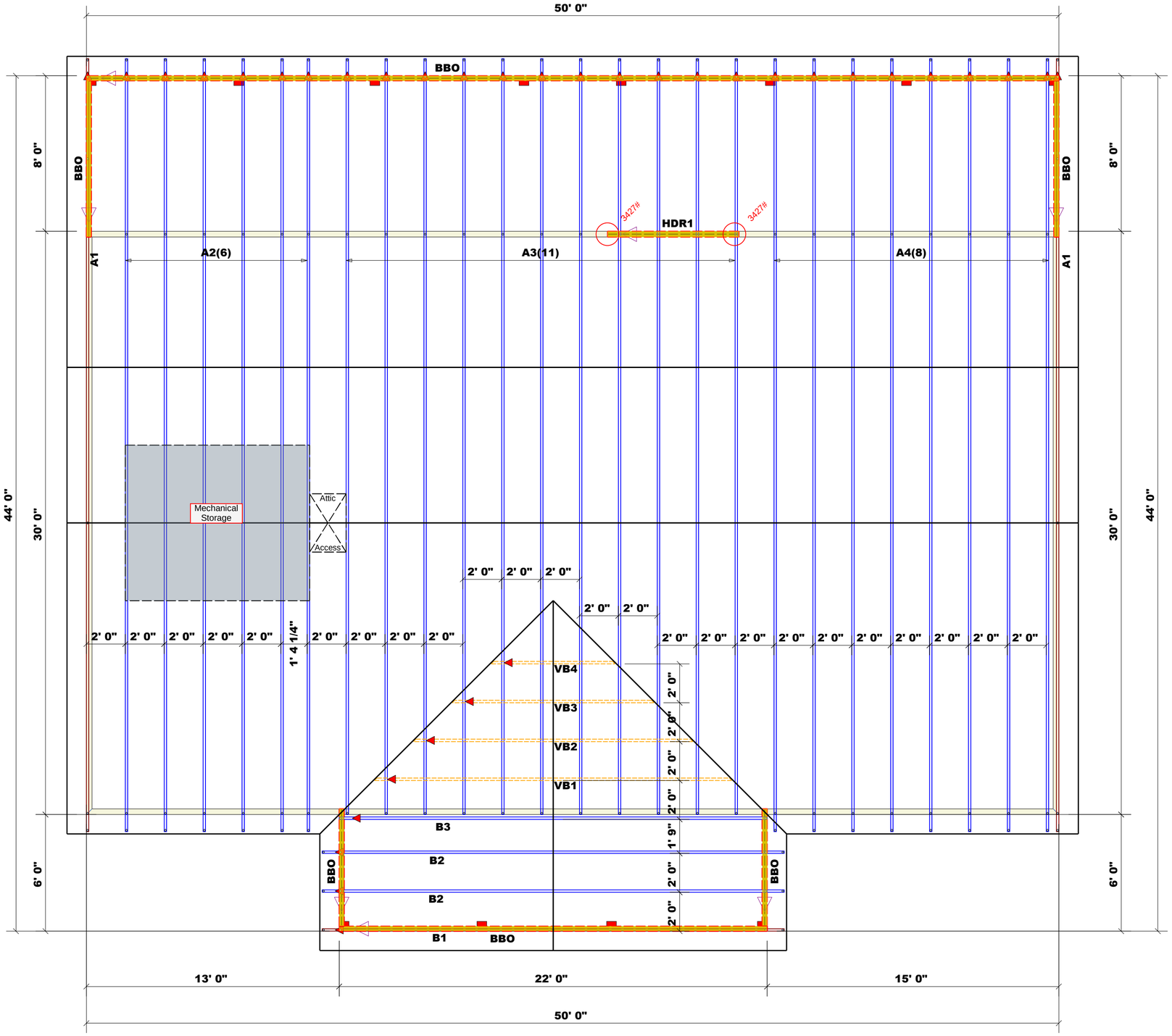

50' 0"
BBO
8' 0"
BBO
BBO
A1
A2(6)
3427#
HDR1
3427#
A3(11)
A4(8)
A1
44' 0"
30' 0"
Mechanical Storage
Attic
Access
2' 0"
2' 0"
2' 0"
2' 0"
2' 0"
1' 4 1/4"
2' 0"
2' 0"
2' 0"
2' 0

# Reaction Summary of Order

ComTech ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park P.O. Box 40408
Fayetteville, N.C. 28309 (910) 864-TRUS

| | | | |
|---|---|---|---|
| **REQ. QUOTE DATE** | / / | **ORDER #** | J1023-5827 |
| **ORDER DATE** | 10/17/23 | **QUOTE #** | |
| **DELIVERY DATE** | / / | **CUSTOMER ACCT #** | 0000006631 |
| **DATE OF INVOICE** | / / | **CUSTOMER PO #** | |
| **ORDERED BY** | Gary Sealey | **INVOICE #** | |
| **COUNTY** | Harnett | **TERMS** | |
| **SUPERINTENDANT** | Gary Sealey | **SALES REP** | Neil Baggett |
| **JOBSITE PHONE #** | (910) 885--1664 | **SALES AREA** | Neil Baggett |

SOLD TO
**Old Hickory Enterprises, LLC**
**233 Tailwinds Ln.**
**St. Pauls, NC 28384**
**(910) 885--1664**

SHIP TO
**Old Hickory Enterprises, LLC**
**178 Collins Rd.**
**Lillington, NC 27546**

**JOB NAME:** Thompson Residence **LOT #** **SUBDIV:**
**MODEL:** Roof **TAG:** Plan 1502-RRR **JOB CATEGORY:** WCall - Will Call

**DELIVERY INSTRUCTIONS:**
70 miles round trip

**SPECIAL INSTRUCTIONS:**

**PLAN SEAL DATE:** 7/1/15

**BUILDING DEPARTMENT**
Roof Order

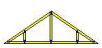
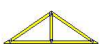
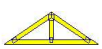
| **OVERHANG INFO** | | **HEEL HEIGHT** | 00-06-08 | **REQ. LAYOUTS** | | | | **REQ. ENGINEERING** | | | | | **BY** | **DATE** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **END CUT** | **RETURN** | | | | | | | | | | | **QUOTE** | | / / |
| PLUMB | | **GABLE STUDS** | 24 IN. OC | | | JOBSITE | 1 | | | JOBSITE | 1 | **LAYOUT** | | / / |
| | | | | | | | | | | | | **CUTTING** | NB | 10/17/23 |

## ROOF TRUSSES

**LOADING INFORMATION**

| TCLL-TCDL-BCLL-BCDL | STRESS INCR. |
|---|---|
| 20.0,10.0,0.0,10.0 | 1.15 |

**ROOF TRUSS SPACING:** 24.0 IN. O.C. (TYP.)

| PROFILE | QTY / PLY | PITCH TOP | PITCH BOT | TYPE ID | BASE O/A | LUMBER TOP | LUMBER BOT | OVERHANG LEFT | OVERHANG RIGHT | REACTIONS |
|---|---|---|---|---|---|---|---|---|---|---|
|  | 2 | 4.00 | 0.00 | GABLE A1 | 38-00-00 38-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | 00-10-08 | Joint 2 151.7 lbs. -42.4 lbs. Joint 22 167.8 lbs. -57.0 lbs. Joint 24 151.5 lbs. -132.4 lbs. Joint 25 184.3 lbs. -93.2 lbs. Joint 26 175.3 lbs. -86.5 lbs. |
|  | 6 | 4.00 | 0.00 | ROOF A2 | 38-00-00 38-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | 00-10-08 | Joint 9 1296.6 lbs. -77.5 lbs. Joint 15 1978.3 lbs. -264.8 lbs. |
|  | 11 | 4.00 | 0.00 | ROOF A3 | 38-00-00 38-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | | Joint 9 1256.6 lbs. -64.9 lbs. Joint 14 1979.1 lbs. -152.6 lbs. |
|  | 8 | 4.00 | 0.00 | ROOF A4 | 38-00-00 38-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | 00-10-08 | Joint 9 1307.1 lbs. -77.5 lbs. Joint 15 1978.3 lbs. -152.6 lbs. |
|  | 1 | 8.00 | 0.00 | GABLE B1 | 22-00-00 22-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | 00-10-08 | Joint 2 922.1 lbs. -190.6 lbs. Joint 16 922.1 lbs. -190.6 lbs. |
|  | 2 | 8.00 | 0.00 | COMMON B2 | 22-00-00 22-00-00 | 2 X 6 | 2 X 6 | 00-10-08 | 00-10-08 | Joint 2 922.1 lbs. -135.8 lbs. Joint 6 922.1 lbs. -135.8 lbs. |
|  | 1 | 8.00 | 0.00 | COMMON B3 | 22-00-00 22-00-00 | 2 X 6 | 2 X 6 | | | Joint 1 870.0 lbs. -132.2 lbs. Joint 5 870.0 lbs. -132.2 lbs. |
|  | 1 | 8.00 | 0.00 | VALLEY VB1 | 18-03-05 18-03-05 | 2 X 4 | 2 X 4 | | | Joint 1 168.1 lbs. -2.7 lbs. Joint 5 168.2 lbs. 10.9 lbs. Joint 6 489.1 lbs. -125.2 lbs. Joint 8 401.5 lbs. 50.2 lbs. Joint 9 493.5 lbs. -125.3 lbs. |
|  | 1 | 8.00 | 0.00 | VALLEY VB2 | 14-03-05 14-03-05 | 2 X 4 | 2 X 4 | | | Joint 1 106.1 lbs. -11.9 lbs. Joint 5 93.0 lbs. 8.1 lbs. Joint 6 340.0 lbs. -97.9 lbs. Joint 7 259.4 lbs. 48.1 lbs. Joint 8 340.2 lbs. -98.1 lbs. |
|  | 1 | 8.00 | 0.00 | VALLEY VB3 | 10-03-05 10-03-05 | 2 X 4 | 2 X 4 | | | Joint 1 186.3 lbs. -23.2 lbs. Joint 3 186.3 lbs. -30.5 lbs. Joint 4 378.0 lbs. 6.5 lbs. |
|  | 1 | 8.00 | 0.00 | VALLEY VB4 | 06-03-05 06-03-05 | 2 X 4 | 2 X 4 | | | Joint 1 117.1 lbs. -18.5 lbs. Joint 3 117.1 lbs. -22.7 lbs. Joint 4 196.4 lbs. 14.1 lbs. |

## ITEMS

| QTY | ITEM TYPE | SIZE | LENGTH FT-IN-16 | PART NUMBER | NOTES |
|---|---|---|---|---|---|

# Reaction Summary of Order

ComTech
ROOF & FLOOR TRUSSES & BEAMS
Reilly Road Industrial Park P.O. Box 40408
Fayetteville, N.C. 28309 (910) 864-TRUS

| | | | |
|---|---|---|---|
| **REQ. QUOTE DATE** | / / | **ORDER #** | J1023-5827 |
| **ORDER DATE** | 10/17/23 | **QUOTE #** | |
| **DELIVERY DATE** | / / | **CUSTOMER ACCT #** | 0000006631 |
| **DATE OF INVOICE** | / / | **CUSTOMER PO #** | |
| **ORDERED BY** | Gary Sealey | **INVOICE #** | |
| **COUNTY** | Harnett | **TERMS** | |
| **SUPERINTENDANT** | Gary Sealey | **SALES REP** | Neil Baggett |
| **JOBSITE PHONE #** | (910) 885--1664 | **SALES AREA** | Neil Baggett |

SOLD TO
**Old Hickory Enterprises, LLC**
**233 Tailwinds Ln.**
**St. Pauls, NC 28384**
**(910) 885--1664**

SHIP TO
**Old Hickory Enterprises, LLC**
**178 Collins Rd.**
**Lillington, NC 27546**

**JOB NAME:** Thompson Residence **LOT #** **SUBDIV:**
**MODEL:** Roof **TAG:** Plan 1502-RRR **JOB CATEGORY:** WCall - Will Call

**DELIVERY INSTRUCTIONS:**
70 miles round trip

**SPECIAL INSTRUCTIONS:**

**PLAN SEAL DATE:** 7/1/15

**BUILDING DEPARTMENT**
Roof Order

| **OVERHANG INFO** | | **HEEL HEIGHT** | 00-06-08 | **REQ. LAYOUTS** | | | | **REQ. ENGINEERING** | | | | | **BY** | **DATE** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **END CUT** | **RETURN** | | | | | | | | | | | **QUOTE** | | / / |
| | | | | | | | | | | | | **LAYOUT** | | / / |
| PLUMB | | **GABLE STUDS** | 24 IN. OC | | | JOBSITE | 1 | | | JOBSITE | 1 | **CUTTING** | NB | 10/17/23 |

## *ITEMS*

| QTY | ITEM TYPE | SIZE | LENGTH FT-IN-16 | PART NUMBER | NOTES |
|---|---|---|---|---|---|
| 2 | LVL Beams (Sized) | LVL, 1-3/4" x 9-1/4" (S) | 07-00-00 | | HDR1 |

ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J1023-5827
Old Hickory/Thompson Residence/Harnett

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

Pages or sheets covered by this seal: I61450353 thru I61450363

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844


October 18,2023

Gilbert, Eric

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

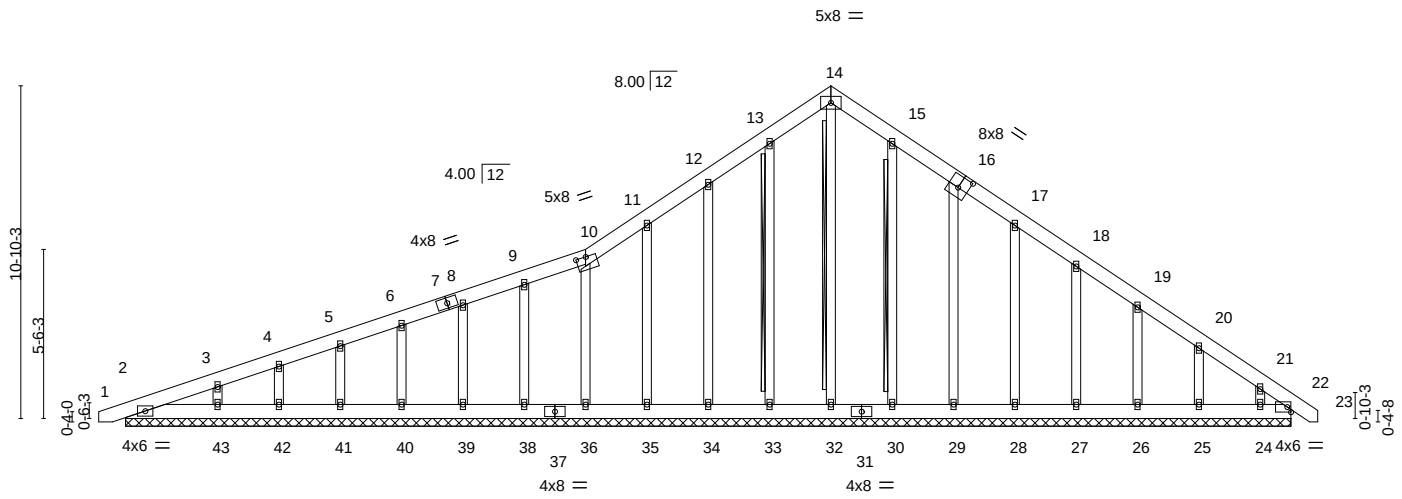
| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | A1 | GABLE | 2 | 1 | I61450353 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:43 2023 Page 1

ID:roCQZwnLu08jxjH0goh?9tySav_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

-0-10-8 0-10-8 | 15-10-8 15-0-0 | 23-10-8 8-0-0 | 38-10-8 15-0-0 | 39-9-0 0-10-8

Scale = 1:75.1




-0-10-8 0-10-8 | 38-10-8 38-0-0 | 39-9-0 0-10-8

Plate Offsets (X,Y)-- [10:0-4-0,0-0-0], [16:0-4-0,0-4-8]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.05 | Vert(LL) | -0.00 | 22 | n/r | 120 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | -0.00 | 22 | n/r | 120 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.01 | 22 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 319 lb | FT = 20% |

**LUMBER-**

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

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 6-0-0 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |
| WEBS | T-Brace: 2x4 SPF No.2 - 14-32, 13-33, 15-30 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 38-0-0.

(lb) - Max Horz 2=343(LC 11)

Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 30, 28, 27, 26, 25 except 29=-103(LC 13), 24=-132(LC 13)

Max Grav All reactions 250 lb or less at joint(s) 2, 22, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 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=-286/64, 12-13=-206/256, 13-14=-242/286, 14-15=-243/287, 21-22=-283/194

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 22, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 30, 28, 27, 26, 25 except (jt=lb) 29=103, 24=132.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.


October 18,2023



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

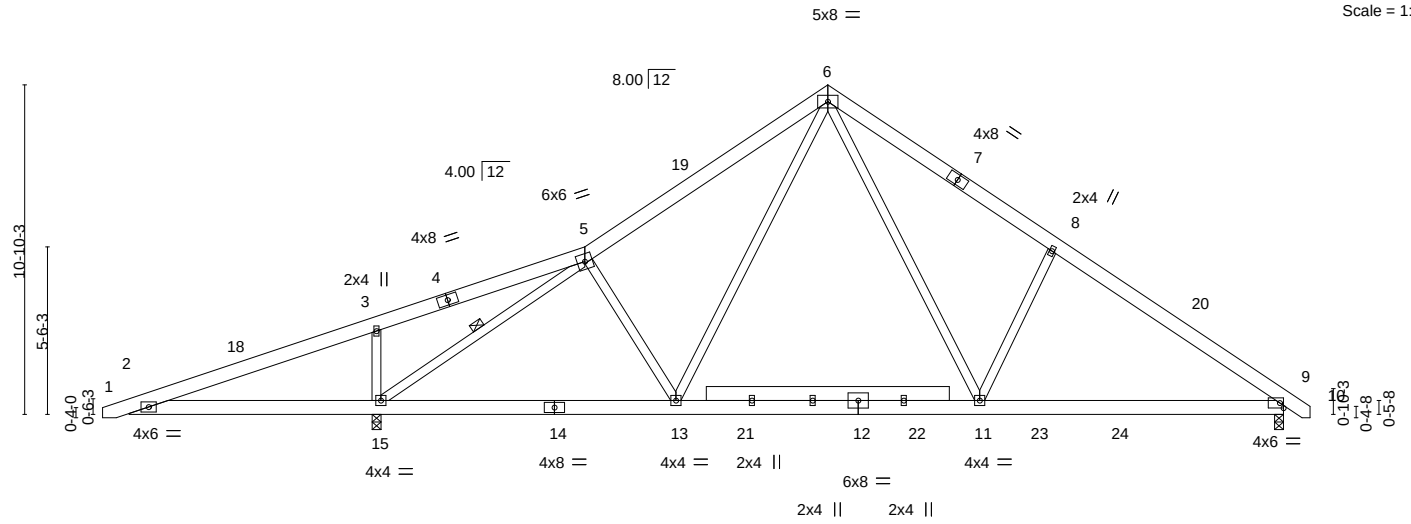
| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett | I61450354 |
|---|---|---|---|---|---|---|
| J1023-5827 | A2 | ROOF SPECIAL | 6 | 1 | Job Reference (optional) | |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:45 2023 Page 1

ID:roCQZwnLu08jxjH0goh?9tySav_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

| -0-10-8 | 8-1-11 | 15-0-0 | 23-0-0 | 30-4-9 | 38-0-0 | 38-10-8 |
|---|---|---|---|---|---|---|
| 0-10-8 | 8-1-11 | 6-10-5 | 8-0-0 | 7-4-9 | 7-7-7 | 0-10-8 |

Scale = 1:75.8




| 8-1-12 | 18-0-0 | 28-0-0 | 38-0-0 |
|---|---|---|---|
| 8-1-12 | 9-10-4 | 10-0-0 | 10-0-0 |

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.41 | Vert(LL) | -0.16 | 11-13 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.48 | Vert(CT) | -0.22 | 11-13 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.70 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.03 | 11-13 | >999 | 240 | Weight: 280 lb | FT = 20% |

**LUMBER-**

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

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-9-2 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-15. |
| WEBS | 1 Row at midpt 5-15 |

**REACTIONS.** (size) 15=0-3-8, 9=0-3-8
Max Horz 15=259(LC 11)
Max Uplift 15=-265(LC 8), 9=-77(LC 13)
Max Grav 15=1978(LC 1), 9=1297(LC 20)

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

| | |
|---|---|
| TOP CHORD | 2-3=-859/972, 3-5=-739/931, 5-6=-1325/170, 6-8=-1603/345, 8-9=-1727/246 |
| BOT CHORD | 2-15=-834/872, 13-15=-52/1163, 11-13=0/927, 9-11=-61/1330 |
| WEBS | 3-15=-541/288, 5-15=-2059/760, 6-13=-34/442, 6-11=-170/938, 8-11=-464/293 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-7-13 to 3-9-0, Interior(1) 3-9-0 to 23-0-0, Exterior(2) 23-0-0 to 27-4-13, Interior(1) 27-4-13 to 38-8-15 zone; cantilever left 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, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 15=265.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


October 18,2023



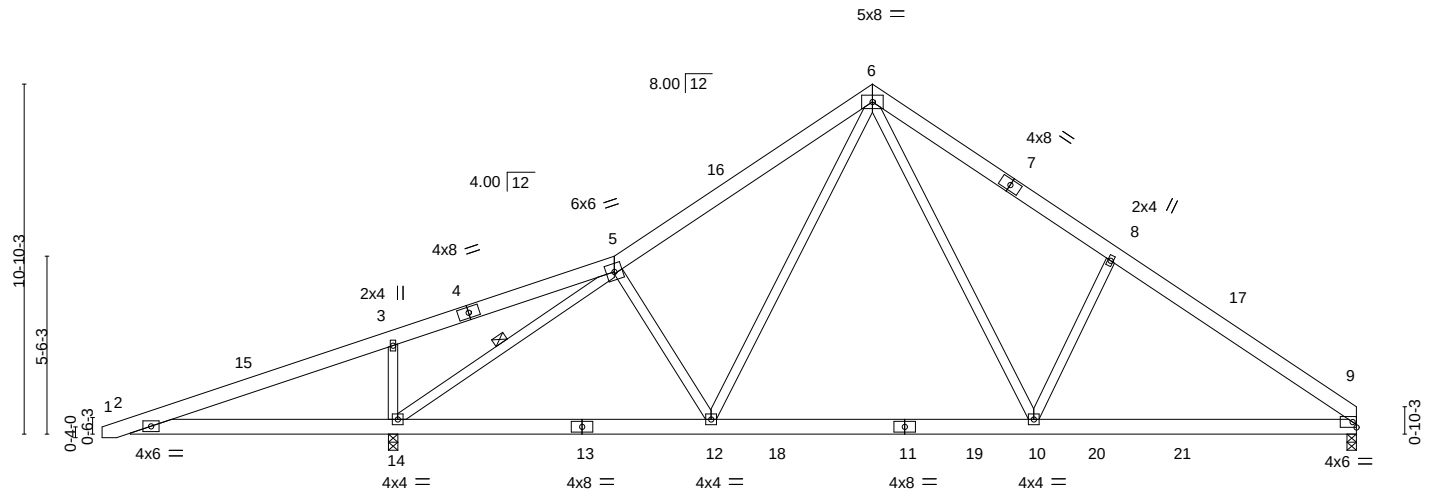
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | A3 | ROOF SPECIAL | 11 | 1 | I61450355 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:46 2023 Page 1
ID:roCQZwnLu08jxjH0goh?9tySav_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

| -0-10-8 | 8-1-11 | 15-0-0 | 23-0-0 | 30-4-9 | 38-0-0 |
|---|---|---|---|---|---|
| 0-10-8 | 8-1-11 | 6-10-5 | 8-0-0 | 7-4-9 | 7-7-7 |

Scale = 1:71.4




| 8-1-12 | 18-0-0 | 28-0-0 | 38-0-0 |
|---|---|---|---|
| 8-1-12 | 9-10-4 | 10-0-0 | 10-0-0 |

| **LOADING** (psf) | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.41 | Vert(LL) | -0.17 | 10-12 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.49 | Vert(CT) | -0.23 | 10-12 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.70 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | Wind(LL) | 0.03 | 10-12 | >999 | 240 | Weight: 259 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 5-8-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-14.
WEBS 1 Row at midpt 5-14

**REACTIONS.** (size) 14=0-3-8, 9=0-3-8
Max Horz 14=258(LC 9)
Max Uplift 14=-153(LC 12), 9=-65(LC 13)
Max Grav 14=1979(LC 1), 9=1257(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-407/972, 3-5=-293/931, 5-6=-1318/339, 6-8=-1626/431, 8-9=-1750/330
BOT CHORD 2-14=-834/447, 12-14=-73/1094, 10-12=0/910, 9-10=-141/1339
WEBS 3-14=-541/259, 5-14=-2080/491, 6-12=-51/389, 6-10=-161/954, 8-10=-467/294

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-7-13 to 3-9-0, Interior(1) 3-9-0 to 23-0-0, Exterior(2) 23-0-0 to 27-4-13, Interior(1) 27-4-13 to 37-10-4 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 14=153.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

October 18,2023




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

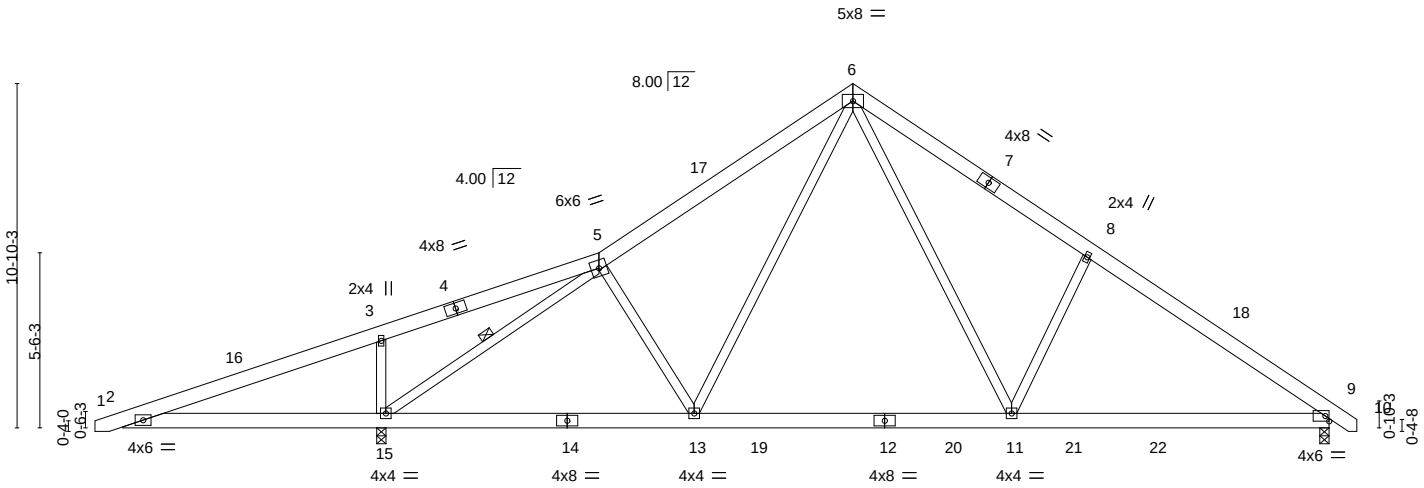
| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | A4 | ROOF SPECIAL | 8 | 1 | I61450356 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:47 2023 Page 1

ID:roCQZwnLu08jxjH0goh?9tySav_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

| -0-10-8 | 8-1-11 | 15-0-0 | 23-0-0 | 30-4-9 | 38-0-0 | 38-10-8 |
|---|---|---|---|---|---|---|
| 0-10-8 | 8-1-11 | 6-10-5 | 8-0-0 | 7-4-9 | 7-7-7 | 0-10-8 |

Scale = 1:72.6




| 8-1-12 | 18-0-0 | 28-0-0 | 38-0-0 |
|---|---|---|---|
| 8-1-12 | 9-10-4 | 10-0-0 | 10-0-0 |

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.41 | Vert(LL) | -0.17 | 11-13 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.49 | Vert(CT) | -0.23 | 11-13 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.70 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.03 | 9-11 | >999 | 240 | Weight: 261 lb | FT = 20% |

**LUMBER-**

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

**BRACING-**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-8-12 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-15. |
| WEBS | 1 Row at midpt 5-15 |

**REACTIONS.** (size) 15=0-3-8, 9=0-3-8
Max Horz 15=259(LC 11)
Max Uplift 15=-153(LC 12), 9=-77(LC 13)
Max Grav 15=1978(LC 1), 9=1307(LC 20)

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

| | |
|---|---|
| TOP CHORD | 2-3=-407/972, 3-5=-293/931, 5-6=-1316/335, 6-8=-1622/421, 8-9=-1747/323 |
| BOT CHORD | 2-15=-834/447, 13-15=-65/1095, 11-13=0/911, 9-11=-124/1334 |
| WEBS | 3-15=-541/259, 5-15=-2079/490, 6-13=-50/390, 6-11=-160/950, 8-11=-465/290 |

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-7-13 to 3-9-0, Interior(1) 3-9-0 to 23-0-0, Exterior(2) 23-0-0 to 27-4-13, Interior(1) 27-4-13 to 38-8-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 15=153.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


October 18,2023



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

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | B1 | GABLE | 1 | 1 | I61450357 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:49 2023 Page 1
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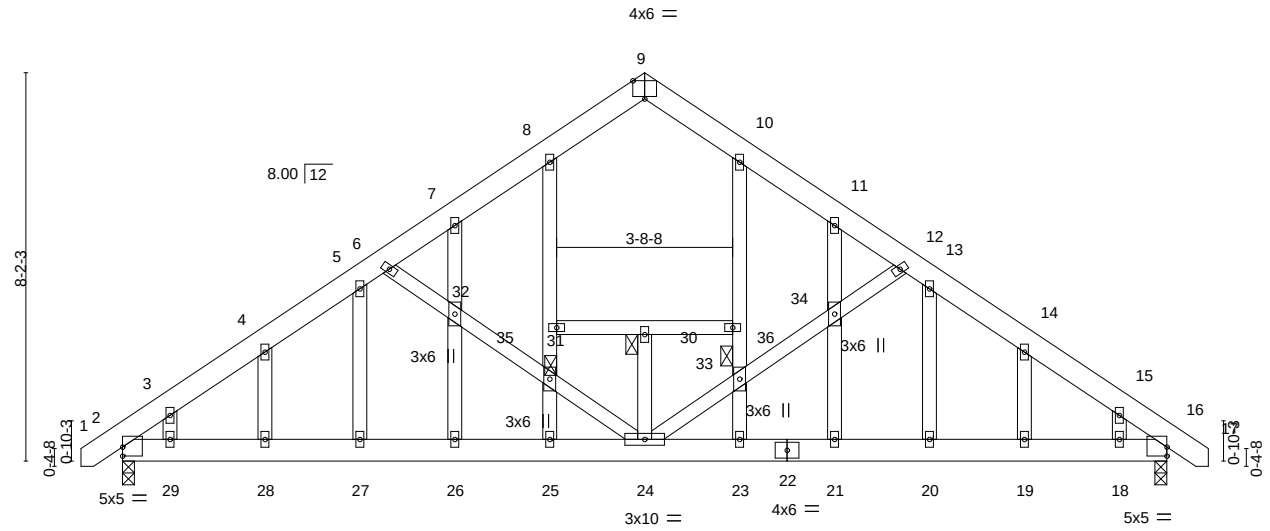
-0-10-8 5-7-7 11-0-0 16-4-9 22-0-0 22-10-8
0-10-8 5-7-7 5-4-9 5-4-9 5-7-7 0-10-8

Scale = 1:48.5




11-0-0 22-0-0
11-0-0 11-0-0

Plate Offsets (X,Y)-- [2:Edge,0-2-4], [9:0-3-0,Edge], [16:0-0-0,0-2-4]

| 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 | 0.30 | Vert(LL) | -0.04 | 24 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.23 | Vert(CT) | -0.08 | 24 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.22 | Horz(CT) | 0.02 | 16 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.08 | 24 | >999 | 240 | Weight: 195 lb | FT = 20% |

**LUMBER-**

| | |
|---|---|
| TOP CHORD | 2x6 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 8-8-2 oc bracing. |
| JOINTS | 1 Brace at Jt(s): 30, 31, 33 |

**REACTIONS.** (size) 16=0-3-0, 2=0-3-0
Max Horz 2=235(LC 11)
Max Uplift 16=-191(LC 13), 2=-191(LC 12)
Max Grav 16=922(LC 1), 2=922(LC 1)

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

TOP CHORD 2-3=-1262/1113, 3-4=-1137/1041, 4-5=-1092/1066, 5-6=-961/952, 6-7=-820/798, 7-8=-859/910, 8-9=-584/617, 9-10=-584/617, 10-11=-859/910, 11-12=-820/798, 12-13=-961/951, 13-14=-1092/1066, 14-15=-1137/1041, 15-16=-1262/1113

BOT CHORD 2-29=-751/888, 28-29=-751/888, 27-28=-751/888, 26-27=-751/888, 25-26=-751/888, 24-25=-751/888, 23-24=-753/888, 21-23=-753/888, 20-21=-753/888, 19-20=-753/888, 18-19=-753/888, 16-18=-753/888

WEBS 24-33=-326/353, 33-34=-388/428, 12-34=-366/403, 6-32=-366/403, 31-32=-388/428, 24-31=-326/353, 31-35=-503/370, 8-35=-529/390, 25-31=-449/325, 33-36=-503/370, 10-36=-529/390, 23-33=-449/325

**NOTES-**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=191, 2=191.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


October 18,2023



ENGINEERING BY TRENCO
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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | B2 | COMMON | 2 | 1 | I61450358 |
| | | | | | Job Reference (optional) |

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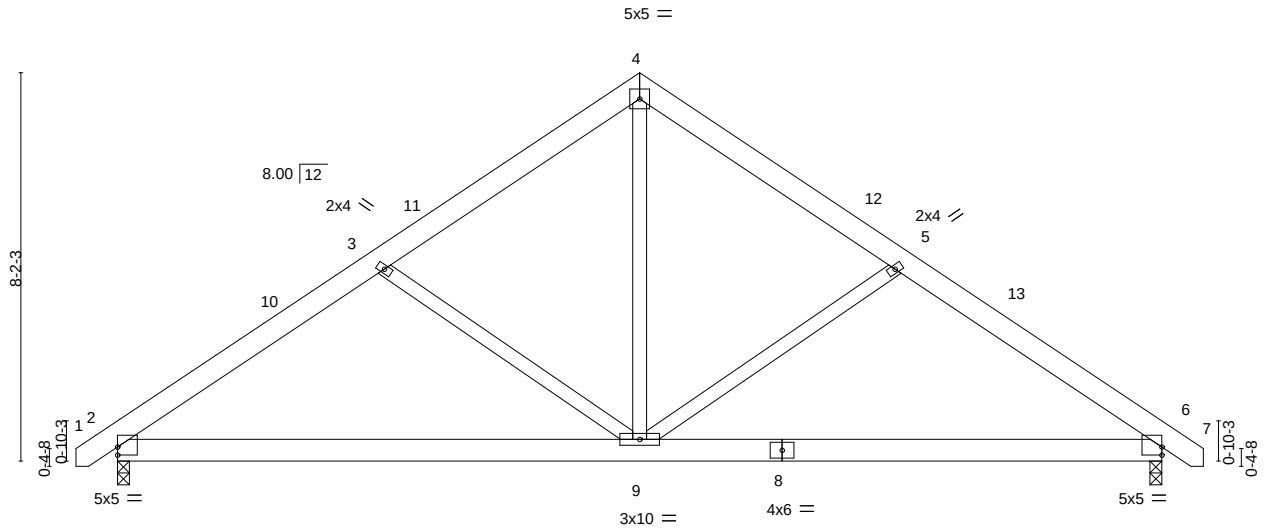
-0-10-8 5-7-7 11-0-0 16-4-9 22-0-0 22-10-8
0-10-8 5-7-7 5-4-9 5-4-9 5-7-7 0-10-8

Scale = 1:48.5




11-0-0 22-0-0
11-0-0 11-0-0

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

| LOADING (psf) | | SPACING- 2-0-0 | | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.42 | Vert(LL) | -0.07 | 2-9 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.40 | Vert(CT) | -0.15 | 2-9 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.78 | Horz(CT) | 0.02 | 6 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.15 | 2-9 | >999 | 240 | Weight: 149 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-0-9 oc bracing.

**REACTIONS.** (size) 6=0-3-0, 2=0-3-0
Max Horz 2=188(LC 11)
Max Uplift 6=-136(LC 8), 2=-136(LC 9)
Max Grav 6=922(LC 1), 2=922(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1155/904, 3-4=-893/869, 4-5=-893/869, 5-6=-1155/904
BOT CHORD 2-9=-646/882, 6-9=-650/882
WEBS 4-9=-802/616, 5-9=-359/234, 3-9=-359/234

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-8-15 to 3-7-14, Interior(1) 3-7-14 to 11-0-0, Exterior(2) 11-0-0 to 15-4-13, Interior(1) 15-4-13 to 22-8-15 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=136, 2=136.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.


October 18,2023



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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | B3 | COMMON | 1 | 1 | I61450359 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:51 2023 Page 1
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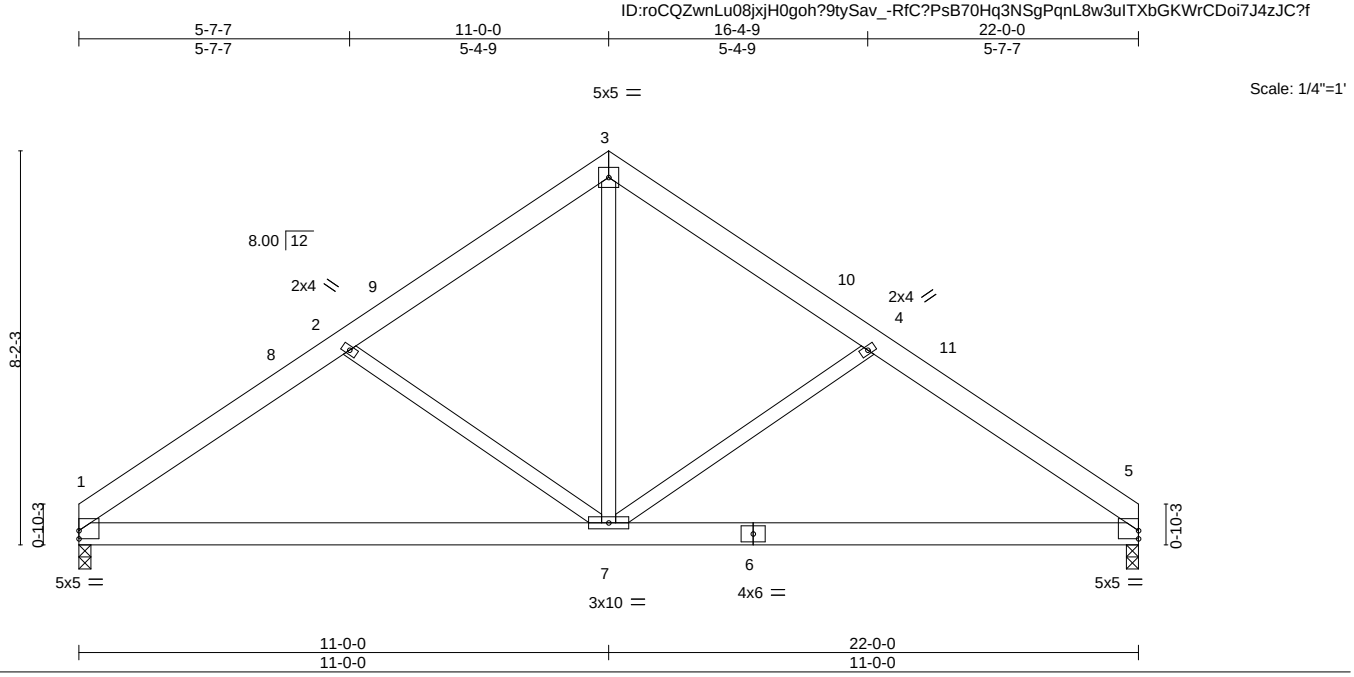


Plate Offsets (X,Y)-- [1:0-0-0,0-2-0], [5:Edge,0-2-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.41 | Vert(LL) | -0.07 | 1-7 | >999 | 360 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | -0.15 | 1-7 | >999 | 240 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.79 | Horz(CT) | 0.02 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code IRC2015/TPI2014 | | Matrix-S | | Wind(LL) | 0.15 | 1-7 | >999 | 240 | Weight: 144 lb | FT = 20% |

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

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-11-9 oc bracing.

**REACTIONS.** (size) 1=0-3-0, 5=0-3-0
Max Horz 1=-184(LC 8)
Max Uplift 1=-132(LC 9), 5=-132(LC 8)
Max Grav 1=870(LC 1), 5=870(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1161/914, 2-3=-898/876, 3-4=-898/876, 4-5=-1161/914
BOT CHORD 1-7=-656/888, 5-7=-657/888
WEBS 3-7=-810/617, 4-7=-359/229, 2-7=-359/229

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-1-8 to 4-6-5, Interior(1) 4-6-5 to 11-0-0, Exterior(2) 11-0-0 to 15-4-13, Interior(1) 15-4-13 to 21-10-8 zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=132, 5=132.


October 18,2023



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | VB1 | VALLEY | 1 | 1 | I61450360 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:52 2023 Page 1
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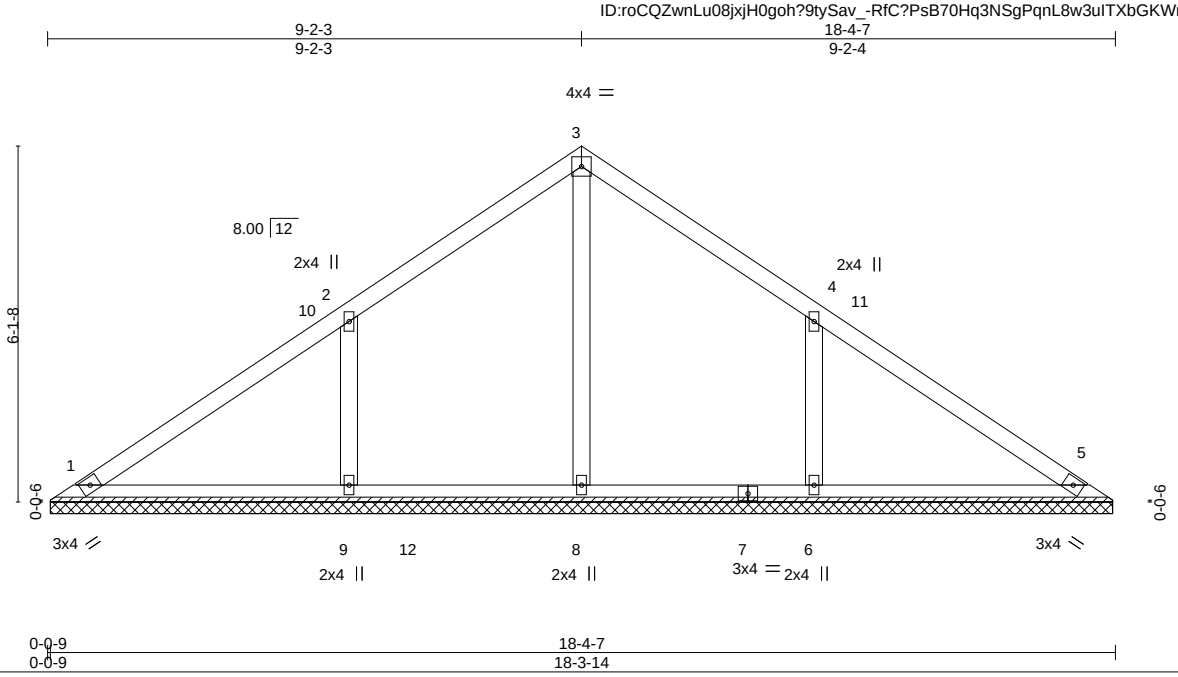


Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.09 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 75 lb | FT = 20% |

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

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

**REACTIONS.** All bearings 18-3-5.
(lb) - Max Horz 1=-139(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-125(LC 12), 6=-125(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=402(LC 19), 9=494(LC 19), 6=489(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-9=-374/236, 4-6=-374/236

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-15 to 5-2-3, Interior(1) 5-2-3 to 9-2-3, Exterior(2) 9-2-3 to 13-7-0, Interior(1) 13-7-0 to 17-10-8 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) 1 except (jt=lb) 9=125, 6=125.
6) N/A


October 18,2023



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | VB2 | VALLEY | 1 | 1 | I61450361 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:53 2023 Page 1
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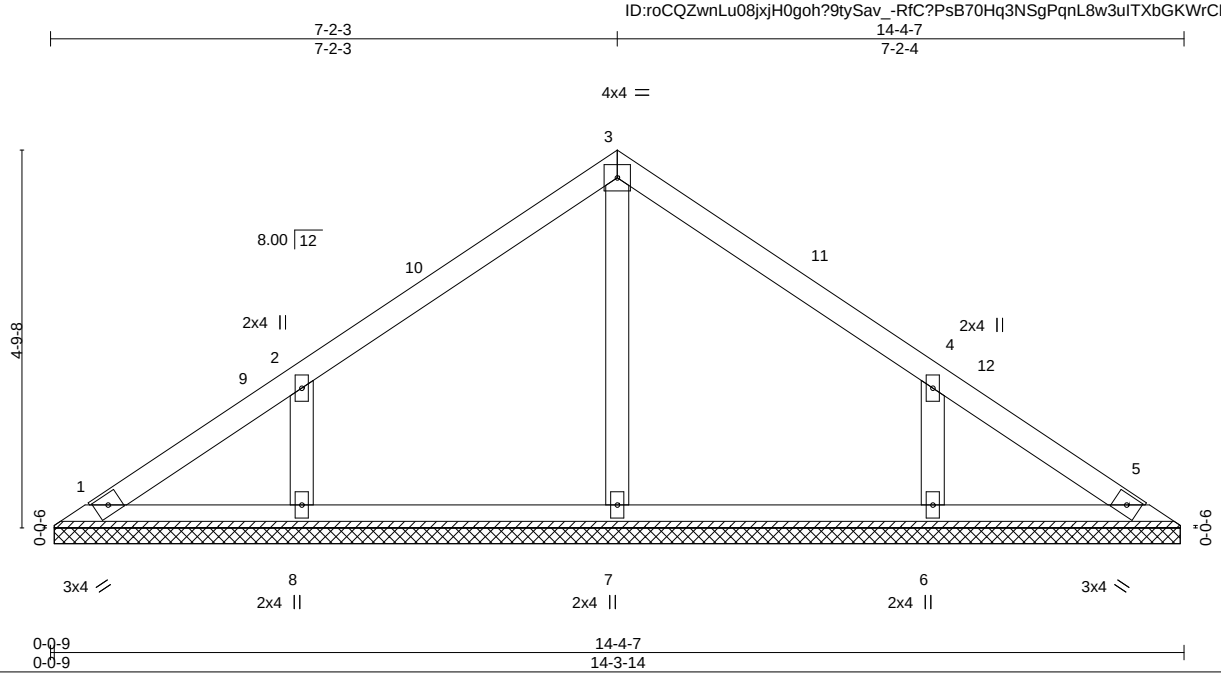



Plate Offsets (X,Y)-- [4:0-0-0,0-0-0]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.13 | 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 | 0.06 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 56 lb | FT = 20% |

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

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

**REACTIONS.** All bearings 14-3-5.
(lb) - Max Horz 1=107(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 6
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=259(LC 1), 8=340(LC 19), 6=340(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-291/200, 4-6=-291/200

**NOTES-**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-5-15 to 4-10-12, Interior(1) 4-10-12 to 7-2-3, Exterior(2) 7-2-3 to 11-7-0, Interior(1) 11-7-0 to 13-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 6.
6) N/A

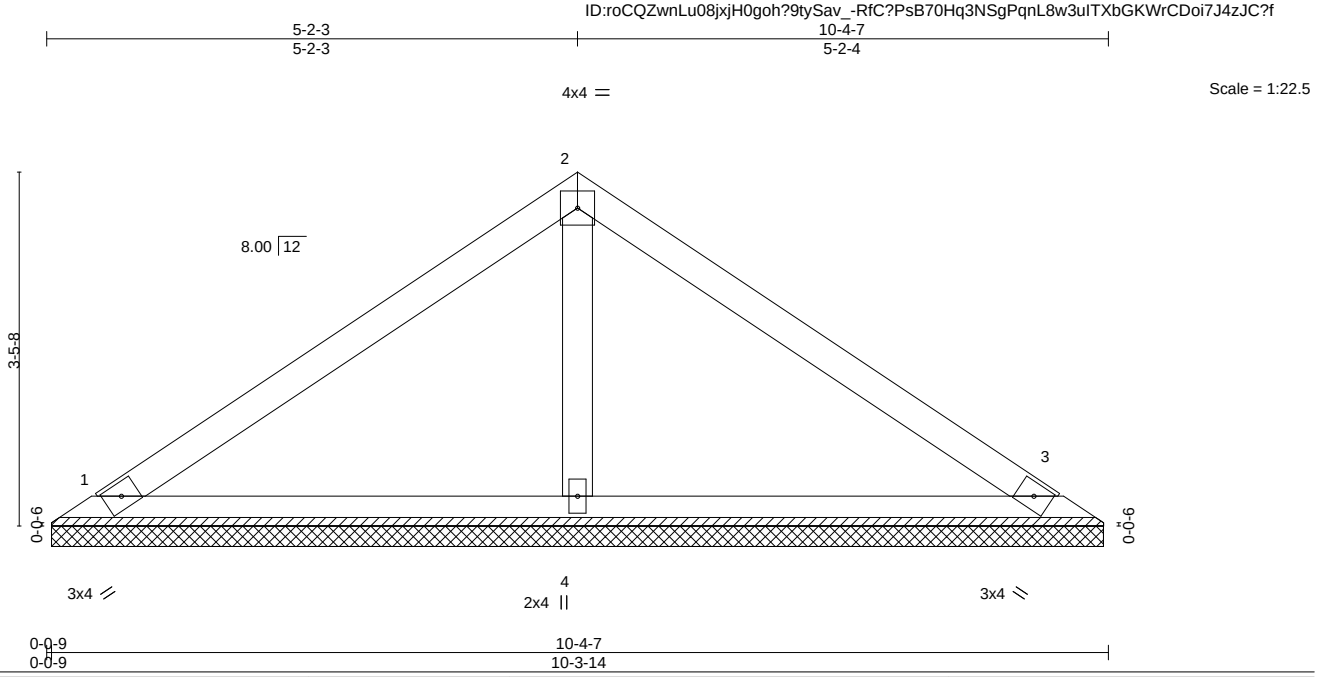

October 18,2023



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

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | VB3 | VALLEY | 1 | 1 | I61450362 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:54 2023 Page 1
ID:roCQZwnLu08jxjH0goh?9tySav_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-S | | | | | | | Weight: 36 lb | FT = 20% |

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

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

**REACTIONS.** (size) 1=10-3-5, 3=10-3-5, 4=10-3-5
Max Horz 1=75(LC 9)
Max Uplift 1=-23(LC 12), 3=-31(LC 13)
Max Grav 1=186(LC 1), 3=186(LC 1), 4=378(LC 1)

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

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


October 18,2023



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

| Job | Truss | Truss Type | Qty | Ply | Old Hickory/Thompson Residence/Harnett |
|---|---|---|---|---|---|
| J1023-5827 | VB4 | VALLEY | 1 | 1 | I61450363 |
| | | | | | Job Reference (optional) |

Comtech, Inc, Fayetteville, NC - 28314, 8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Oct 17 07:57:55 2023 Page 1
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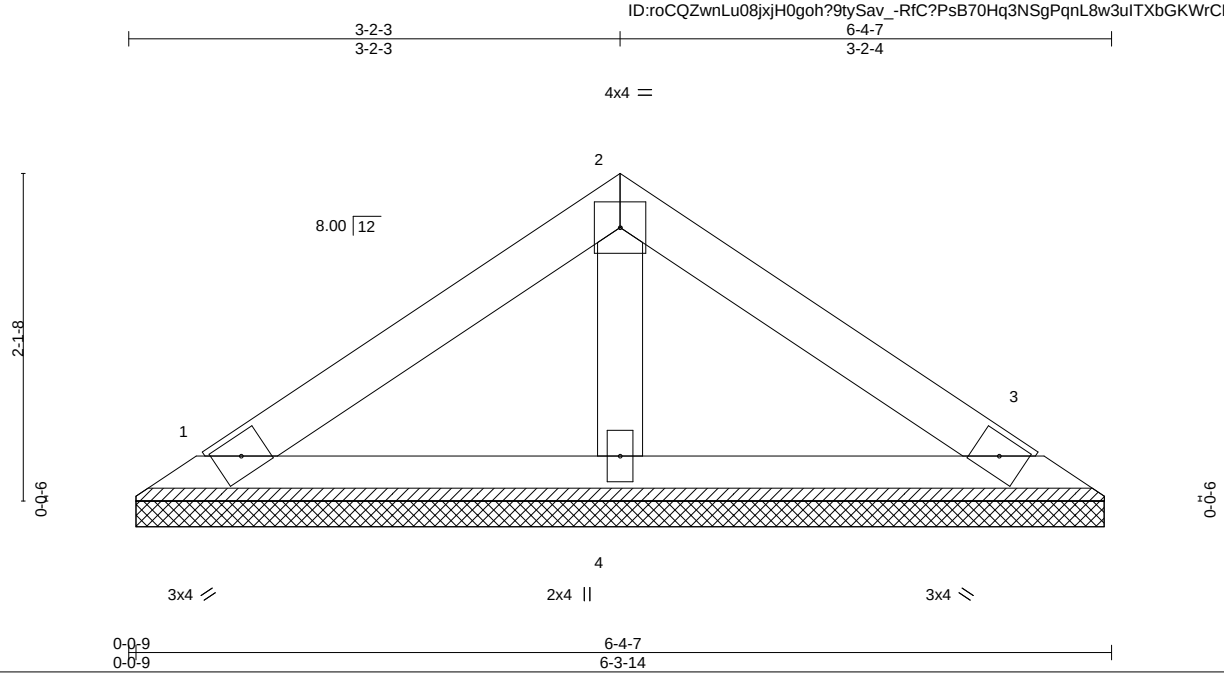


| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 20.0 | Plate Grip DOL | 1.15 | TC | 0.10 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| TCDL | 10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | n/a | - | n/a | 999 | | |
| BCLL | 0.0 * | Rep Stress Incr | YES | WB | 0.02 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCDL | 10.0 | Code | IRC2015/TPI2014 | Matrix-P | | | | | | | Weight: 21 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=6-3-5, 3=6-3-5, 4=6-3-5
Max Horz 1=43(LC 9)
Max Uplift 1=-18(LC 12), 3=-23(LC 13)
Max Grav 1=117(LC 1), 3=117(LC 1), 4=196(LC 1)

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

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


October 18,2023



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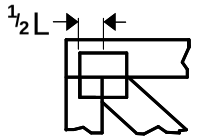
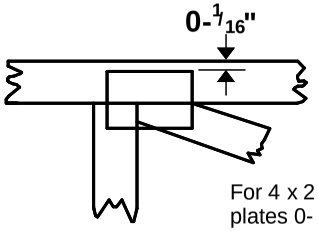
Edenton, NC 27932

# Symbols

### PLATE LOCATION AND ORIENTATION




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




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

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

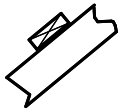
* Plate location details available in MiTek software or upon request.

### PLATE SIZE

4 x 4

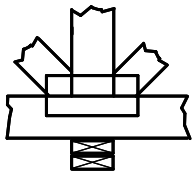
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

### LATERAL BRACING LOCATION



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

### BEARING

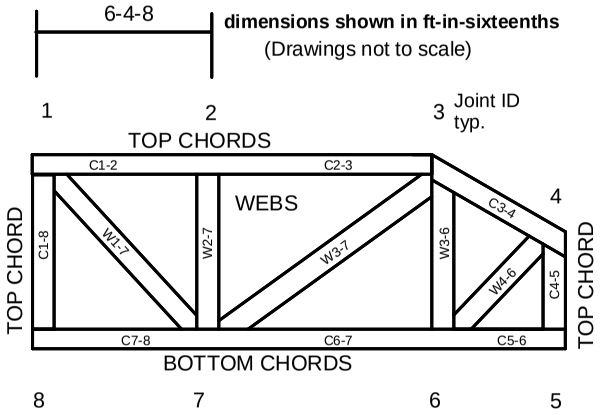


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

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

# Numbering System




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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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



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

# General Safety Notes

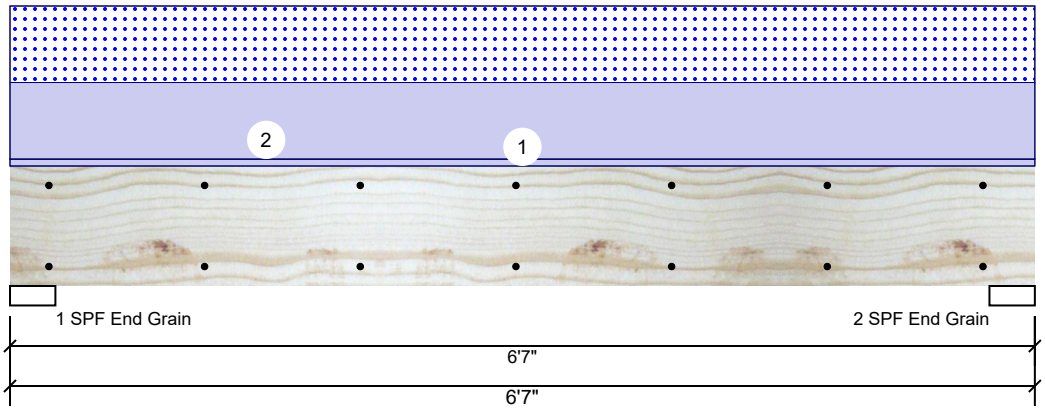
Failure to Follow Could Cause Property Damage or Personal Injury

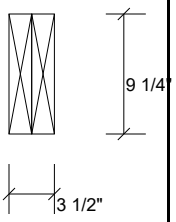
1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed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

| | | | |
|---|---|---|---|
| Client: | | Date: | 10/17/2023 |
| Project: | | Input by: | NEIL BAGGETT |
| Address: | | Job Name: | THOMPSON RESIDENCE |
| | | Project #: | |

# HDR1 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: | IRC 2018 |
| Deflection LL: | 480 | Load Sharing: | No |
| Deflection TL: | 360 | Deck: | Not Checked |
| Importance: | Normal - II | | |
| Temperature: | Temp <= 100°F | | |

## Reactions UNPATTERNED lb (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|---|---|---|---|---|---|---|
| 1 | Vertical | 0 | 1798 | 1626 | 0 | 0 |
| 2 | Vertical | 0 | 1798 | 1626 | 0 | 0 |

## Bearings

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---|---|---|---|---|---|---|---|
| 1 - SPF End Grain | 3.500" | Vert | 33% | 1798 / 1626 | 3424 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 33% | 1798 / 1626 | 3424 | L | D+S |

## Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---|---|---|---|---|---|
| Moment | 4878 ft-lb | 3'3 1/2" | 14423 ft-lb | 0.338 (34%) | D+S | L |
| Unbraced | 4878 ft-lb | 3'3 1/2" | 10451 ft-lb | 0.467 (47%) | D+S | L |
| Shear | 2324 lb | 1' 3/4" | 7943 lb | 0.293 (29%) | D+S | L |
| LL Defl inch | 0.042 (L/1745) | 3'3 1/2" | 0.153 (L/480) | 0.275 (28%) | S | L |
| TL Defl inch | 0.089 (L/829) | 3'3 1/2" | 0.204 (L/360) | 0.434 (43%) | D+S | L |

## Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Uniform | | | Top | 45 PLF | 0 PLF | 0 PLF | 0 PLF | 0 PLF | WALL |
| 2 | Uniform | | | Top | 494 PLF | 0 PLF | 494 PLF | 0 PLF | 0 PLF | A3 |
| | Self Weight | | | | 7 PLF | | | | | |

### Notes

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

### Lumber

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

### Handling & Installation

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

This design is valid until 11/3/2024

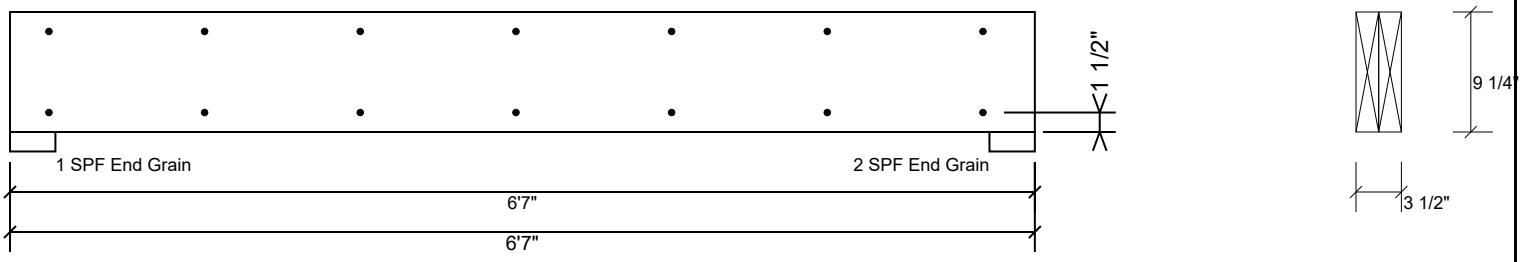
### Manufacturer Info

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

| | | | |
|---|---|---|---|
| Client: | | Date: | 10/17/2023 |
| Project: | | Input by: | NEIL BAGGETT |
| Address: | | Job Name: | THOMPSON RESIDENCE |
| | | Project #: | |

# HDR1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level




## Multi-Ply Analysis

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

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

**Notes**

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

**Lumber**

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

**Handling & Installation**

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

This design is valid until 11/3/2024

**Manufacturer Info**

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