0.19 | 11-12 | >961 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.72 | Vert(CT) | -0.27 | 11-12 | >689 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.53 | Horz(CT) | 0.05 | 9 | n/a | n/a | | |
| BCDL | 5.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 77 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 14=0-3-8, 9=0-3-0
Max Grav 14=844(LC 1), 9=844(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2850/0, 3-4=-2850/0, 4-5=-3105/0, 5-6=-2850/0, 6-7=-2850/0
BOT CHORD 13-14=0/1818, 12-13=0/3105, 11-12=0/3105, 10-11=0/3105, 9-10=0/1818
WEBS 2-14=-1950/0, 2-13=0/1113, 7-9=-1950/0, 7-10=0/1113, 5-10=-607/51, 4-13=-607/51

**NOTES-**
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 1.5x3 MT20 unless otherwise indicated.
3) Plates checked for a plus or minus 1 degree rotation about its center.
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.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F8 | FLOOR | 7 | 1 | E14950669 |
| | | | | | Job Reference (optional) |

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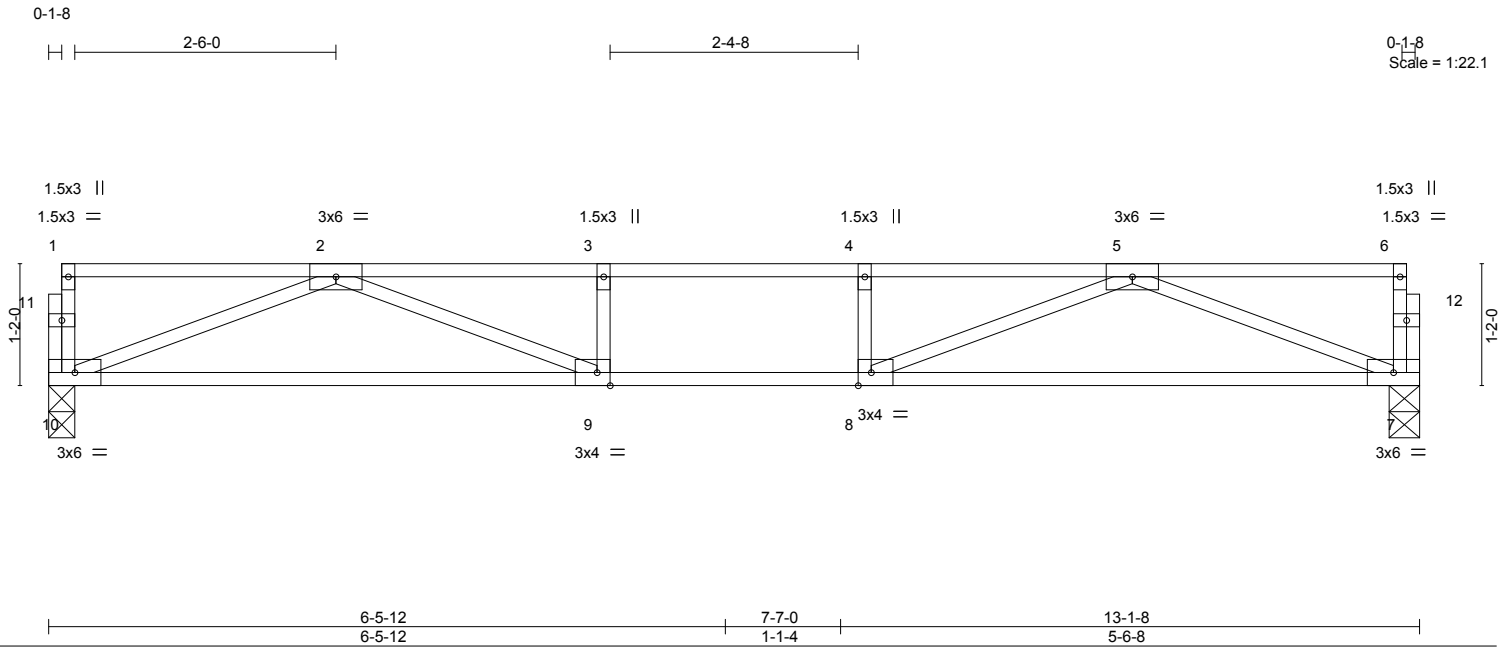


Plate Offsets (X,Y)-- [8:0-1-8,Edge], [9:0-1-8,Edge]

| 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 | 0.51 | Vert(LL) | -0.20 | 9-10 | >787 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.57 | Vert(CT) | -0.27 | 9-10 | >569 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | YES | WB | 0.43 | Horz(CT) | 0.03 | 7 | n/a | n/a | | |
| BCDL | 5.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 62 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 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 10=0-3-0, 7=0-3-8
Max Grav 10=702(LC 1), 7=702(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2160/0, 3-4=-2160/0, 4-5=-2160/0
BOT CHORD 9-10=0/1456, 8-9=0/2160, 7-8=0/1456
WEBS 2-10=-1560/0, 2-9=0/870, 5-7=-1560/0, 5-8=0/870

**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) 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.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3990 | F9-GR | FLOOR GIRDER | 1 | 1 | E14950670 |
| | | | | | Job Reference (optional) |

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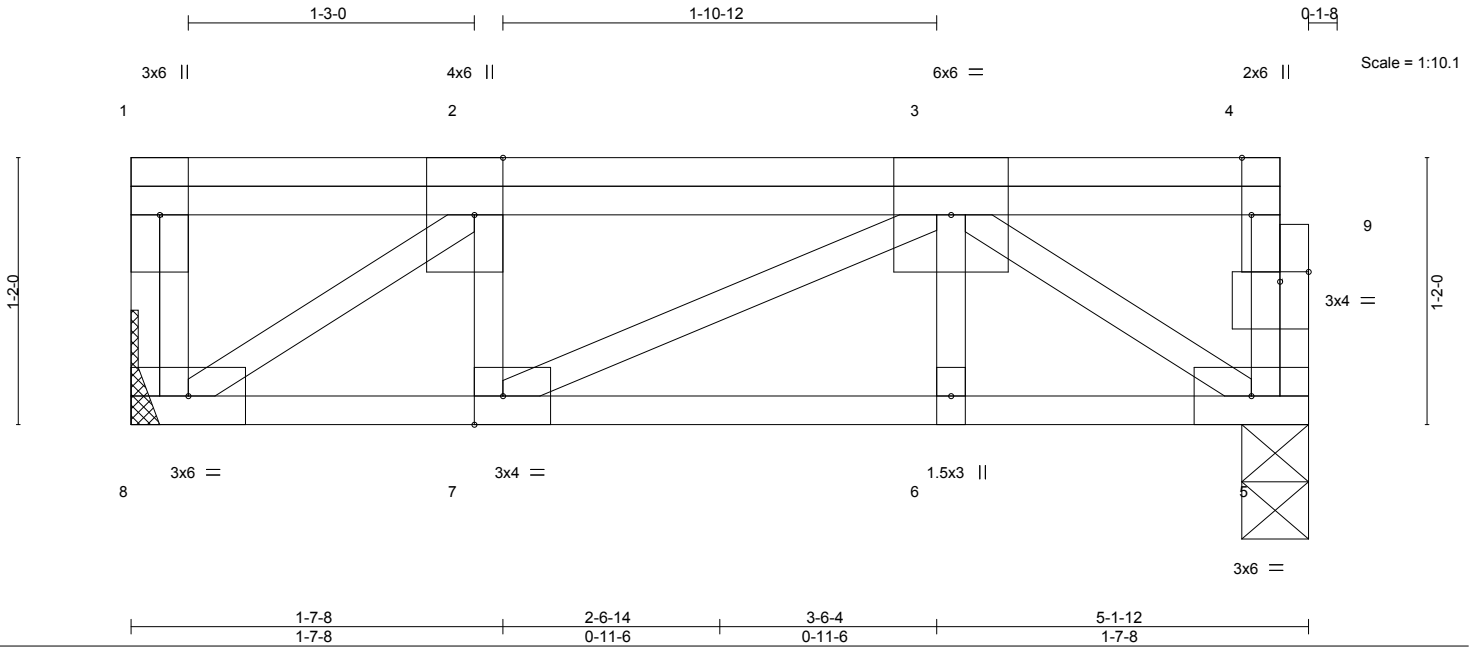


Plate Offsets (X,Y)-- [2:0-3-0,Edge], [4:0-3-0,Edge], [7:0-1-8,Edge], [9:0-1-8,0-0-8]

| 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 | 0.10 | Vert(LL) | -0.02 | 6-7 | >999 | 480 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.00 | BC | 0.30 | Vert(CT) | -0.02 | 6-7 | >999 | 360 | | |
| BCLL | 0.0 | Rep Stress Incr | NO | WB | 0.38 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCDL | 5.0 | Code IRC2015/TPI2014 | | Matrix-P | | | | | | | Weight: 37 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 5-1-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 8=Mechanical, 5=0-3-8
Max Grav 8=1003(LC 1), 5=997(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1355/0
BOT CHORD 7-8=0/1355, 6-7=0/1341, 5-6=0/1341
WEBS 2-8=-1640/0, 3-5=-1616/0

**NOTES-**
1) Plates checked for a plus or minus 1 degree rotation about its center.
2) Refer to girder(s) for truss to truss connections.
3) 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.
4) CAUTION, Do not erect truss backwards.
5) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 734 lb down at 1-10-4, and 734 lb down at 3-10-4 on top chord. The design/selection of such connection device(s) is the responsibility of others.
6) 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: 5-8=-10, 1-4=-100
Concentrated Loads (lb)
Vert: 2=-734(F) 3=-734(F)


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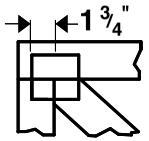
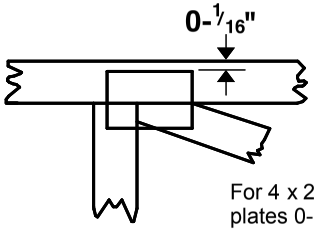
# Symbols

## PLATE LOCATION AND ORIENTATION




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




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

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

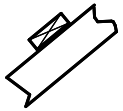
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

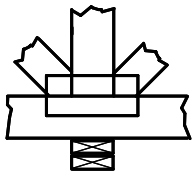
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING

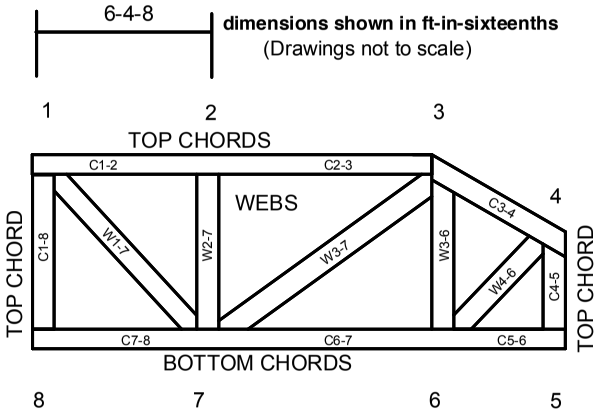


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

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

# Numbering System




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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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



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# 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.

ENGINEERING BY TRENCO
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RE: J0820-3989
Precision/Lot 38 Summerlin/Harnett

**Trenco**
818 Soundside Rd
Edenton, NC 27932

**Site Information:**

Customer: Project Name: J0820-3989
Lot/Block: Model:
Address: Subdivision:
City: State:

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

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

This package includes 20 individual, dated Truss Design Drawings and 0 Additional Drawings.

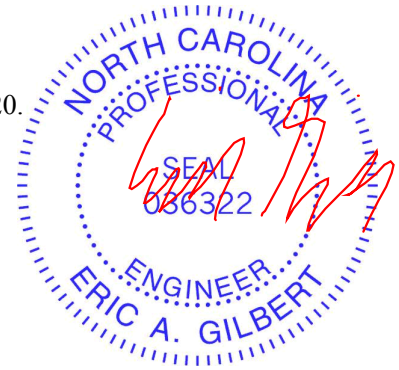
| No. | Seal# | Truss Name | Date |
|---|---|---|---|
| 1 | E14950639 | A1-GE | 10/21/2020 |
| 2 | E14950640 | A2 | 10/21/2020 |
| 3 | E14950641 | A4 | 10/21/2020 |
| 4 | E14950642 | A5-GE | 10/21/2020 |
| 5 | E14950643 | B1-GE | 10/21/2020 |
| 6 | E14950644 | B2 | 10/21/2020 |
| 7 | E14950645 | C1-GE | 10/21/2020 |
| 8 | E14950646 | C2 | 10/21/2020 |
| 9 | E14950647 | C3 | 10/21/2020 |
| 10 | E14950648 | C4 | 10/21/2020 |
| 11 | E14950649 | D1-SG | 10/21/2020 |
| 12 | E14950650 | D2 | 10/21/2020 |
| 13 | E14950651 | P1-GE | 10/21/2020 |
| 14 | E14950652 | P2 | 10/21/2020 |
| 15 | E14950653 | P3 | 10/21/2020 |
| 16 | E14950654 | P4-GE | 10/21/2020 |
| 17 | E14950655 | VB1 | 10/21/2020 |
| 18 | E14950656 | VB2 | 10/21/2020 |
| 19 | E14950657 | VB3 | 10/21/2020 |
| 20 | E14950658 | VB4 | 10/21/2020 |

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

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844




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

October 21, 2020



Gilbert, Eric

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | A1-GE | GABLE | 1 | 1 | E14950639 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:27 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-VWGACvQTc?vjFAryhSpikv4hw2J6RqoqCeIe?hyVreM

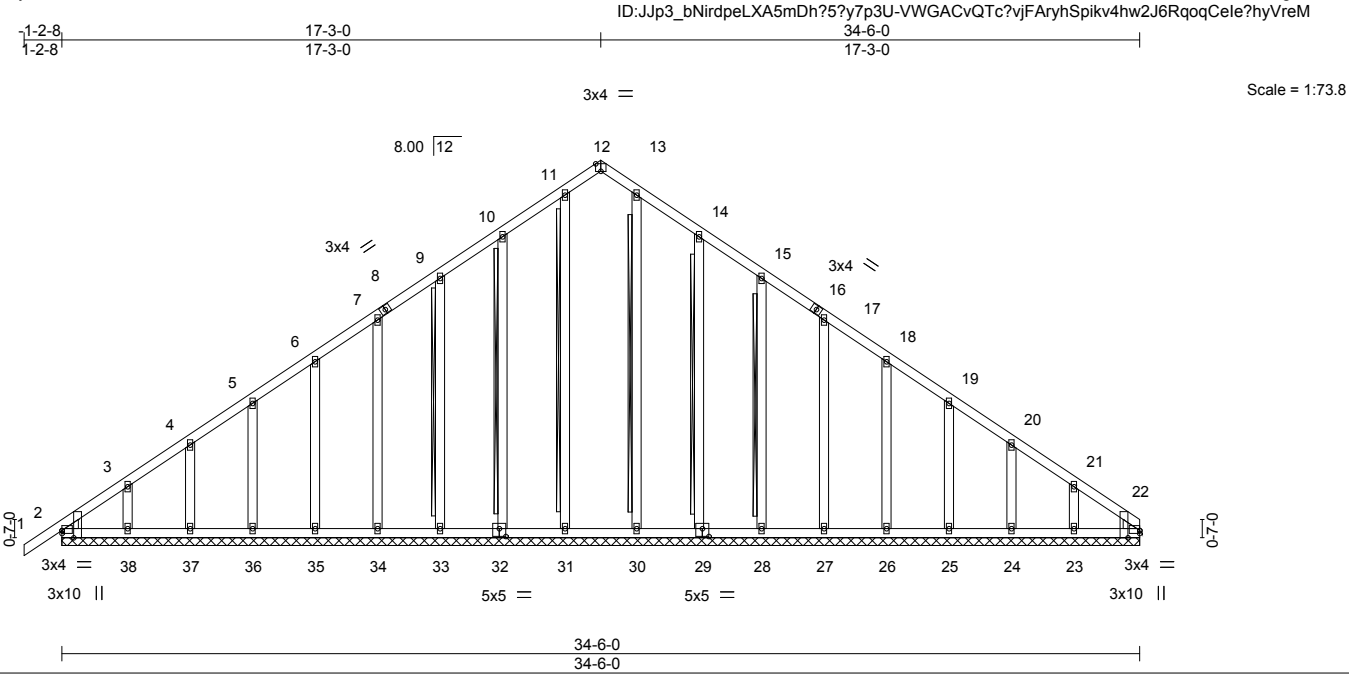



Plate Offsets (X,Y)-- [2:0-2-12,Edge], [2:0-0-0,0-1-2], [12:0-2-0,Edge], [22:0-2-12,Edge], [22:0-0-0,0-1-2], [29:0-2-8,0-3-0], [32:0-2-8,0-3-0]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | -0.00 | 1 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | -0.00 | 1 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.02 | 22 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 262 lb | FT = 20% |

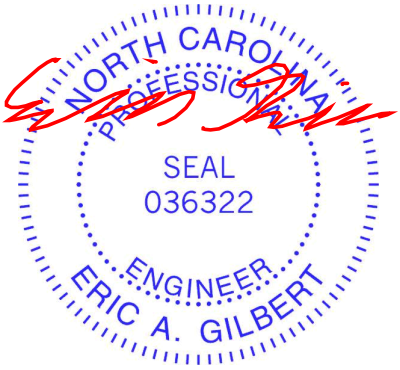
**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 2x4 SP No.2

**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 - 11-31, 10-32, 9-33, 13-30, 14-29, 15-28
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 34-6-0.
(lb) - Max Horz 2=363(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 2, 31, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24, 22 except 32=-117(LC 12), 38=-132(LC 12), 29=-126(LC 13), 23=-147(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 31, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24, 23, 22

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-461/289, 3-4=-352/224, 4-5=-277/197, 20-21=-294/195, 21-22=-408/288
BOT CHORD 2-38=-241/349, 37-38=-241/349, 36-37=-241/349, 35-36=-241/349, 34-35=-241/349, 33-34=-241/349, 32-33=-241/349, 31-32=-239/348, 30-31=-239/348, 29-30=-239/348, 28-29=-241/349, 27-28=-241/349, 26-27=-241/349, 25-26=-241/349, 24-25=-241/349, 23-24=-241/349, 22-23=-241/349

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 31, 33, 34, 35, 36, 37, 28, 27, 26, 25, 24, 22 except (jt=lb) 32=117, 38=132, 29=126, 23=147.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.




October 7,2020

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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | A2 | COMMON | 11 | 1 | E14950640 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:29 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-RuOxdbRj8d9RUT_LotrAqKApcrrqveC7gynl3ZyVreK

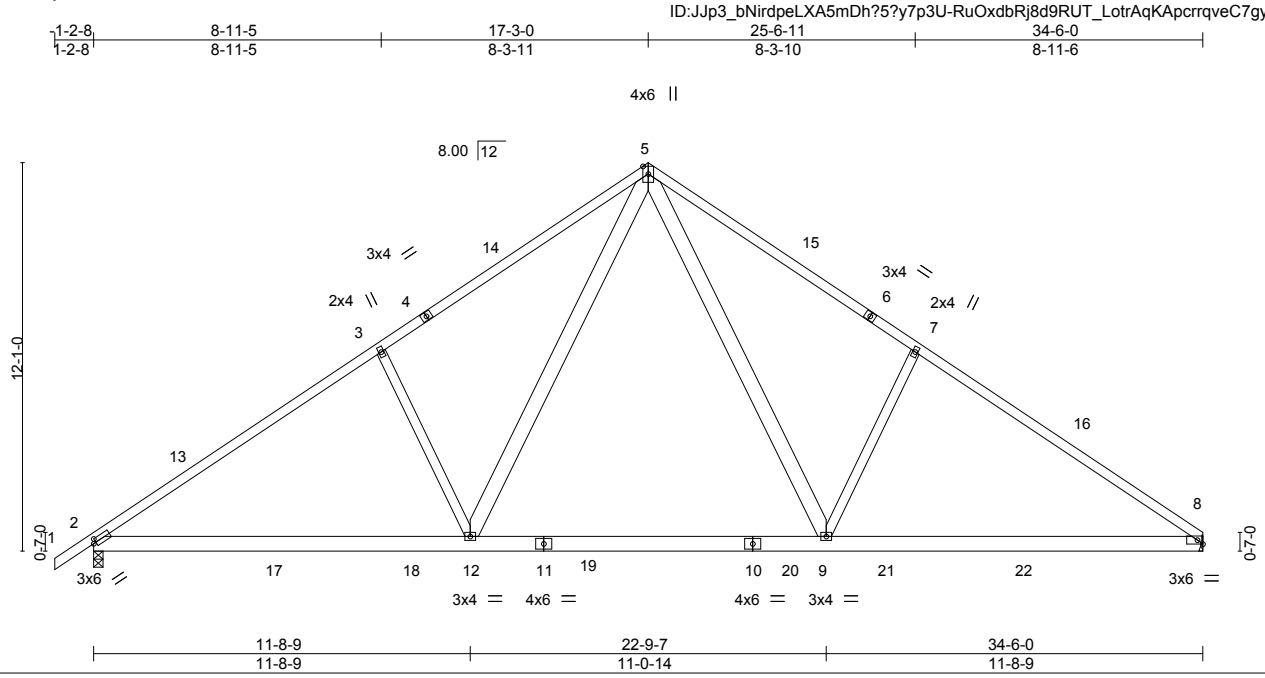


Plate Offsets (X,Y)-- [2:0-1-0,0-1-8]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.94 | Vert(LL) | -0.17 | 9-12 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.34 | 8-9 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.45 | Horz(CT) | 0.05 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.08 | 2-12 | >999 | 240 | Weight: 223 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1 *Except*
1-4,6-8: 2x4 SP 2400F 2.0E
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
7-9,3-12: 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-3-8, 8=Mechanical
Max Horz 2=290(LC 9)
Max Uplift 2=-91(LC 12), 8=-72(LC 13)
Max Grav 2=1706(LC 19), 8=1626(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2353/405, 3-5=-2184/514, 5-7=-2198/529, 7-8=-2365/418
BOT CHORD 2-12=-197/2022, 9-12=0/1323, 8-9=-201/1842
WEBS 5-9=-195/1165, 7-9=-582/348, 5-12=-192/1142, 3-12=-562/336

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 17-3-0, Exterior(2) 17-3-0 to 21-7-13, Interior(1) 21-7-13 to 34-5-4 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) 2, 8.


October 7,2020




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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | A4 | COMMON | 6 | 1 | E14950641 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:31 2020 Page 1
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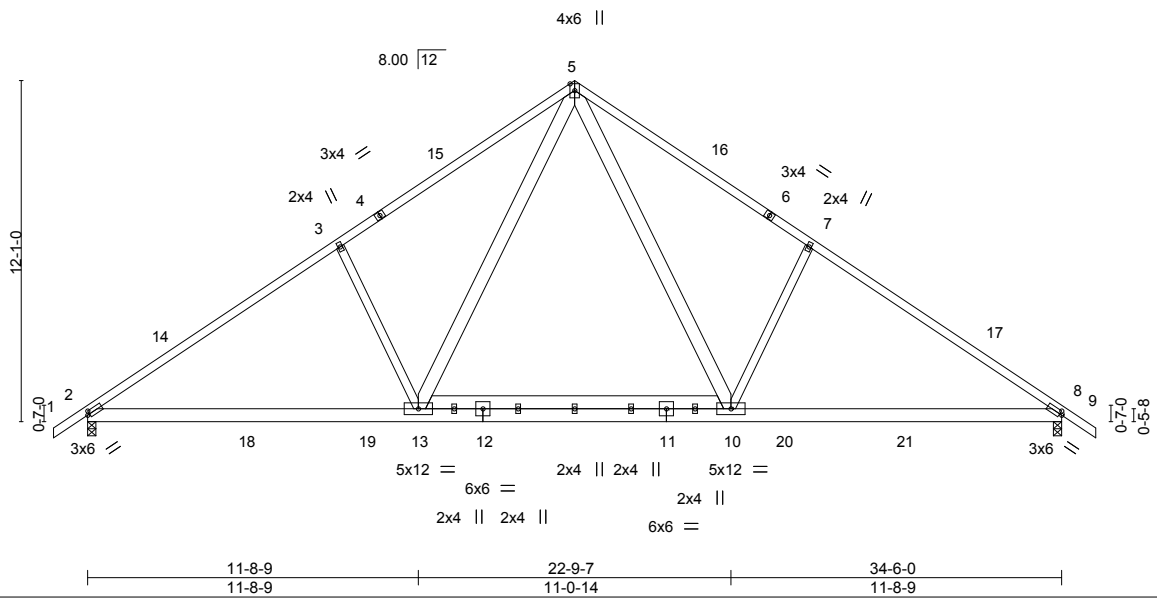


Plate Offsets (X,Y)-- [2:0-1-0,0-1-8], [8:0-1-0,0-1-8]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.91 | Vert(LL) | -0.17 | 2-13 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.66 | Vert(CT) | -0.34 | 2-13 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.43 | Horz(CT) | 0.05 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.08 | 2-13 | >999 | 240 | Weight: 250 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1 *Except*
1-4,6-9: 2x4 SP 2400F 2.0E
BOT CHORD 2x6 SP No.1
WEBS 2x6 SP No.1 *Except*
7-10,3-13: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied.
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=-295(LC 10)
Max Uplift 2=-91(LC 12), 8=-91(LC 13)
Max Grav 2=1687(LC 19), 8=1687(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2318/403, 3-5=-2149/511, 5-7=-2149/511, 7-8=-2318/403
BOT CHORD 2-13=-160/2001, 10-13=0/1308, 8-10=-172/1806
WEBS 5-10=-190/1127, 7-10=-561/336, 5-13=-190/1127, 3-13=-561/336

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 17-3-0, Exterior(2) 17-3-0 to 21-7-13, Interior(1) 21-7-13 to 35-8-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8.


October 7,2020




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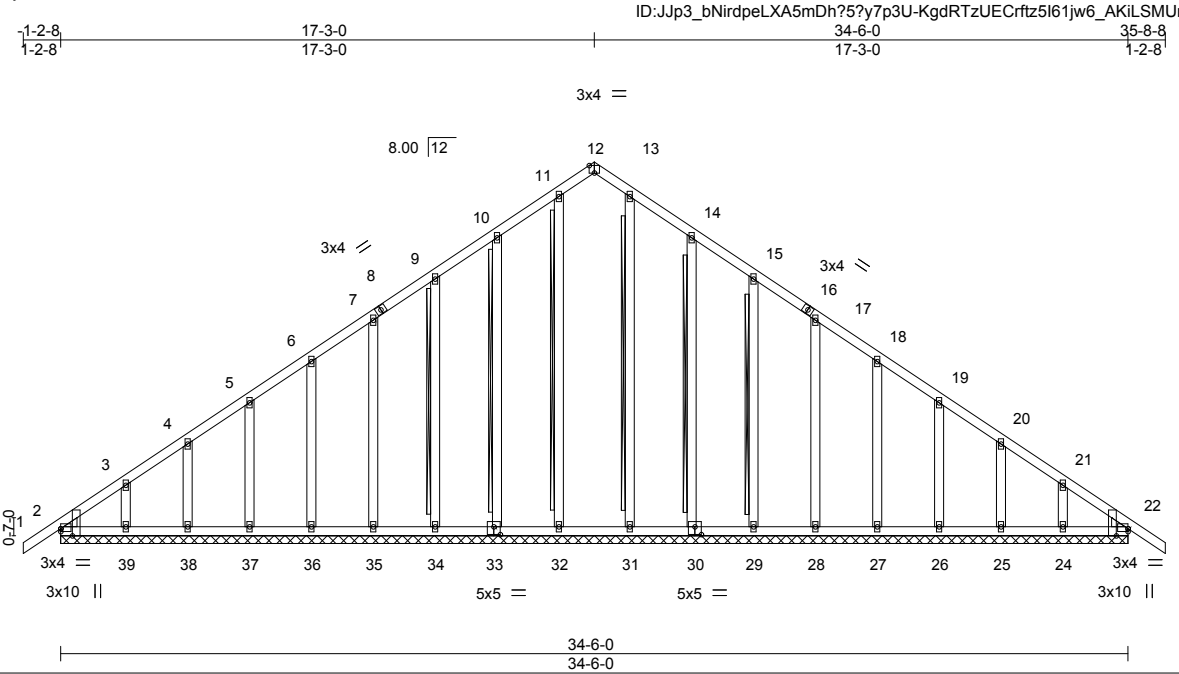
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | A5-GE | GABLE | 1 | 1 | E14950642 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:33 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-KgdRTzUECrftz5l61jw6_AKiLSMUrYHjbalzCLyVreG




Scale = 1:74.5

Plate Offsets (X,Y)-- [2:0-2-12,Edge], [2:0-0-0,0-1-2], [12:0-2-0,Edge], [16:0-0-0,0-0-0], [22:0-0-0,0-1-2], [22:0-2-12,Edge], [30:0-2-8,0-3-0], [33:0-2-8,0-3-0]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | -0.00 | 23 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | -0.00 | 23 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.12 | Horz(CT) | 0.02 | 22 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 264 lb | FT = 20% |

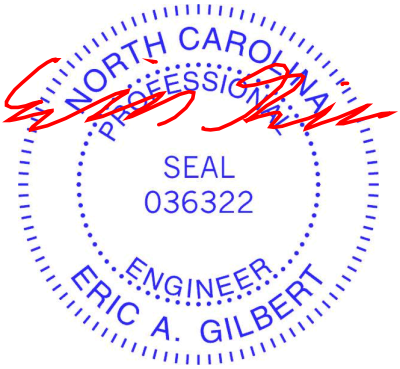
**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2 , Right: 2x4 SP No.2

**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 - 11-32, 10-33, 9-34, 13-31, 14-30, 15-29
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 34-6-0.
(lb) - Max Horz 2=-369(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 32, 34, 35, 36, 37, 38, 29, 28, 27, 26, 25 except 33=-118(LC 12), 39=-132(LC 12), 30=-127(LC 13), 24=-126(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 22, 32, 33, 34, 35, 36, 37, 38, 39, 31, 30, 29, 28, 27, 26, 25, 24

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-458/285, 3-4=-350/226, 4-5=-275/199, 20-21=-290/199, 21-22=-395/294
BOT CHORD 2-39=-254/366, 38-39=-254/366, 37-38=-254/366, 36-37=-254/366, 35-36=-254/366, 34-35=-254/366, 33-34=-254/366, 32-33=-252/365, 31-32=-252/365, 30-31=-252/365, 29-30=-254/367, 28-29=-254/367, 27-28=-254/367, 26-27=-254/367, 25-26=-254/367, 24-25=-254/367, 22-24=-254/367

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 22, 32, 34, 35, 36, 37, 38, 29, 28, 27, 26, 25 except (jt=lb) 33=118, 39=132, 30=127, 24=126.
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/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | B1-GE | COMMON SUPPORTED GAB | 1 | 1 | E14950643 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:34 2020 Page 1
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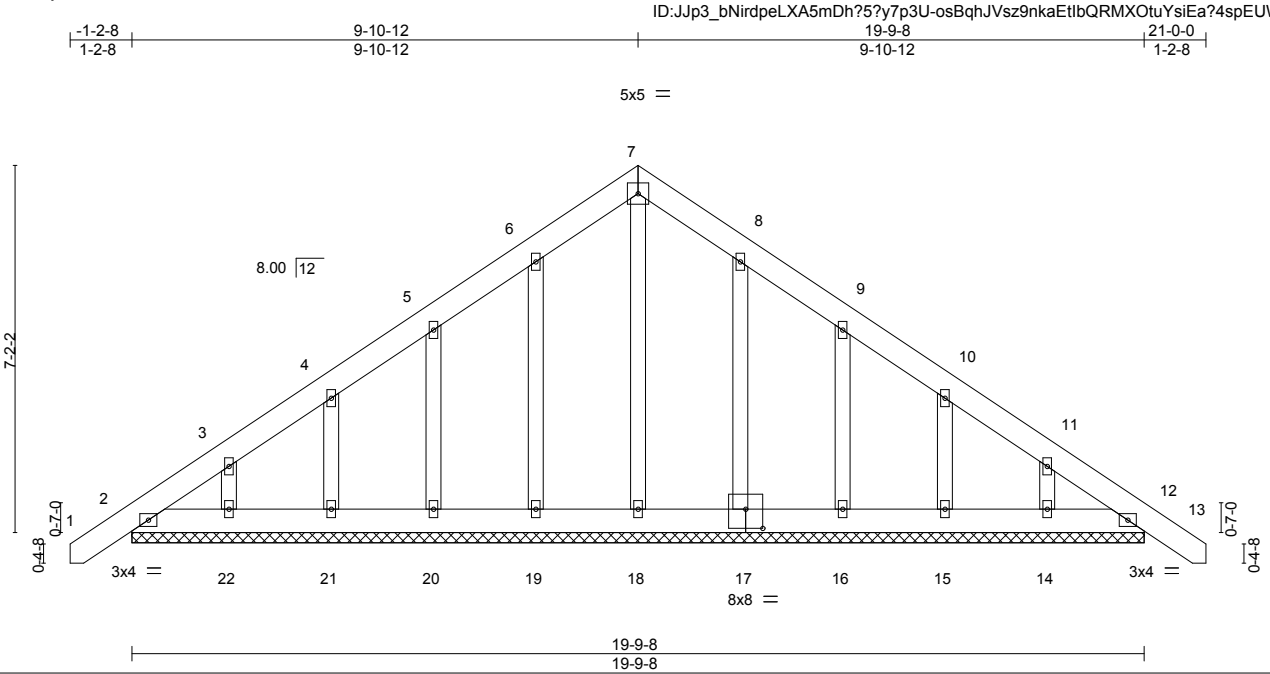


Plate Offsets (X,Y)-- [17:0-4-0,0-4-8]

| 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 | 0.03 | Vert(LL) | -0.00 | 12 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | -0.00 | 12 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.09 | Horz(CT) | 0.00 | 12 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 154 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.

**REACTIONS.** All bearings 19-9-8.
(lb) - Max Horz 2=219(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 19, 20, 21, 22, 17, 16, 15, 14, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 18, 19, 20, 21, 22, 17, 16, 15, 14, 12

**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 (3-second gust) 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, 19, 20, 21, 22, 17, 16, 15, 14, 12.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | B2 | COMMON GIRDER | 1 | 2 | E14950644 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:35 2020 Page 1
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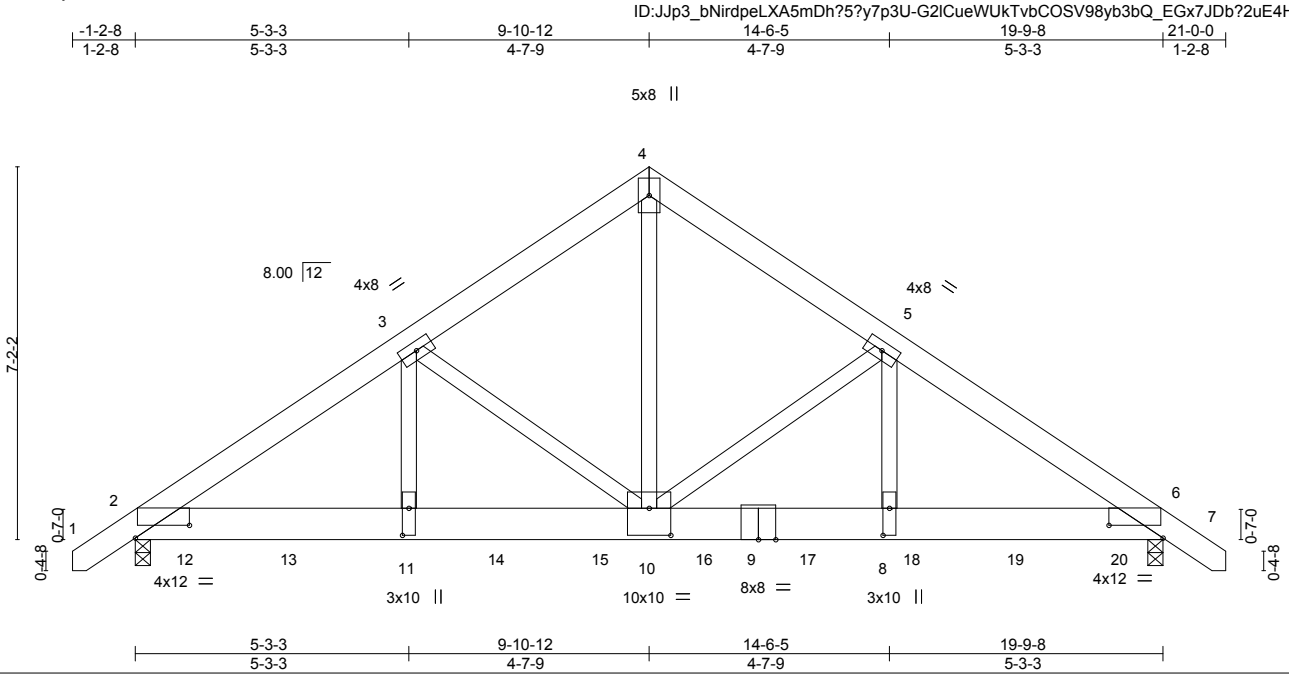


Plate Offsets (X,Y)-- [2:1-0-8,0-2-15], [6:1-0-8,0-2-15], [8:0-6-4,0-1-8], [10:0-5-0,0-6-4], [11:0-6-4,0-1-8]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.35 | Vert(LL) | -0.09 | 10-11 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.49 | Vert(CT) | -0.17 | 10-11 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.97 | Horz(CT) | 0.05 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.06 | 10-11 | >999 | 240 | Weight: 316 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-9-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8
Max Horz 2=-175(LC 25)
Max Uplift 2=-475(LC 8), 6=-485(LC 9)
Max Grav 2=8147(LC 2), 6=8350(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-10810/618, 3-4=-7460/488, 4-5=-7461/488, 5-6=-10799/619
BOT CHORD 2-11=-510/8880, 10-11=-510/8880, 8-10=-440/8874, 6-8=-440/8874
WEBS 4-10=-452/7896, 5-10=-3373/290, 5-8=-155/3783, 3-10=-3382/289, 3-11=-153/3798

**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.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-3-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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=475, 6=485.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1502 lb down and 91 lb up at 1-0-0, 1500 lb down and 93 lb up at 3-0-0, 1500 lb down and 93 lb up at 5-0-0, 1500 lb down and 93 lb up at 7-0-0, 1500 lb down and 93 lb up at 9-0-0, 1500 lb down and 93 lb up at 11-0-0, 1500 lb down and 93 lb up at 13-0-0, 1500 lb down and 93 lb up at 15-0-0, and 1500 lb down and 93 lb up at 17-0-0, and 1504 lb down and 89 lb up at 19-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-60, 4-7=-60, 2-6=-20


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Continued on page 2



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**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 11=-1350(B) 12=-1352(B) 13=-1350(B) 14=-1350(B) 15=-1350(B) 16=-1350(B) 17=-1350(B) 18=-1350(B) 19=-1350(B) 20=-1354(B)

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | C1-GE | ATTIC | 1 | 1 | E14950645 |
| | | | | | Job Reference (optional) |

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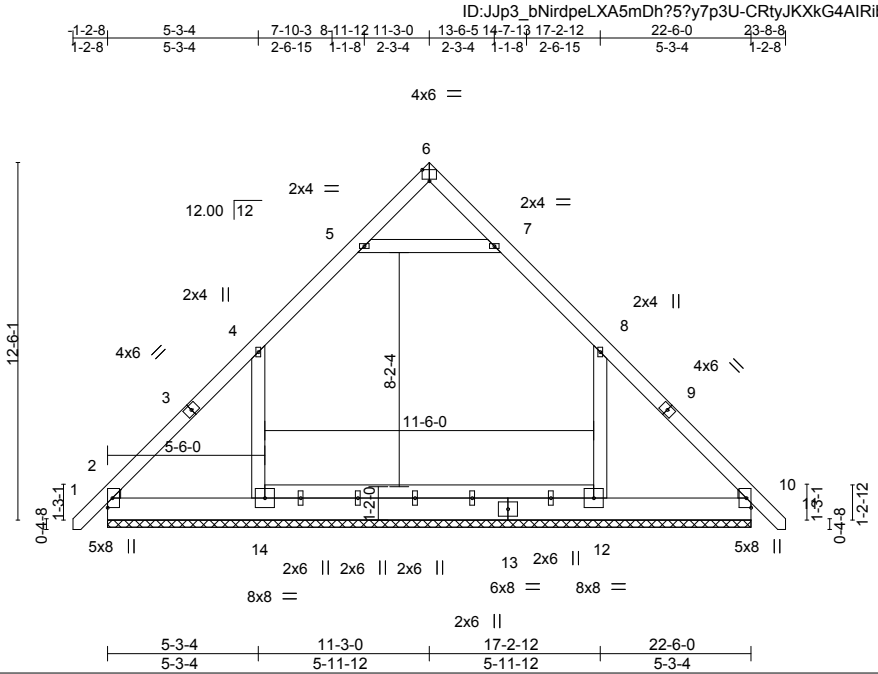


Plate Offsets (X,Y)-- [2:0-2-0,0-4-5], [2:0-1-0,0-1-0], [6:0-3-0,Edge], [10:0-1-0,0-1-0], [10:0-1-15,0-4-5]

| 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 | 0.11 | Vert(LL) | -0.00 | 11 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.26 | Vert(CT) | -0.00 | 11 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.00 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | | | | | | Weight: 236 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
12-14: 2x6 SP No.1
WEBS 2x6 SP No.1
WEDGE
Left: 2x4 SP No.2 , Right: 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 22-6-0.
(lb) - Max Horz 2=369(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) except 14=-287(LC 12), 12=-284(LC 13)
Max Grav All reactions 250 lb or less at joint(s) except 2=576(LC 1), 14=1056(LC 20), 12=1052(LC 21), 10=576(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-678/69, 4-5=-566/133, 7-8=-565/133, 8-10=-674/63
BOT CHORD 2-14=-25/457, 12-14=-25/457, 10-12=-25/457
WEBS 4-14=-524/369, 8-12=-524/366, 5-7=-350/163

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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) 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) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).4-14, 8-12
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 287 lb uplift at joint 14 and 284 lb uplift at joint 12.
8) Attic room checked for L/360 deflection.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | C2 | ATTIC | 6 | 1 | E14950646 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:39 2020 Page 1
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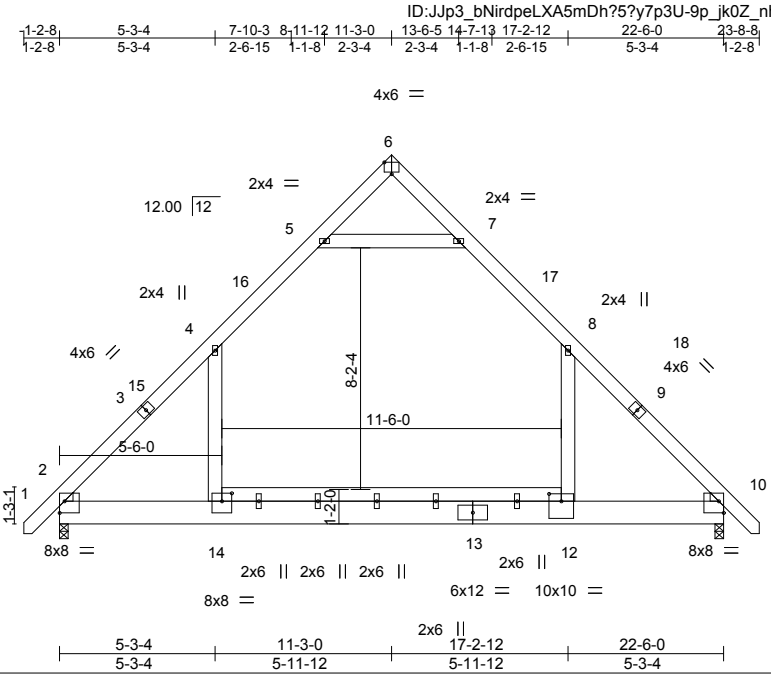


Plate Offsets (X,Y)-- [2:Edge,0-4-12], [2:0-4-5,0-2-0], [2:0-1-0,0-1-0], [6:0-3-0,Edge], [10:Edge,0-4-12], [10:0-4-5,0-1-15], [10:0-1-0,0-1-0], [12:0-5-0,0-3-0], [14:0-4-0,0-3-4]

| 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 | 0.67 | Vert(LL) | -0.29 | 12-14 | >911 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.82 | Vert(CT) | -0.51 | 12-14 | >522 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.18 | Horz(CT) | 0.01 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.10 | 12-14 | >999 | 240 | Weight: 236 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP 2400F 2.0E *Except*
1-3,9-11: 2x6 SP No.1
BOT CHORD 2x10 SP No.1 *Except*
12-14: 2x6 SP No.1
WEBS 2x6 SP No.1
WEDGE
Left: 2x4 SP No.2 , Right: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-4-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-4-3 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8
Max Horz 2=295(LC 11)
Max Grav 2=1518(LC 20), 10=1518(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-1928/0, 4-5=-1039/146, 5-6=0/385, 6-7=0/386, 7-8=-1038/146, 8-10=-1927/0
BOT CHORD 2-14=0/1088, 12-14=0/1088, 10-12=0/1088
WEBS 4-14=0/939, 8-12=0/939, 5-7=-1492/196

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-6-14 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) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).4-14, 8-12
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
7) Attic room checked for L/360 deflection.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett | E14950647 |
|---|---|---|---|---|---|---|
| J0820-3989 | C3 | ATTIC | 2 | 2 | Job Reference (optional) | |

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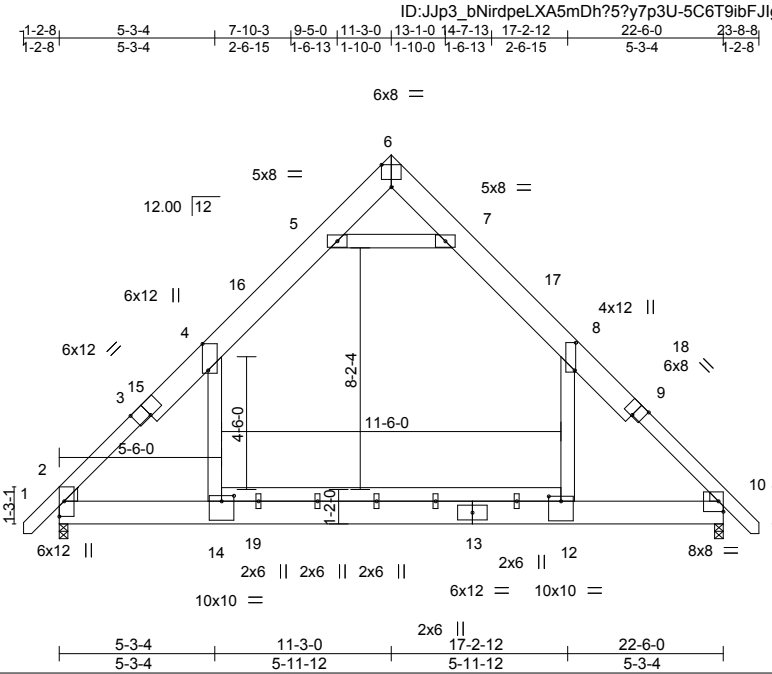


Plate Offsets (X,Y)-- [2:Edge,0-1-15], [2:0-1-15,0-4-5], [2:0-1-0,0-1-0], [3:0-6-0,Edge], [4:0-10-13,Edge], [6:0-4-0,Edge], [8:0-11-4,0-0-8], [9:0-4-0,Edge], [10:0-4-5,0-1-15], [10:0-1-0,0-1-0], [10:Edge,0-4-4], [12:0-5-0,0-2-0], [14:0-5-0,0-2-4]

| 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 | 0.74 | Vert(LL) | -0.31 | 12-14 | >848 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.56 | Vert(CT) | -0.47 | 12-14 | >562 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | NO | WB | 0.36 | Horz(CT) | 0.02 | 10 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.14 | 12-14 | >999 | 240 | Weight: 542 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x10 SP 2400F 2.0E *Except* 1-3,9-11: 2x6 SP 2400F 2.0E
BOT CHORD 2x10 SP 2400F 2.0E *Except* 12-14: 2x6 SP No.1
WEBS 2x6 SP No.1
WEDGE
Left: 2x6 SP No.1 , Right: 2x4 SP No.2

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

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8
Max Horz 2=290(LC 11)
Max Uplift 2=-117(LC 12), 10=-101(LC 13)
Max Grav 2=6007(LC 20), 10=5746(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-7574/705, 4-5=-3099/440, 5-6=-331/2626, 6-7=-297/2391, 7-8=-3334/474, 8-10=-7203/656
BOT CHORD 2-14=-203/4106, 12-14=-207/4151, 10-12=-204/4112
WEBS 4-14=-517/5919, 8-12=-401/5107, 5-7=-7548/1075

**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, 2x10 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-3-0 oc.
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-6-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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) Ceiling dead load (10.0 psf) on member(s). 4-5, 7-8, 5-7; Wall dead load (5.0psf) on member(s).4-14, 8-12
8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 12-14
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 2 and 101 lb uplift at joint 10.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3348 lb down and 480 lb up at 5-5-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) This truss is checked for L/360 deflection.

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Continued on page 2



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**LOAD CASE(S)** Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-60, 4-5=-80, 5-6=-60, 6-7=-60, 7-8=-80, 8-11=-60, 2-14=-20, 14-19=-40, 12-19=-233(F=-193), 10-12=-213(F=-193), 5-7=-20
   Drag: 4-14=-10, 8-12=-10
   Concentrated Loads (lb)
   Vert: 14=-1900(F)

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | C4 | ATTIC | 3 | 1 | E14950648 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:42 2020 Page 1
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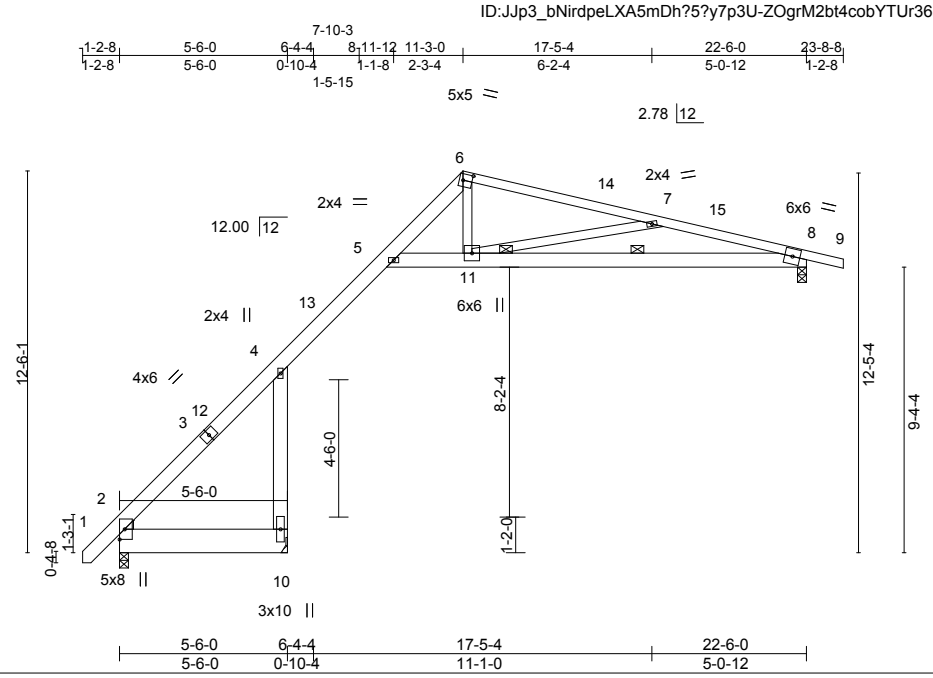


Plate Offsets (X,Y)-- [2:0-2-0,0-4-5], [2:0-1-0,0-1-0], [6:0-3-9,0-2-8]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.63 | Vert(LL) | 0.00 | 2-10 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.14 | Vert(CT) | -0.00 | 2-10 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.60 | Horz(CT) | 0.29 | 8 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | -0.00 | 2-10 | >999 | 240 | Weight: 141 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x6 SP No.1 *Except*
6-9: 2x4 SP No.1
BOT CHORD 2x10 SP No.1
WEBS 2x6 SP No.1 *Except*
6-11,7-11: 2x4 SP No.2
WEDGE
Left: 2x4 SP No.2

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 4-11-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 8-11
JOINTS 1 Brace at Jt(s): 11

**REACTIONS.** (size) 2=0-3-8, 10=Mechanical, 8=0-3-8
Max Horz 2=345(LC 12)
Max Uplift 2=-86(LC 10), 10=-491(LC 12), 8=-197(LC 9)
Max Grav 2=296(LC 12), 10=967(LC 20), 8=548(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-523/603, 4-5=-395/192, 5-6=-662/468, 6-7=-669/489, 7-8=-1518/982
WEBS 5-11=-374/606, 8-11=-924/1454, 7-11=-870/556, 4-10=-1157/854

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -1-0-14 to 3-3-15, Interior(1) 3-3-15 to 11-3-0, Exterior(2) 11-3-0 to 15-7-13, Interior(1) 15-7-13 to 23-8-8 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 2, 491 lb uplift at joint 10 and 197 lb uplift at joint 8.
7) Attic room checked for L/360 deflection.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | D1-SG | GABLE | 1 | 1 | E14950649 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:42 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-ZOgrM2bt4cobYTUr36aEr4CF35QSSdW1fTQx1JyVre7

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

Scale = 1:22.7

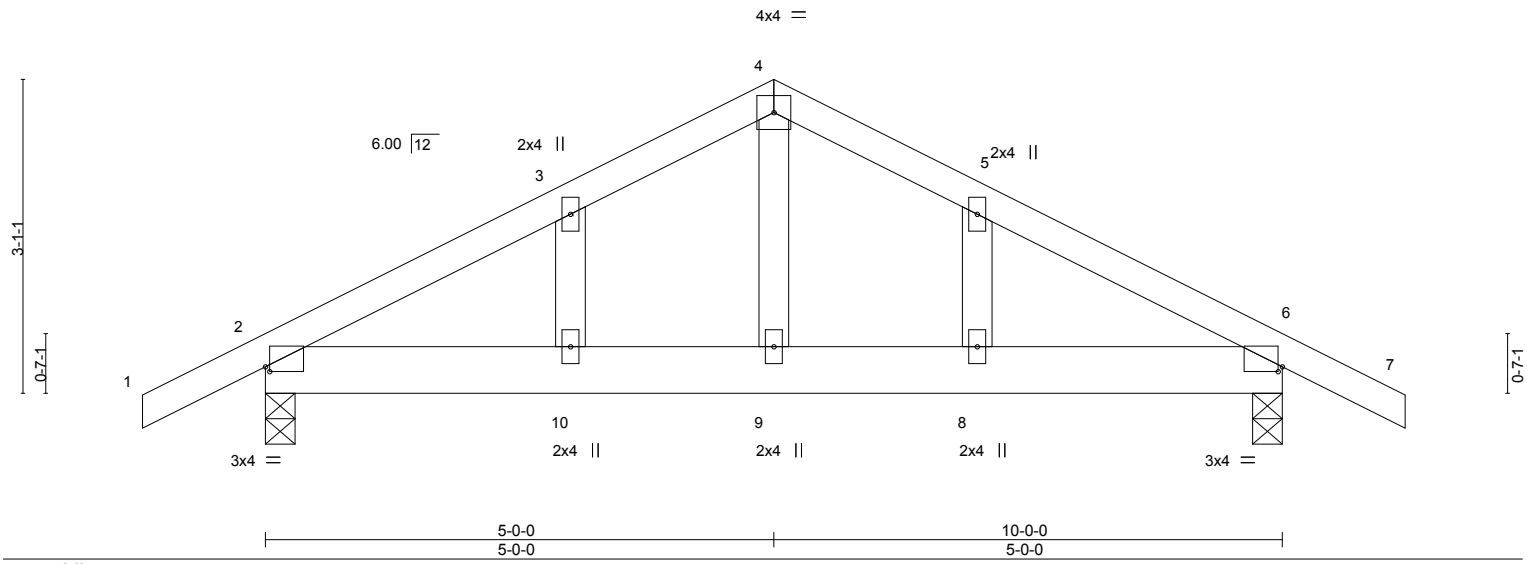


Plate Offsets (X,Y)-- [2:0-0-8,0-0-9], [6:0-0-8,0-0-9]

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.12 | Vert(LL) | -0.01 | 10 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(CT) | -0.02 | 10 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.02 | 8 | >999 | 240 | Weight: 52 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 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 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 6=0-3-8
Max Horz 2=-63(LC 17)
Max Uplift 2=-120(LC 9), 6=-120(LC 8)
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=-493/553, 3-4=-449/607, 4-5=-449/607, 5-6=-493/553
BOT CHORD 2-10=-389/381, 9-10=-389/381, 8-9=-389/381, 6-8=-389/381
WEBS 4-9=-415/246

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 120 lb uplift at joint 2 and 120 lb uplift at joint 6.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | D2 | COMMON | 4 | 1 | E14950650 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:43 2020 Page 1
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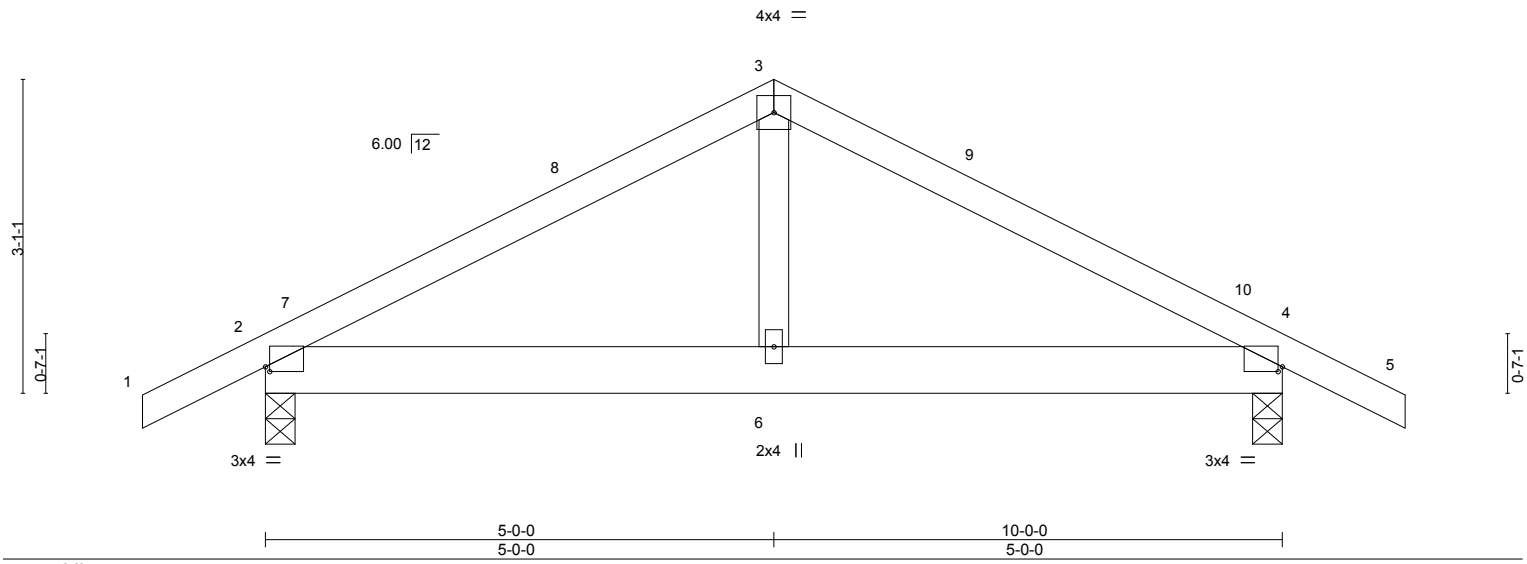
-1-2-8 / 1-2-8 | 5-0-0 / 5-0-0 | 10-0-0 / 5-0-0 | 11-2-8 / 1-2-8

Scale = 1:22.7




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

Plate Offsets (X,Y)-- [2:0-0-8,0-0-9], [4:0-0-8,0-0-9]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | 0.02 | 4-6 | >999 | 240 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | -0.01 | 2-6 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 48 lb | FT = 20% |

**LUMBER-**
TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 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 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 4=0-3-8
Max Horz 2=-40(LC 10)
Max Uplift 2=-91(LC 9), 4=-91(LC 8)
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=-506/558, 3-4=-506/558
BOT CHORD 2-6=-365/377, 4-6=-365/377
WEBS 3-6=-327/239

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) 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 91 lb uplift at joint 2 and 91 lb uplift at joint 4.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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | P1-GE | GABLE | 1 | 1 | E14950651 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:43 2020 Page 1
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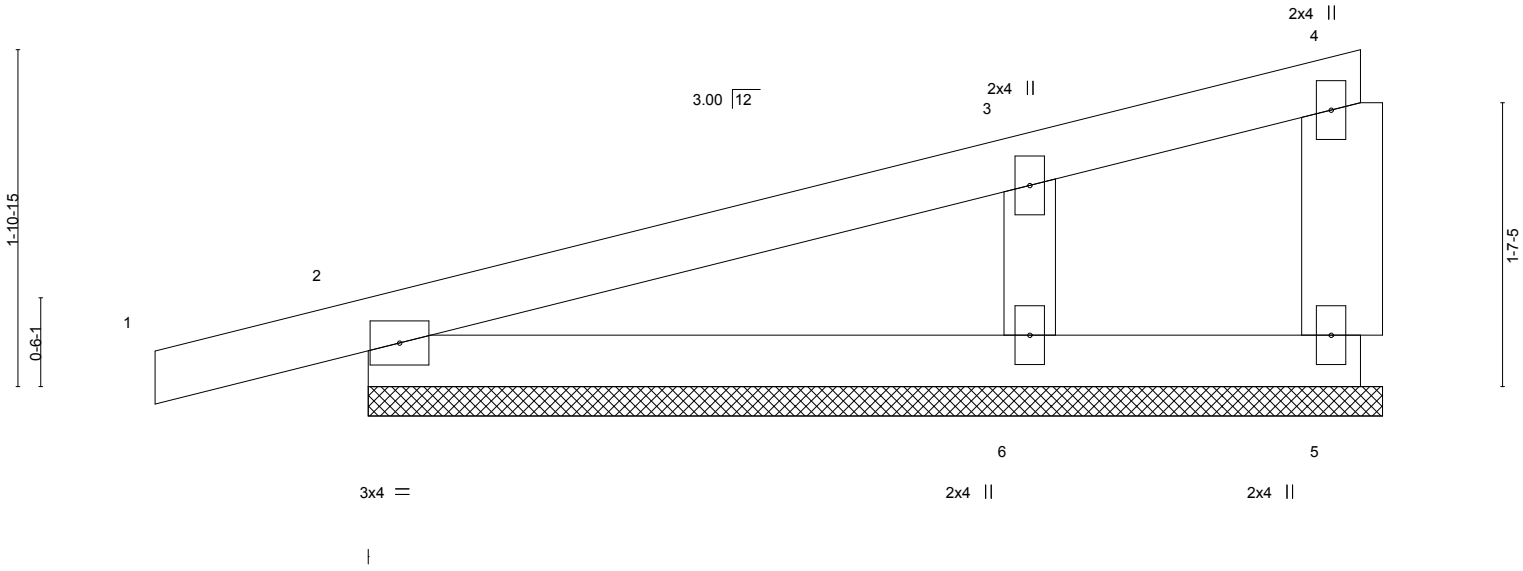
-1-2-8 / 1-2-8 | 5-9-0 / 5-9-0

Scale = 1:13.1




| 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 | 0.10 | Vert(LL) | -0.00 | 1 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.08 | Vert(CT) | 0.00 | 1 | 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: 23 lb | FT = 20% |

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.** (size) 5=5-9-0, 2=5-9-0, 6=5-9-0
Max Horz 2=80(LC 8)
Max Uplift 5=-10(LC 8), 2=-93(LC 8), 6=-93(LC 12)
Max Grav 5=20(LC 1), 2=210(LC 1), 6=284(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 (3-second gust) 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 10 lb uplift at joint 5, 93 lb uplift at joint 2 and 93 lb uplift at joint 6.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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | P2 | MONOPITCH | 6 | 1 | E14950652 |
| | | | | | Job Reference (optional) |

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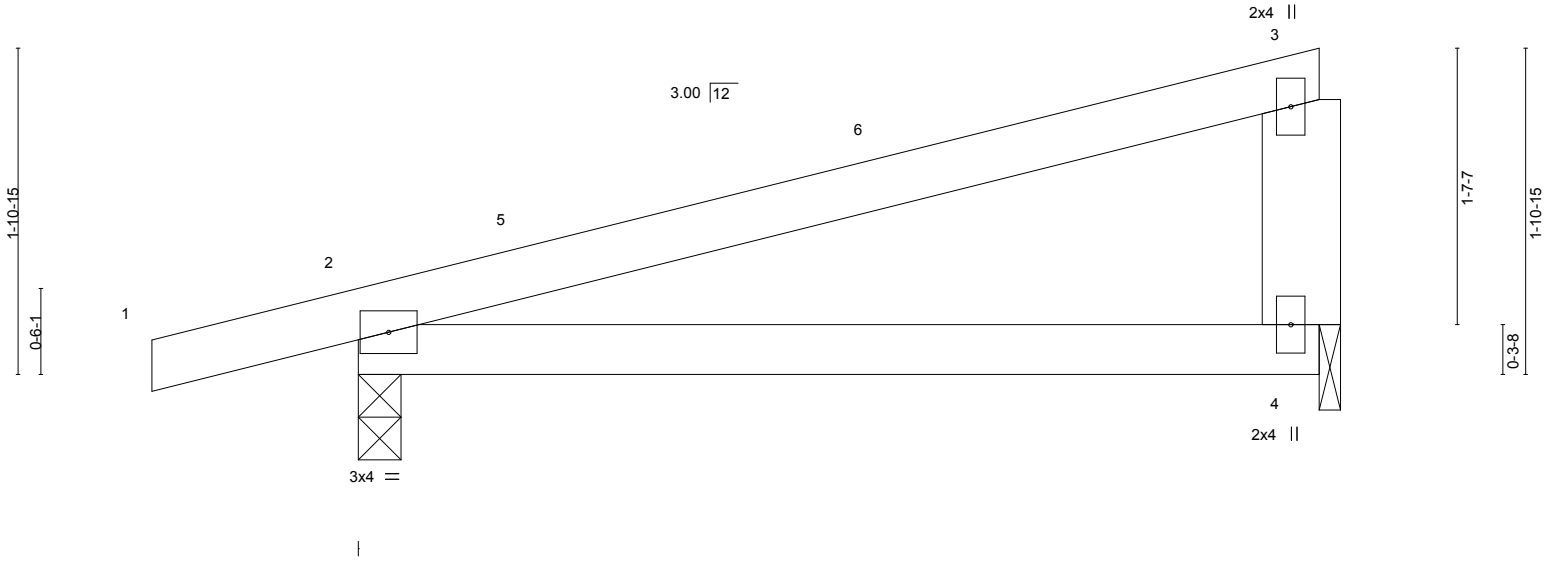
-1-2-8 5-9-0
1-2-8 5-9-0

Scale = 1:13.5




| 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 | 0.37 | Vert(LL) | -0.04 | 2-4 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.27 | Vert(CT) | -0.09 | 2-4 | >728 | 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) | 0.10 | 2-4 | >655 | 240 | Weight: 22 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-9-0 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=56(LC 8)
Max Uplift 2=-130(LC 8), 4=-85(LC 8)
Max Grav 2=306(LC 1), 4=206(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 (3-second gust) 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 5-6-4 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 130 lb uplift at joint 2 and 85 lb uplift at joint 4.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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | P3 | MONOPITCH | 10 | 1 | E14950653 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:44 2020 Page 1
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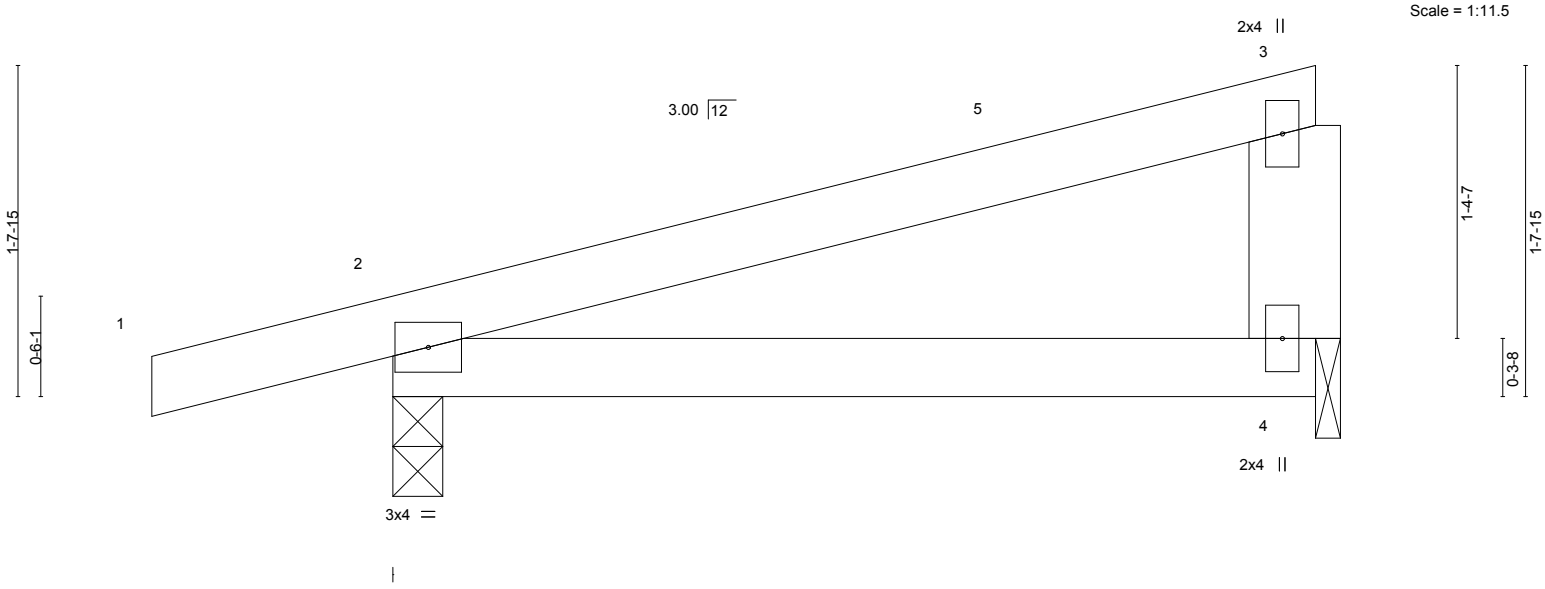
-1-2-8 / 1-2-8 | 4-9-0 / 4-9-0

Scale = 1:11.5




| 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) | -0.02 | 2-4 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | -0.04 | 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) | 0.04 | 2-4 | >999 | 240 | Weight: 18 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-9-0 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=48(LC 8)
Max Uplift 2=-117(LC 8), 4=-67(LC 8)
Max Grav 2=268(LC 1), 4=164(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 (3-second gust) 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 4-6-4 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 117 lb uplift at joint 2 and 67 lb uplift at joint 4.


October 7,2020

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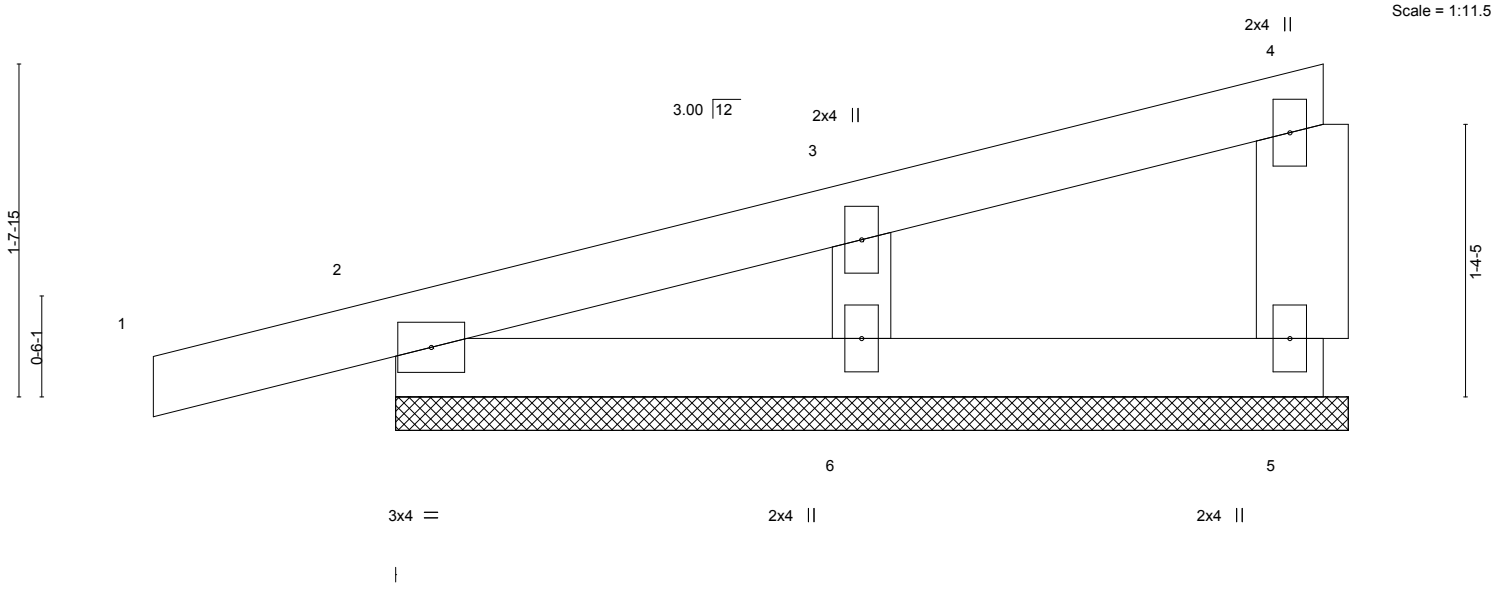
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | P4-GE | GABLE | 1 | 1 | E14950654 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:45 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-zzL__3elNXAAPxDQkE7xTiqI9ISVf_lULRfbdeyVre4

-1-2-8 / 1-2-8 | 4-9-0 / 4-9-0

Scale = 1:11.5




| 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 | 0.04 | 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: 19 lb | FT = 20% |

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.** (size) 5=4-9-0, 2=4-9-0, 6=4-9-0
Max Horz 2=69(LC 8)
Max Uplift 5=-25(LC 8), 2=-85(LC 8), 6=-65(LC 12)
Max Grav 5=70(LC 1), 2=167(LC 1), 6=197(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 (3-second gust) 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 25 lb uplift at joint 5, 85 lb uplift at joint 2 and 65 lb uplift at joint 6.


October 7,2020

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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | VB1 | Valley | 1 | 1 | E14950655 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:45 2020 Page 1
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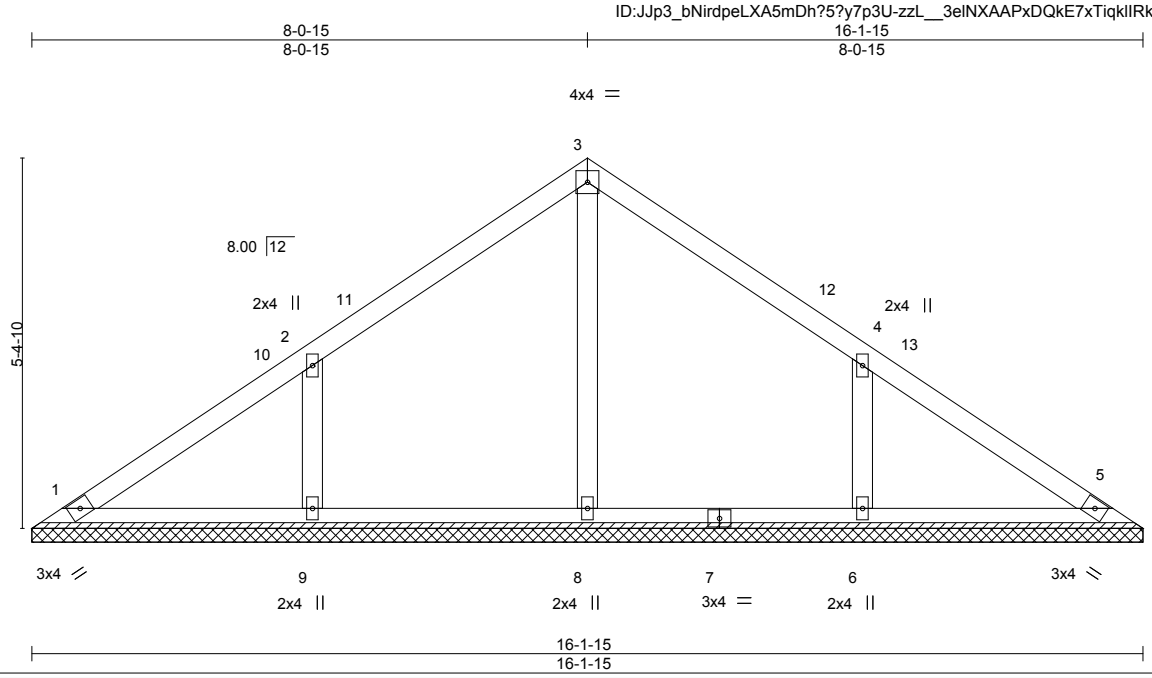


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.16 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.08 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 65 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 16-1-15.
(lb) - Max Horz 1=-121(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-108(LC 12), 6=-108(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 8 except 9=385(LC 19), 6=385(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-322/211, 4-6=-322/211

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-12 to 4-10-9, Interior(1) 4-10-9 to 8-0-15, Exterior(2) 8-0-15 to 12-5-12, Interior(1) 12-5-12 to 15-8-2 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 except (jt=lb) 9=108, 6=108.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | VB2 | Valley | 1 | 1 | E14950656 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:46 2020 Page 1
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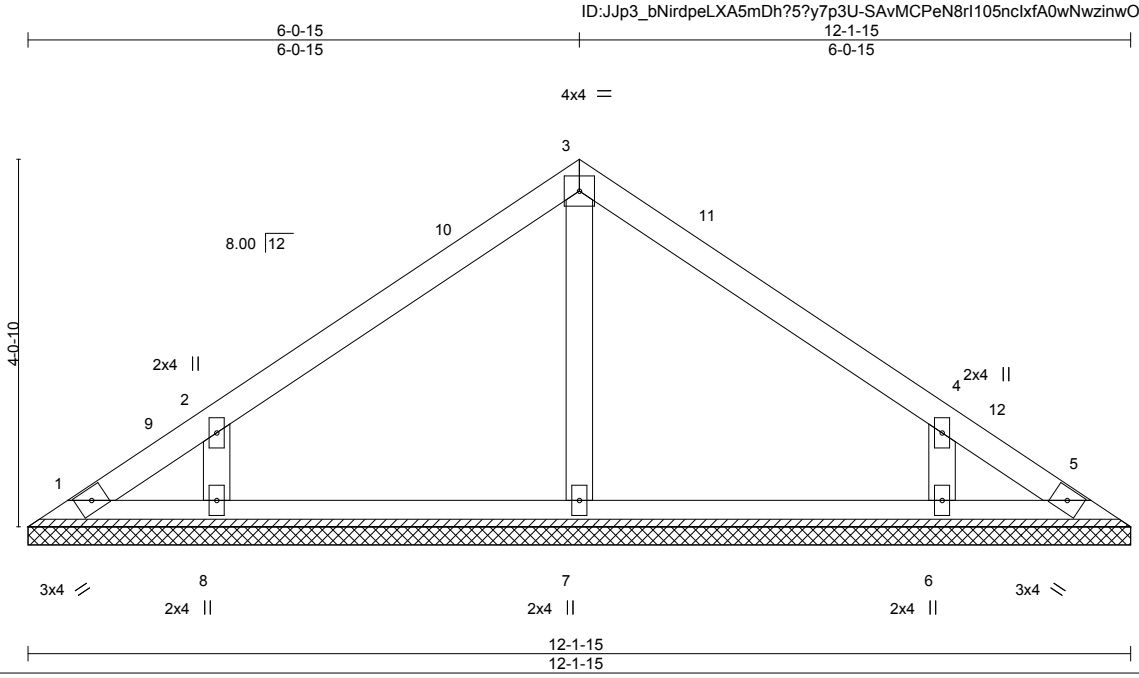


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.13 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 46 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 12-1-15.
(lb) - Max Horz 1=89(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 8, 6
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=264(LC 1), 8=314(LC 19), 6=314(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-279/203, 4-6=-279/203

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-12 to 4-10-9, Interior(1) 4-10-9 to 6-0-15, Exterior(2) 6-0-15 to 10-5-12, Interior(1) 10-5-12 to 11-8-2 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, 5, 8, 6.


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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | VB3 | Valley | 1 | 1 | E14950657 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:47 2020 Page 1
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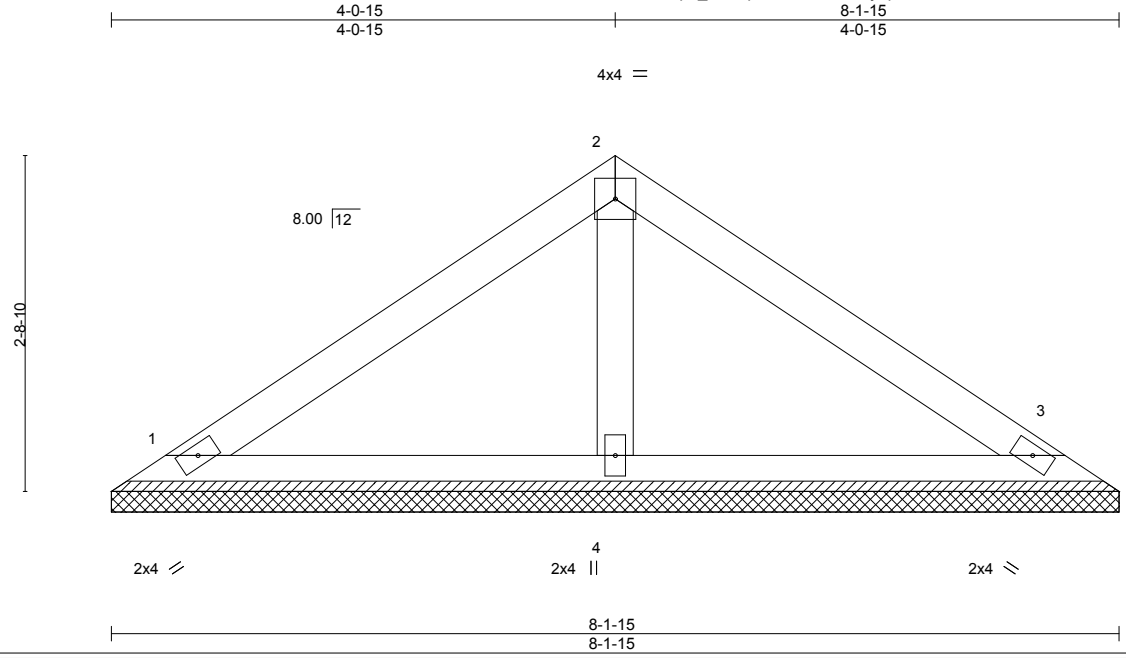


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.18 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.10 | 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: 28 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=8-1-15, 3=8-1-15, 4=8-1-15
Max Horz 1=-58(LC 8)
Max Uplift 1=-25(LC 12), 3=-30(LC 13)
Max Grav 1=156(LC 1), 3=156(LC 1), 4=263(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 (3-second gust) 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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| Job | Truss | Truss Type | Qty | Ply | Precision/Lot 38 Summerlin/Harnett |
|---|---|---|---|---|---|
| J0820-3989 | VB4 | Valley | 1 | 1 | E14950658 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.330 s Jul 22 2020 MiTek Industries, Inc. Wed Oct 7 09:21:47 2020 Page 1
ID:JJp3_bNirdpeLXA5mDh?5?y7p3U-wMTkPlf0v8QueEMosfAPY7v6D6797uhnpl8iiXyVre2

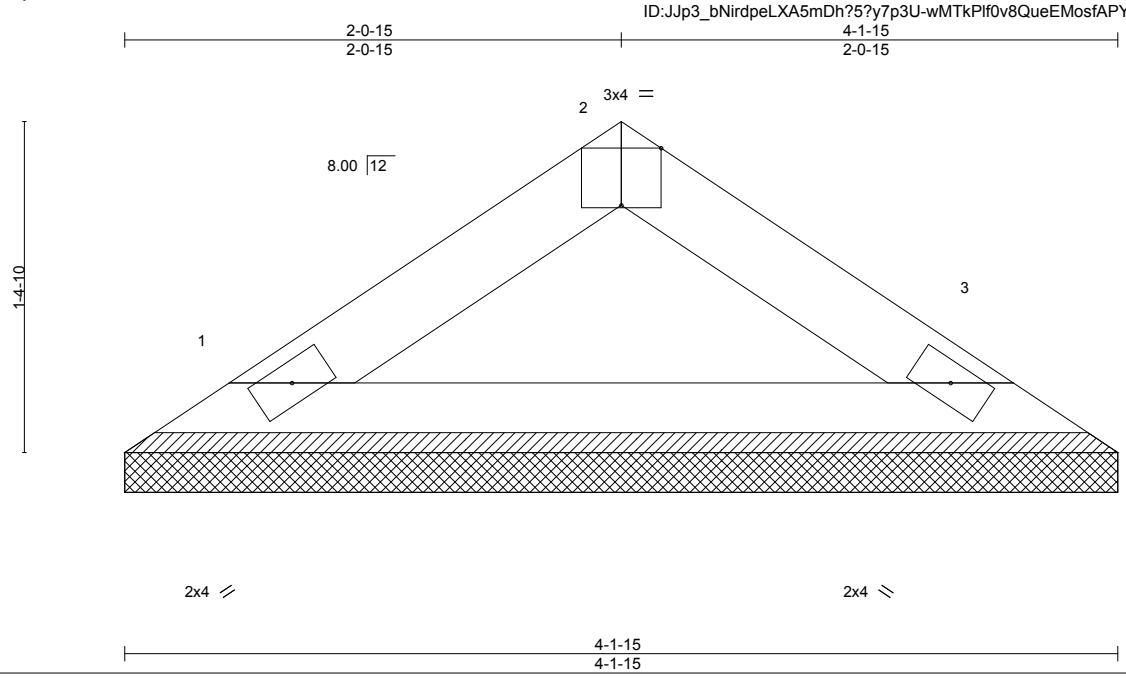


Plate Offsets (X,Y)-- [2:0-2-0,Edge]

| 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 | 0.03 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.09 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-P | | | | | | | Weight: 12 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 4-1-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=4-1-15, 3=4-1-15
Max Horz 1=-26(LC 8)
Max Uplift 1=-7(LC 12), 3=-7(LC 13)
Max Grav 1=128(LC 1), 3=128(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 (3-second gust) 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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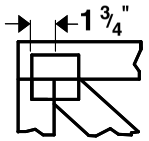
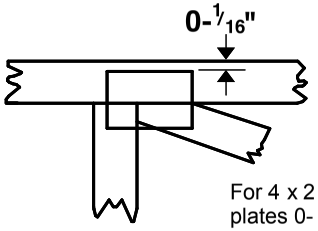
# Symbols

## 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.

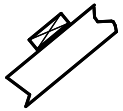
*** Plate location details available in MiTek 20/20 software or upon request.**

## PLATE SIZE

4 x 4

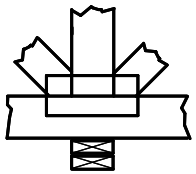
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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

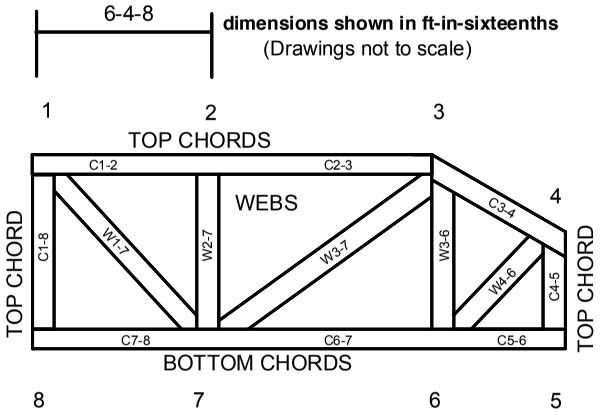


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

**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.



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# General Safety Notes

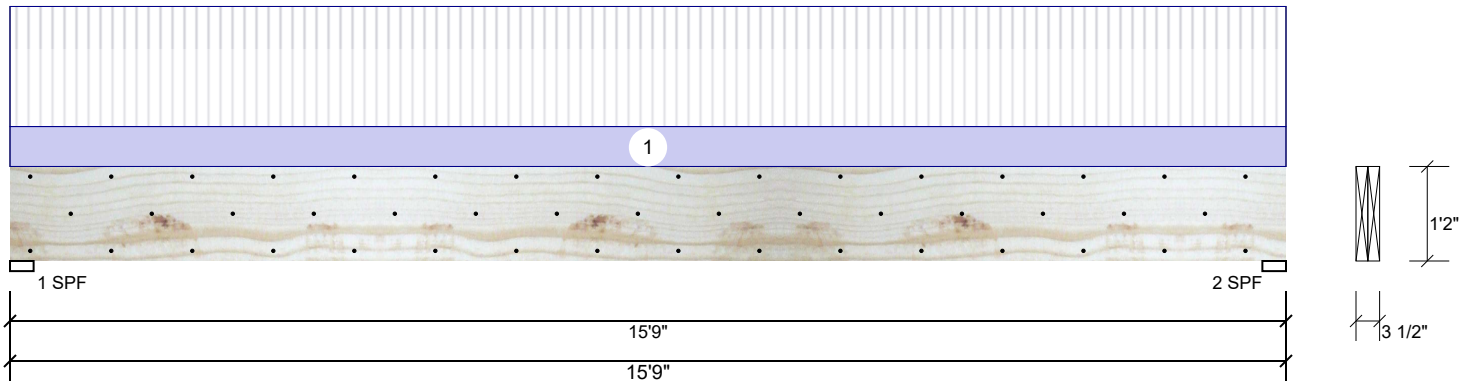
Failure to Follow Could Cause Property Damage or Personal Injury

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.

# BM1 Kerto-S LVL 1.750" X 14.000" 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: | 360 | Load Sharing: | No |
| Deflection TL: | 240 | Deck: | Not Checked |
| Importance: | Normal | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|
| 1 | 2701 | 984 | 0 | 0 | 0 |
| 2 | 2701 | 984 | 0 | 0 | 0 |

## Bearings

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|
| 1 - SPF | 3.500" | 71% | 984 / 2701 | 3685 | L | D+L |
| 2 - SPF | 3.500" | 71% | 984 / 2701 | 3685 | L | D+L |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 13676 ft-lb | 7'10 1/2" | 26999 ft-lb | 0.507 (51%) | D+L | L |
| Unbraced | 13676 ft-lb | 7'10 1/2" | 13717 ft-lb | 0.997 (100%) | D+L | L |
| Shear | 3565 lb | 1'4 3/4" | 10453 lb | 0.341 (34%) | D+L | L |
| LL Defl inch | 0.287 (L/639) | 7'10 9/16" | 0.510 (L/360) | 0.560 (56%) | L | L |
| TL Defl inch | 0.392 (L/468) | 7'10 9/16" | 0.765 (L/240) | 0.510 (51%) | D+L | L |

## Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be laterally braced at a maximum of 7'4 7/8" o.c.
5 Bottom braced at bearings.
6 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 | | | Near Face | 114 PLF | 343 PLF | 0 PLF | 0 PLF | 0 PLF | F4 |
| | Self Weight | | | | 11 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 12/11/2021

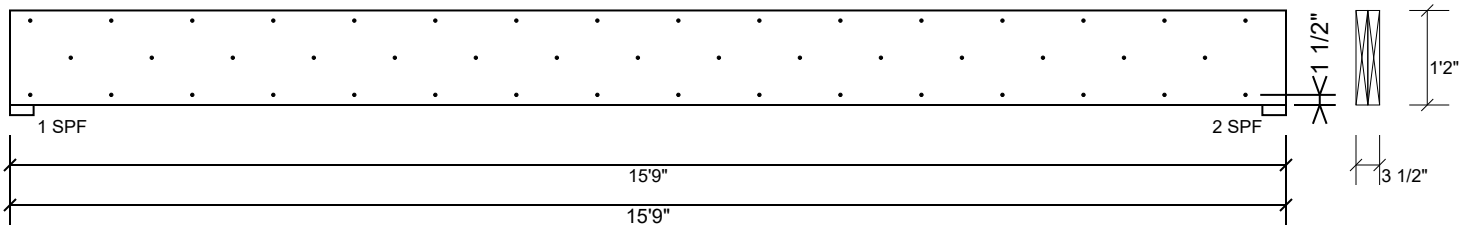
**Manufacturer Info**

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

# BM1 Kerto-S LVL 1.750" X 14.000" 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 | 93.1 % |
| Load | 228.5 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 | D+L |
| 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 12/11/2021

### Manufacturer Info

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301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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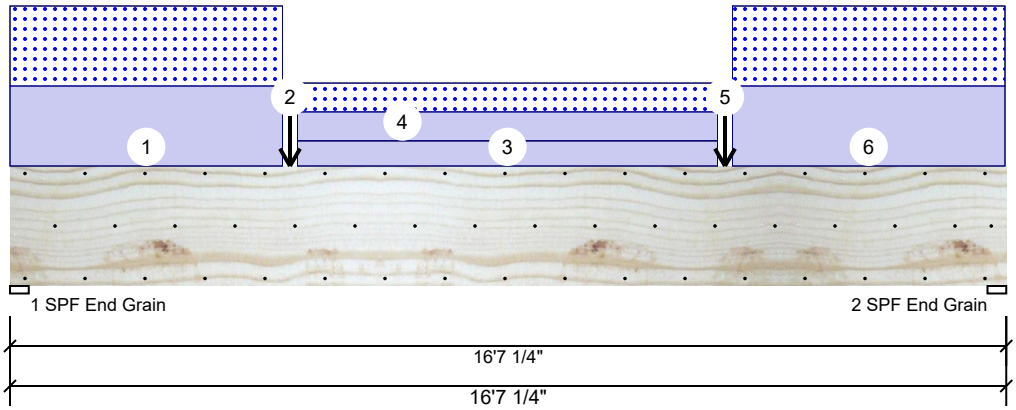
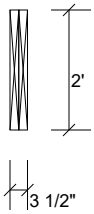
USA
28314
910-864-TRUS

# GDH Kerto-S LVL 1.750" X 24.000" 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 | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|
| 1 | 0 | 5660 | 5085 | 0 | 0 |
| 2 | 0 | 5646 | 5072 | 0 | 0 |

## Bearings

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.750" | 94% | 5660 / 5085 | 10745 | L | D+S |
| 2 - SPF End Grain | 3.750" | 94% | 5646 / 5072 | 10718 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 41877 ft-lb | 8'3 7/8" | 84163 ft-lb | 0.498 (50%) | D+S | L |
| Unbraced | 41877 ft-lb | 8'3 7/8" | 41979 ft-lb | 0.998 (100%) | D+S | L |
| Shear | 9001 lb | 2'2 7/8" | 20608 lb | 0.437 (44%) | D+S | L |
| LL Defl inch | 0.146 (L/1324) | 8'3 11/16" | 0.403 (L/480) | 0.360 (36%) | S | L |
| TL Defl inch | 0.315 (L/615) | 8'3 11/16" | 0.538 (L/360) | 0.590 (59%) | D+S | L |

## Design Notes

1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top must be laterally braced at a maximum of 4'1 7/8" o.c.
6 Bottom braced at bearings.
7 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 | Part. Uniform | 0-0-0 to 4-6-8 | | Top | 380 PLF | 0 PLF | 380 PLF | 0 PLF | 0 PLF | C2 |
| 2 | Point | 4-8-0 | | Top | 2873 lb | 0 lb | 2873 lb | 0 lb | 0 lb | C3 |
| 3 | Part. Uniform | 4-9-8 to 11-9-8 | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | WALL |
| 4 | Part. Uniform | 4-9-8 to 11-9-8 | | Top | 137 PLF | 0 PLF | 137 PLF | 0 PLF | 0 PLF | C4 |
| 5 | Point | 11-11-0 | | Top | 2873 lb | 0 lb | 2873 lb | 0 lb | 0 lb | C3 |
| 6 | Part. Uniform | 12-0-8 to 16-7-0 | | Top | 380 PLF | 0 PLF | 380 PLF | 0 PLF | 0 PLF | C2 |
| | Self Weight | | | | 19 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 12/11/2021

**Manufacturer Info**

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ICC-ES: ESR-3633

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1001 S. Reilly Road, Suite #639
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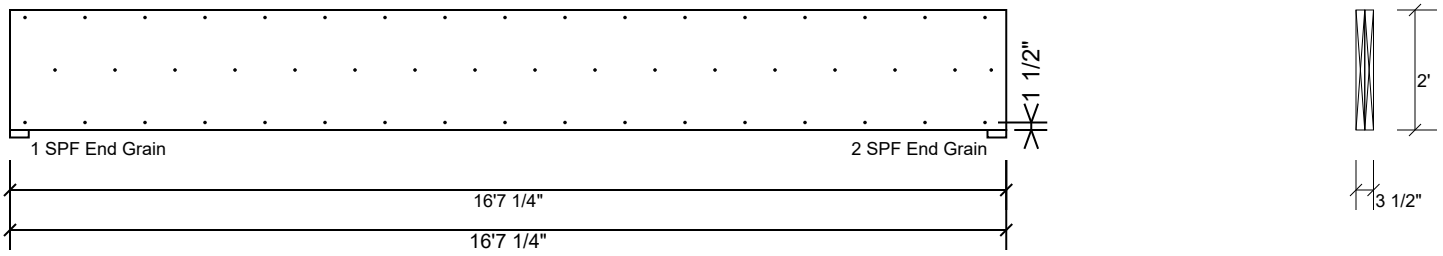
28314
910-864-TRUS

# GDH Kerto-S LVL 1.750" X 24.000" 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 12/11/2021

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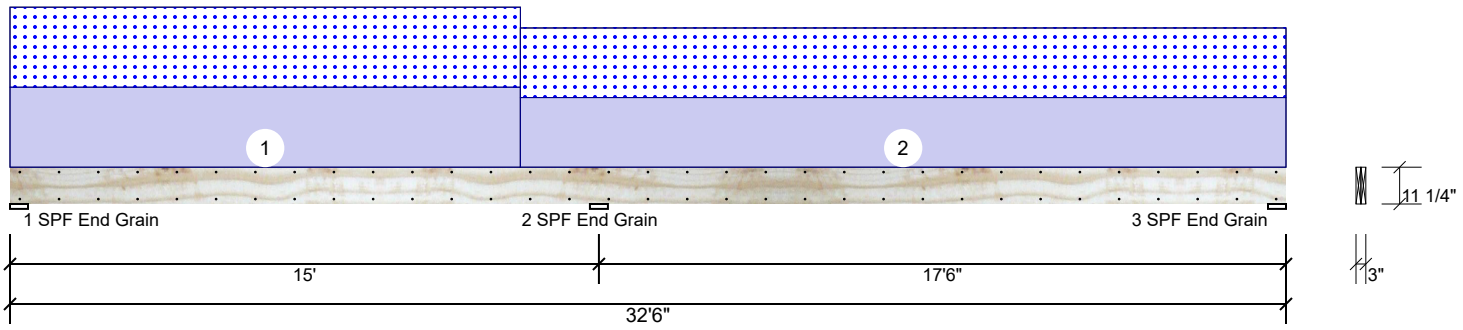
ICC-ES: ESR-3633

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

# Front Porch Beams SP #2 2.000" X 12.000" 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 | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|
| 1 | 0 | 437 | 437 | 0 | 0 |
| 2 | 0 | 1403 | 1403 | 0 | 0 |
| 3 | 0 | 467 | 467 | 0 | 0 |

## Bearings

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 5.500" | 10% | 437 / 482 | 919 | L_ | D+S |
| 2 - SPF End Grain | 5.500" | 30% | 1403 / 1403 | 2807 | LL | D+S |
| 3 - SPF End Grain | 5.500" | 10% | 467 / 495 | 962 | _L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Neg Moment | -4518 ft-lb | 15' | 4548 ft-lb | 0.993 (99%) | D+S | LL |
| Unbraced | -4518 ft-lb | 15' | 4519 ft-lb | 1.000 (100%) | D+S | LL |
| Pos Moment | 3085 ft-lb | 25'3 13/16" | 4548 ft-lb | 0.678 (68%) | D+S | _L |
| Unbraced | 3085 ft-lb | 25'3 13/16" | 3089 ft-lb | 0.998 (100%) | D+S | _L |
| Shear | 1285 lb | 15'11 1/4" | 4528 lb | 0.284 (28%) | D+S | LL |
| LL Defl inch | 0.147 (L/1395) | 24'4 5/16" | 0.428 (L/480) | 0.340 (34%) | S | _L |
| TL Defl inch | 0.266 (L/772) | 24'6 5/16" | 0.570 (L/360) | 0.470 (47%) | D+S | _L |

## Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top must be laterally braced at a maximum of 11'9" o.c.
6 Bottom must be laterally braced at a maximum of 11 1/4" o.c.
7 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 | Part. Uniform | 0-0-0 to 13-0-0 | | Top | 77 PLF | 0 PLF | 77 PLF | 0 PLF | 0 PLF | P2 |
| 2 | Part. Uniform | 13-0-0 to 32-6-0 | | Top | 67 PLF | 0 PLF | 67 PLF | 0 PLF | 0 PLF | P3 |

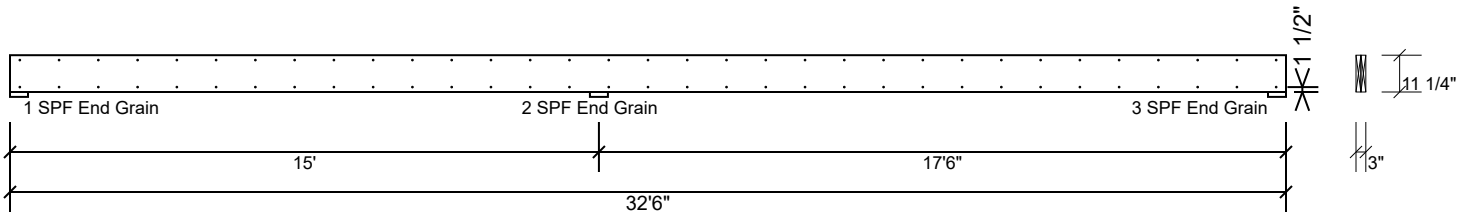
This design is valid until 12/11/2021

Manufacturer Info

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

## Front Porch Beams SP #2 2.000" X 12.000" 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 | 202.6 PLF |
| Yield Limit per Fastener | 101.3 lb. |
| Yield Mode | IV |
| Edge Distance | 1 1/2" |
| Min. End Distance | 3" |
| Load Combination | |
| Duration Factor | 1.00 |

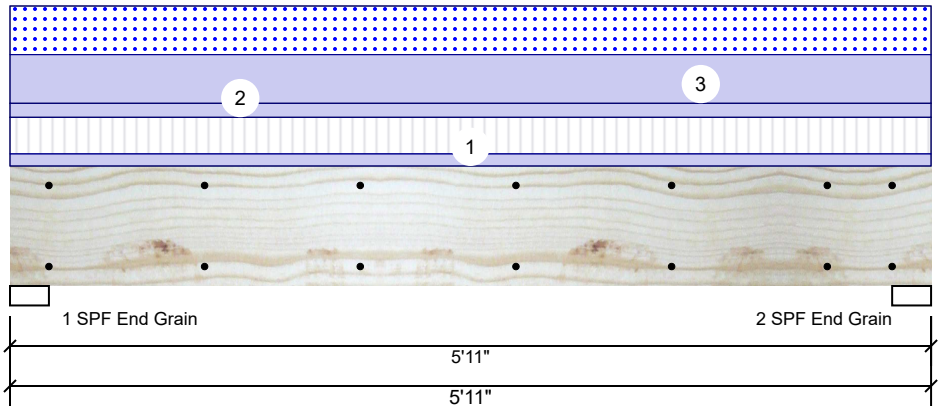
This design is valid until 12/11/2021

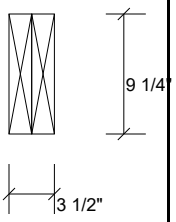
**Manufacturer Info**

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

# 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 | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|
| 1 | 926 | 1915 | 1231 | 0 | 0 |
| 2 | 926 | 1915 | 1231 | 0 | 0 |

## Bearings

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.000" | 39% | 1915 / 1617 | 3532 | L | D+0.75(L+S) |
| 2 - SPF End Grain | 3.000" | 39% | 1915 / 1617 | 3532 | L | D+0.75(L+S) |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 4583 ft-lb | 2'11 1/2" | 14423 ft-lb | 0.318 (32%) | D+0.75(L+S) | L |
| Unbraced | 4583 ft-lb | 2'11 1/2" | 11027 ft-lb | 0.416 (42%) | D+0.75(L+S) | L |
| Shear | 2388 lb | 4'11 1/2" | 7943 lb | 0.301 (30%) | D+0.75(L+S) | L |
| LL Defl inch | 0.033 (L/2040) | 2'11 1/2" | 0.139 (L/480) | 0.240 (24%) | 0.75(L+S) | L |
| TL Defl inch | 0.071 (L/934) | 2'11 1/2" | 0.185 (L/360) | 0.390 (39%) | D+0.75(L+S) | L |

## Design Notes

1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2 Refer to last page of calculations for fasteners required for specified loads.
3 Girders are designed to be supported on the bottom edge only.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 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 | 104 PLF | 313 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 2 | Uniform | | | Top | 120 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Uniform | | | Top | 416 PLF | 0 PLF | 416 PLF | 0 PLF | 0 PLF | |
| | 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 12/11/2021

**Manufacturer Info**

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ICC-ES: ESR-3633

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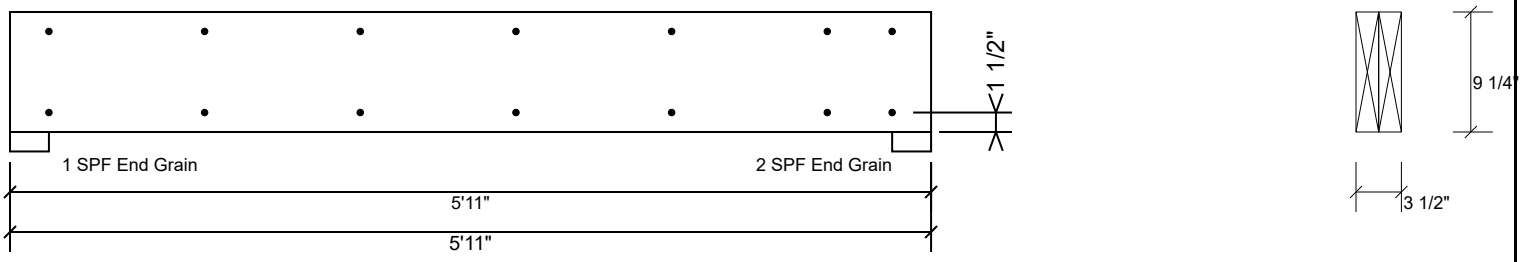
# BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

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
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