

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW Development Services LEE'S SUMMIT, MISSOURI MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

# Re: 3020681 SUMMIT/COBEY CREEK #16/MO

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Valley Center).

Pages or sheets covered by this seal: I49512996 thru I49513084

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

Missouri COA: Engineering 001193



January 4,2022

**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.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not
 a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall
 building design. Bracing indicated is to preven tbuckling of individual truss web and/or chord members only. Additional temporary and permanent bracing
 is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the
 fabrication, storage, delivery, erection and bracing of trusses sand truss systems, see
 MSIVTP11 Quality Criteria, DSB-89 and BCSI Building Component
 Safety Information
 available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

MITEK<sup>®</sup> 16023 Swingley Ridge Rd Chesterfield, MO 63017

| Job                          | Truss                     | Truss Type | Qty       | Ply         | SUMMIT/COBEY CREEK #16/MO                              |           |
|------------------------------|---------------------------|------------|-----------|-------------|--|-----------|
|                              |                           |            |           |             |  | I49512996 |
| 3020681                      | A04                       | Hip Girder | 1         | 2           |  |           |
|                              |                           |            |           | <b>_</b>    | Job Reference (optional)                               |           |
| Builders FirstSource (Valley | Center), Valley Center, K | S - 67147, | 8.        | 430 s Aug   | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:05 2022 | Page 2    |
|                              |                           | ID:ql      | /leyVrAyR | 40V1rvltLjl | LFIzXPDf-qgy2wV9NudTMJ67YH9ViagUK5d2AF2FVe4z86         | nzz2oO    |

#### NOTES-

9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1432 lb uplift at joint 14 and 1538 lb uplift at joint 2.

10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- 12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 3-0-0 from the left end to 7-0-0 to connect truss(es) to back face of bottom chord.
- 13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 9-0-0 from the left end to 23-0-0 to connect truss(es) to back face of bottom chord.
- 14) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 37-0-0 from the left end to 39-0-0 to connect truss(es) to back face of bottom chord.
- 15) Fill all nail holes where hanger is in contact with lumber.

16) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

17) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 22 lb down and 19 lb up at 40-10-14, and 287 lb down and 90 lb up at 43-0-0 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: 1-5=-70, 5-11=-70, 11-14=-70, 22-31=-20, 15-20=-20, 15-28=-20

Concentrated Loads (lb)

Vert: 9=-51(B) 18=-125(B) 15=-22 25=-236(B) 17=-125(B) 13=-160(B) 11=-51(B) 19=-125(B) 10=-51(B) 16=-230(B) 35=-51(B) 36=-51(B) 37=-263(B) 38=-230(B) 39=-230(B) 40=-230(B) 41=-230(B) 42=-236(B) 43=-236(B) 45=-236(B) 46=-236(B) 49=-125(B) 50=-125(B) 51=-117(B) 52=-230(B) 53=-287(B)







| L   | 8-6-1  | 17-0-0  | 24-6-8   | 3 2   | 9-0-0  | 34-11-7  | 40-1  | 10-14 4   | 6-0-0                  |
|---|--|---|--|---|--|--|---|---|------------------------|
|   | 8-6-1  | 8-5-15  | 7-6-8  |   | 1-5-8  | 5-11-7   | 5-1   | 11-7  | 5-1-2                  |
| Plate Offsets (X,Y)   | [2:0-1-1,0-2-12], [4:0-3-0,E   | Edge], [9:0-4-0,Edge], [1   | 1:0-6-0,0-3-9],  | 15:0-5-8,0-4-4], [  | 16:Edge,0-3-8  | ], [17:0-1-8,0-  | 3-0]  |   |                        |
| LOADING (psf)   | SPACING-   | 2-0-0 CS  | I.   | DEFL.   | in (loc)   | l/defl   | _/d   | PLATES  | GRIP                   |
| TCLL 25.0   | Plate Grip DOL   | 1.15 TC   | 0.93   | Vert(LL)  | -0.53 12-14  | >999 2   | 40  | MT20  | 197/144                |
| TCDL 10.0   | Lumber DOL   | 1.15 BC   | 0.90   | Vert(CT)  | -1.05 12-14  | >526 1   | 80  | MT20HS  | 148/108                |
| BCLL 0.0  | Rep Stress Incr  | YES WE  | 0.89   | Horz(CT)  | 0.33 11  | n/a i  | n/a   |   |                        |
| BCDL 10.0   | Code IRC2018/TP  | I2014 Ma  | trix-AS  |   |  |  |   | Weight: 219 I   | b FT = 20%             |
| LUMBER-<br>TOP CHORD 2x4<br>BOT CHORD 2x4<br>6-1<br>12-<br>WEBS 2x4<br>OTHERS 2x4   | 4 SPF 1650F 1.5E *Except*<br>5: 2x6 SPF No.2<br>4 SPF 1650F 1.5E *Except*<br>6: 2x4 SPF No.2, 11-12: 2x8 S<br>-13,13-15: 2x6 SPF 2100F 1.8<br>4 SPF No.2   | SP 2400F 2.0E<br>E  |  | BRACING-<br>TOP CHOF<br>BOT CHOF<br>WEBS  | RD Struct<br>2-0-0<br>RD Rigid<br>1 Row  | ural wood she<br>oc purlins (2-<br>ceiling directly<br>v at midpt                                    | eathing direc<br>7-6 max.): 5-<br>7 applied.<br>3-1 | tly applied, except<br>7.<br>7  | :                      |
| WEDGE   |  |   |  |   |  |  |   |   |                        |
| Left: 2x6 SPF No.2  |  |   |  |   |  |  |   |   |                        |
| REACTIONS.<br>Ma<br>Ma<br>Ma  | (size) 2=0-3-8, 11=0-3-8<br>ax Horz 2=121(LC 16)<br>ax Uplift 2=-237(LC 12), 11=-2<br>ax Grav 2=2132(LC 1), 11=20  | 20(LC 13)<br>69(LC 1)   |  |   |  |  |   |   |                        |
| FORCES. (lb) - M<br>TOP CHORD 2<br>BOT CHORD 2<br>WEBS 5<br>3   | Max. Comp./Max. Ten All forc<br>-3=-4220/480, 3-5=-3489/452,<br>-10=-7193/802, 10-11=-7223/3<br>-19=-417/3781, 17-19=-417/37<br>4-15=-276/3643, 12-14=-455/4<br>-17=-50/295, 15-17=-269/2761<br>-17=-747/257, 3-19=0/290, 8-1  | xes 250 (lb) or less exce<br>5-6=-3844/526, 6-7=-36<br>728<br>781, 16-17=0/400, 6-15=<br>4553<br>1, 5-15=-130/1056, 7-15<br>12=-289/2446, 8-14=-10  | pt when shown.<br>341/526, 7-8=-4<br>=-510/169, 11-1:<br>=-120/557, 7-14<br>55/291   | 044/498,<br>2=-626/6677,<br>!=-77/960,  |  |  |   |   |                        |
| NOTES-<br>1) Unbalanced rool<br>2) Wind: ASCE 7-1<br>MWFRS (envelo<br>Interior(1) 21-2-<br>vertical left and i<br>3) Provide adequat<br>4) All plates are MT<br>5) This truss has b<br>6) Bearing at joint(s<br>capacity of beari<br>7) Provide mechan<br>joint 11.<br>8) This truss is des | f live loads have been conside<br>6; Vult=115mph (3-second gu:<br>ope) gable end zone and C-C E<br>15 to 29-0-0, Exterior(2R) 29-0<br>right exposed;C-C for member<br>te drainage to prevent water po<br>r20 plates unless otherwise in<br>een designed for a 10.0 psf bo<br>s) 11 considers parallel to grait<br>ing surface.<br>ical connection (by others) of t<br>igned in accordance with the 2 | red for this design.<br>st) Vasd=91mph; TCDL<br>Exterior(2E) -0-10-8 to 2<br>-0 to 33-2-15, Interior(1)<br>s and forces & MWFRS<br>onding.<br>dicated.<br>dicated.<br>wtom chord live load nor<br>n value using ANSI/TPI<br>truss to bearing plate ca<br>2018 International Resid | =6.0psf; BCDL=<br>-1-8, Interior(1)<br>) 33-2-15 to 46-<br>for reactions sh<br>aconcurrent with<br>1 angle to grain<br>pable of withsta<br>ential Code sec | 4.2psf; h=15ft; C<br>2-1-8 to 17-0-0, E<br>0-0 zone; cantilev<br>own; Lumber DC<br>any other live loa<br>formula. Building<br>nding 237 lb uplif<br>tions R502.11.1 a | at. II; Exp C; E<br>Exterior(2R) 17<br>ver left and righ<br>DL=1.60 plate g<br>ads.<br>g designer sho<br>t at joint 2 and<br>and R802.10.2 | nclosed;<br>-0-0 to 21-2-1<br>tt exposed ; e<br>rip DOL=1.60<br>uld verify<br>220 lb uplift a<br>and | 5,<br>nd<br>,                                       | OF<br>CONTENTS<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE<br>SCO<br>SE | MISSOL                 |
| 9) This truss design  | uaru ANSI/TPT1.<br>n requires that a minimum of 7  | /16" structural wood she  | athing be appli  | ed directly to the  | top chord and  | 1/2" gynsum  |   | 100   |                        |
| sheetrock be ap   | plied directly to the bottom cho   | ord.  |  |   |  |  |   | Janu  | ary 4,2022             |
| 10) Graphical purli   | n representation does not depi   | ict the size or the orienta   | ation of the purli   | n along the top a   | nd/or bottom c   | hord.  |   |   |                        |
| WARNING - Veri<br>Design valid for use<br>a truss system. Bef<br>building design. Br<br>is always required 1<br>fabrication, storage<br>Safety Information  | ify design parameters and READ NOTE<br>e only with MITek® connectors. This de<br>fore use, the building designer must ve<br>racing indicated is to prevent buckling<br>for stability and to prevent collapse with<br>e, delivery, erection and bracing of truss<br>a varilable from Truss Plate Institute.   | S ON THIS AND INCLUDED M<br>esign is based only upon parar<br>rify the applicability of design p<br>of individual truss web and/or of<br>h possible personal injury and<br>ses and truss systems, see<br>2670 Crain Highway, Suite 20:  | ITEK REFERENCE I<br>neters shown, and is<br>parameters and prop<br>hord members only<br>property damage. F<br>ANSI/TPI1 Q<br>3 Waldorf, MD 2060            | PAGE MII-7473 rev. 5/<br>s for an individual built<br>perly incorporate this of<br>Additional temporary<br>or general guidance r<br>uality Criteria, DSB-8            | 19/2020 BEFORE I<br>ding component, n<br>lesign into the ove<br>y and permanent b<br>egarding the<br>39 and BCSI Build                     | JSE.<br>ot<br>rall<br>racing<br>ling Component   |   | 16023 Swingle<br>Chesterfield, N  | y Ridge Rd<br>10 63017 |



Scale = 1:82.1



|  | 6-8-5         13-5-6           6-8-5         6-9-1  | 21-0-0<br>7-6-10   | 24-6-8 25-0-0 30-4<br>3-6-8 0-5-8 5-4   | 1-3 35-6-11<br>-3 5-2-7   | <u>40-10-14</u> <u>46-</u><br><u>5-4-3</u> <u>5-</u>                        | -0-0<br>1-2   |
|--|---|--|---|---|---|---|
| Plate Offsets (X,Y)  | [2:Edge,0-2-4], [7:0-7-4,0-1-12], [11:0-  | 3-0,Edge], [13:0-6-0,0-3-9]  | , [14:0-10-0,0-5-4], [15:0  | <u>)-3-8,0-2-0], [16:0-3-13</u>   | ,Edge], [18:0-4-4,0-3-4], [21:0-3   | -0,0-3-0]   |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0   | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCodeIRC2018/TPI2014  | <b>CSI.</b><br>TC 0.94<br>BC 1.00<br>WB 0.86<br>Matrix-AS  | <b>DEFL.</b> i<br>Vert(LL) -0.4<br>Vert(CT) -1.0<br>Horz(CT) 0.3  | n (loc) l/defl L<br>7 17-18 >999 24<br>3 19 >535 18<br>3 13 n/a n.  | d PLATES<br>0 MT20<br>0 MT20HS<br>a Weight: 233 lb                          | <b>GRIP</b><br>197/144<br>148/108<br>FT = 20%   |
| LUMBER-<br>TOP CHORD 2x4 SI<br>BOT CHORD 2x4 SI<br>2-22:<br>13-14:<br>WEBS 2x4 SI<br>OTHERS 2x4 SI<br>SLIDER Left 2:   | PF No.2<br>PF No.2 *Except*<br>2x4 SPF 1650F 1.5E, 16-18: 2x6 SPF N<br>: 2x8 SP 2400F 2.0E, 14-16: 2x6 SPF 2<br>PF No.2<br>PF No.2<br>x4 SPF No.2 3-6-0   | lo.2<br>100F 1.8E  | BRACING-<br>TOP CHORD<br>BOT CHORD<br>WEBS  | Structural wood shea<br>2-0-0 oc purlins (3-0-<br>Rigid ceiling directly<br>1 Row at midpt  | athing directly applied, except<br>-7 max.): 7-8.<br>applied.<br>8-18, 6-18 |   |
| REACTIONS. (siz<br>Max H<br>Max U<br>Max C   | ze) 2=0-3-8, 13=0-3-8<br>Horz 2=149(LC 16)<br>Uplift 2=-272(LC 12), 13=-254(LC 13)<br>Grav 2=2172(LC 1), 13=2098(LC 1)  |  |   |   |   |   |
| FORCES.         (lb) - Max           TOP CHORD         2-4=           9-10           BOT CHORD         2-23           13-'           WEBS         4-21           8-18           10-1   | . Comp./Max. Ten All forces 250 (lb) c<br>=-4198/500, 4-6=-3804/447, 6-7=-3451/4<br>)=-4236/462, 10-12=-5278/591, 12-13=-<br>]=-527/3806, 21-23=-527/3806, 17-18=-<br>14=-715/6683<br>I=-433/156, 18-20=0/323, 7-18=-61/866<br>3=-201/381, 6-18=-548/221, 18-21=-393<br>17=-1202/252, 8-17=-268/1395  | or less except when shown<br>115, 7-8=-3104/419, 8-9=-4<br>7228/825<br>169/3059, 15-17=-417/483<br>, 9-17=-322/163, 12-14=-5<br>/3420, 12-15=-1732/291, 1  | 1214/540,<br>14, 14-15=-698/6507,<br>8/958,<br>0-15=-62/683,  |   |   |   |
| <ul> <li>NOTES-</li> <li>1) Unbalanced roof liv</li> <li>2) Wind: ASCE 7-16;<br/>MWFRS (envelope<br/>Exterior(2R) 25-0-0<br/>exposed;C-C for ma</li> <li>3) Provide adequate ot</li> <li>4) All plates are MT20</li> <li>5) This truss has beer</li> <li>6) Bearing at joint(s) 1</li> <li>capacity of bearing</li> <li>7) Provide mechanica</li> <li>joint 13.</li> <li>8) This truss is design referenced standard</li> <li>9) This truss design resheetrock be applie</li> <li>10) Graphical purlin referenced</li> </ul> | ve loads have been considered for this d<br>Vult=115mph (3-second gust) Vasd=910<br>) gable end zone and C-C Exterior(2E) -<br>to 29-2-15, Interior(1) 29-2-15 to 46-0-(<br>embers and forces & MWFRS for reactive<br>frainage to prevent water ponding.<br>D plates unless otherwise indicated.<br>In designed for a 10.0 psf bottom chord lin<br>13 considers parallel to grain value using<br>surface.<br>Il connection (by others) of truss to bear<br>and in accordance with the 2018 Internat<br>d ANSI/TPI 1.<br>equires that a minimum of 7/16" structure<br>ad directly to the bottom chord.<br>epresentation does not depict the size o | esign.<br>mph; TCDL=6.0psf; BCDL=<br>0-10-8 to 2-1-8, Interior(1)<br>0 zone; cantilever left and r<br>ons shown; Lumber DOL=<br>ve load nonconcurrent with<br>g ANSI/TPI 1 angle to grain<br>ng plate capable of withsta<br>ional Residential Code sec<br>al wood sheathing be appli | =4.2psf; h=15ft; Cat. II; I<br>2-1-8 to 21-0-0, Exterio<br>ight exposed ; end verti<br>1.60 plate grip DOL=1.6<br>n any other live loads.<br>n formula. Building desi<br>anding 272 lb uplift at joi<br>ctions R502.11.1 and R8<br>ed directly to the top ch<br>in along the top and/or b | Exp C; Enclosed;<br>r(2E) 21-0-0 to 25-0-0,<br>cal left and right<br>0<br>gner should verify<br>nt 2 and 254 lb uplift at<br>302.10.2 and<br>ord and 1/2" gypsum<br>pottom chord. | STATE OF M<br>SCOTT<br>SEVE<br>PE-20010<br>Januar                           | AISSOLUTION<br>M. ER<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION<br>DISSOLUTION |
| WARNING - Verify d<br>Design valid for use on<br>a truss system. Before<br>building design. Bracir<br>is always required for s<br>fabrication, storage, de<br>Safety Information ar  | lesign parameters and READ NOTES ON THIS AND<br>ly with MITek® connectors. This design is based o<br>use, the building designer must verify the applicab<br>ng indicated is to prevent buckling of individual trus<br>stability and to prevent collapse with possible persc<br>livery, erection and bracing of trusses and truss sy<br>vailable from Truss Plate Institute, 2670 Crain Higt   | INCLUDED MITEK REFERENCE<br>nly upon parameters shown, and<br>ility of design parameters and pro<br>s web and/or chord members only<br>nal injury and property damage. I<br>stems, see <u>ANSI/TPH1 C</u><br>way, Suite 203 Waldorf, MD 2066   | PAGE MII-7473 rev. 5/19/2020<br>is for an individual building cor<br>perly incorporate this design ir<br>Additional temporary and perfor<br>general guidance regardin<br>guality Criteria, DSB-89 and b<br>11   | BEFORE USE.<br>nponent, not<br>ito the overall<br>armanent bracing<br>g the<br>BCSI Building Component  | 16023 Swingley R<br>Chesterfield, MO  | idge Rd<br>53017  |



| Plate Offsets (X'):         20-11.0-212[11:0-0-0.3-30]         160-6-8.0-2-4]         100         100         100         100         100           LOADING (pst)<br>TCCL         SPACING-<br>2:0-0         2:0-0         CSL         0         Vert(L)         0.55         1:1:0:0         0         PLate Sign (PL)         0:1 <t< th=""><th> </th><th>8-5-11</th><th>15-10-7</th><th>23-0-0</th><th>24-6-8</th><th><u>33-0-0</u><br/>8-5-8</th><th>40-10</th><th>-14 46-0-0</th><th>)</th></t<>   |   | 8-5-11   | 15-10-7  | 23-0-0   | 24-6-8  | <u>33-0-0</u><br>8-5-8   | 40-10  | -14 46-0-0                                  | )  |
|--|---|--|--|--|---|--|--|---|--|
| LOADING (psf)<br>TCLL 25.0<br>Plate Grip DOL 1.15<br>ECLL 10.0<br>ECL 10.0<br>Code IRC2018/TPI2014     SPACING<br>TC 0.75<br>Code TC     CSL<br>TC 0.75<br>WS 0.76     DEFL<br>Wer(IL) - 0.58 13-15 - 361 180<br>Horz(CT) 0.57 11 n/a     PLATES<br>WS 0.76     GRIP<br>MT20H<br>MT20H<br>Wer(IL) - 0.58 13-15 - 361 180<br>Horz(CT) 0.57 11 n/a       LUMBER-<br>TOP CHORD 2x4 SPF No.2 "Except"<br>1-4.8-11:2x4 SPF 1650F 1.5E.<br>220.12+11:2x4 SPF 1650F 1.5E.<br>COT HORD 2x4 SPF No.2 "Except"<br>1-220.12+11:2x4 SPF 1650F 1.5E.<br>220.12+11:2x4 SPF 1650F 1.5E.<br>220.12+11:2x4 SPF 1650F 1.5E.<br>COT HORD 2x4 SPF No.2     BRACING-<br>TOP CHORD Structural wood sheathing directly applied.<br>WEBS 2x4 SPF No.2       REACTION:<br>FORCES. (b)-Max. Comp./Max. Ten All forces 250 (b) or less except when shown.<br>TOP CHORD 5: 2x1-5560(787, 15-16-2560(C 13)<br>Max Grav 2x=123(LC 12), 11=2266(LC 13)<br>Max Grav 2x=2132(LC 1), 11=2266(LC 13)<br>Max Grav 2x=2132(LC 1), 11=2266(LC 13)<br>Max Grav 2x=2132(LC 1), 11=2266(C 13)<br>Max Grav 2x=132(LC 1), 11=2267(LC 13)<br>M                         | Plate Offsets (X,Y)   | [2:0-1-1,0-2-12], [11:0-6-0  | 0,0-3-9], [16:0-5-8,0  | -2-4]  | 100   | 000  | 7.10   | 14 012                                      |  |
| UNBER-<br>TOP CHORD<br>24, 24 SPF No.2 "Except"<br>44, 811: 2x4 SPF 1650F 1.5E, 11-12: 2x8 SP 2400F 2.0E<br>2-20, 124: 2x4 SPF 1650F 1.5E, 11-12: 2x8 SP 2400F 2.0E<br>2-20, 124: 2x4 SPF 10: 2<br>VERS<br>2-24 SPF No.2<br>VERS<br>2-24 SPF No.2<br>VERS<br>2-24 SPF No.2       Structural wood sheathing tectly applied.<br>1 Row at midpt       3.19, 716, 5.16         VERS<br>2-20, 124: 2x4 SPF 10: 2<br>VERS<br>2-20, 124: 2x4 SPF 10: 2<br>VERS<br>2-20, 124: 2x4 SPF No.2       No.2<br>VERS<br>2-20, 124: 2x4 SPF No.2         ReACTIONS<br>Max Horz 2-2163UC 16)<br>Max Upit 2283UC 12, 11266UC 13<br>Max Grav 2-2163UC 13, 11266UC 13, 11-269UR 1437       Second 200, 101-17-07444747       Second 200, 101-17-0744477         BOT CHOR<br>2-22-E5803787, 19-21-E5603787, 19-21-E5603787, 15-61-12771780, 571-5979741, 7-98-4512/545, 9-12-2603084, 12-135144927, 11-12-2742401       Second 200, 101-17-0744747         WEBS<br>2-21-2202188, 161-180-038147, 15-61-1227178, 15-12-2803787, 15-61-1227178, 15-298739, 7-13-977941, 9-13-1056274       Second 200, 101-17-0744747         WETES<br>2-12-262188, 161-180-038147, 15-16-1227178, 16-19-227050 15, 25-42, 15-5144927, 11-12-2724601       Second 200, 101-17-0744747         VIES<br>2-12-262188, 16-180-038147, 16-19-1227180, 16-19-2307180, 5-16-17271780, 16-19-2307180, 4-16-17271780, 16-19-1207180, 15-18-140474, 15-122, 12-201018807, 11-12-12-1244847         10 Habarance for the loads have been considered for this design.       Second 2-20, 12-264149, 15-26414, 15-26414, 15-264, 12-26414, 15-264, 12-26414, 15-264, 12-264, 12-264, 12-264,   | LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0  | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TF   | 2-0-0<br>1.15<br>1.15<br>YES<br>Pl2014   | <b>CSI.</b><br>TC 0.75<br>BC 1.00<br>WB 0.76<br>Matrix-AS  | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT)   | in (loc)<br>-0.55 13-15<br>-1.06 13-15<br>0.37 11  | l/defl L/d<br>>999 240<br>>519 180<br>n/a n/a  | PLATES<br>MT20<br>MT20HS<br>Weight: 207 lb  | <b>GRIP</b><br>197/144<br>148/108<br>FT = 20%            |
| REACTIONS. (size) 2=0-3-8, 11=0-3-8<br>Max Horz 2=163(LC 16)<br>Max Grav 2=2163(LC 12), 11=-266(LC 13)<br>Max Grav 2=2132(LC 1), 11=2069(LC 1)<br>FORCES. (lb) - Max Comp./Max. Ten All forces 250 (lb) or less except when shown.<br>TOP CHORD 2-3-4-224/3630, 35-6-35039/452, 5-6-3057/431, 7-9=4512/545,<br>9-10=-6967/900, 10-11=-704/837<br>BOT CHORD 2-21=-556/3787, 19-21=556/3787, 15-16=-226/3674, 13-15=-298/3694, 12-13=-514/4927,<br>11-12=-724/6501<br>WEBS 3-21=-027/1, 3-19=-730/213, 7-16=-2267/323, 7-13=-97/941, 9-13=-1056/264,<br>9-12=-262/1898, 16-18=0/395, 6-16=-172/1786, 16-19=-301/3104, 5-16=-740/246<br><b>NOTES</b><br>1) Unbalanced roof live loads have been considered for this design.<br>2) Wind: ASCE 7-16; Vult=115mph (3-second guis) Vasd-94 Imp; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed;<br>MWFRS for reactions shown; Lumber DOL=1.60 plate bit 2-1-8, Interior(1) 2-1-8 to 23-0-0, Exterior(2R) 23-0-0 to 26-0-0,<br>Interior(1) 26-0-0 to 46-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces &<br>MWFRS for reactions shown; Lumber DOL=1.60 plate to plate 0 and onconcrurent with any other live loads.<br>5) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify<br>capacity of bearing surface.<br>6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 2 and 266 lb uplift at<br>joint 11.<br>6) This truss is designed in a accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and<br>referenced standard ANSI/TPI 1.<br>6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and<br>referenced standard ANSI/TPI 1.<br>6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and<br>referenced standard ANSI/TPI 1.<br>6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and<br>referen | LUMBER-<br>TOP CHORD 2x4 SF<br>1-4,8-<br>BOT CHORD 2x4 SF<br>2-20,1<br>WEBS 2x4 SF<br>OTHERS 2x4 SF<br>WEDGE<br>Left: 2x6 SPF No.2  | PF No.2 *Except*<br>11: 2x4 SPF 1650F 1.5E<br>PF No.2 *Except*<br>2-14: 2x4 SPF 1650F 1.5I<br>PF No.2<br>PF No.2   | E, 11-12: 2x8 SP 24  | 00F 2.0E   | BRACING<br>TOP CHOF<br>BOT CHOF<br>WEBS   | RD Structu<br>RD Rigid c<br>1 Row  | ral wood sheathing o<br>eiling directly applied<br>at midpt  | directly applied.<br>d.<br>3-19, 7-16, 5-16 |  |
| <ul> <li>FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown.</li> <li>TOP CHORD 2-3=-4224/530, 3-5=-3539/452, 5-6=-3019/425, 6-7=-3057/431, 7-9=-4512/545, 9-10=-6667/900, 10-11=-704/4837</li> <li>BOT CHORD 2-21=-566/3787, 19-21=-556/3787, 15-16=-226/3674, 13-15=-298/3694, 12-13=-614/4927, 11-12=-724/6501</li> <li>WEBS 3-21=0/271, 3-19=-730/213, 7-16=-1257/323, 7-13=-97/941, 9-13=-1056/264, 9-12=-262/1898, 16-18=0/395, 6-16=-172/1786, 16-19=-301/3104, 5-16=-740/246</li> <li>NOTES- <ol> <li>Unbalanced roof live loads have been considered for this design.</li> <li>WirRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 230-0, Exterior(2R) 230-0 to 26-0-0, Interior(1) 26-0 to 64-00-20ne; cantilever left and right exposed; C-C for members and forces &amp; MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60</li> <li>All plates are MT20 plates unless otherwise indicated.</li> <li>This truss has been designed for a 10.0 ps bottom chord live load nonconcurrent with any other live loads.</li> <li>Bearing at joint(s) 11 considers parallel to grain value using ANSI/TP1 1 angle to grain formula. Building designer should verify capacity of bearing surface.</li> <li>Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 2 and 266 lb uplift at joint 11.</li> <li>This truss design ed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.</li> <li>This truss design ed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.</li> <li>This truss design ed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.</li> <li>This truss design ed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.</li> </ol></li></ul>  | REACTIONS. (siz<br>Max H<br>Max U<br>Max C  | e) 2=0-3-8, 11=0-3-8<br>Horz 2=163(LC 16)<br>Jplift 2=-283(LC 12), 11=-<br>Grav 2=2132(LC 1), 11=2(  | 266(LC 13)<br>069(LC 1)  |  |   |  |  |   |  |
| <ul> <li>NOTES-</li> <li>1) Unbalanced roof live loads have been considered for this design.</li> <li>2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 23-0-0, Exterior(2R) 23-0-0 to 26-0-0, Interior(1) 26-0-0 to 46-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces &amp; MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60</li> <li>3) All plates are MT20 plates unless otherwise indicated.</li> <li>4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.</li> <li>5) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.</li> <li>6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 2 and 266 lb uplift at joint 11.</li> <li>7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.</li> <li>8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.</li> </ul>   | FORCES.         (lb) - Max.           TOP CHORD         2:3=           9-10           BOT CHORD         2:21           11-1           WEBS         3:21           9-12  | Comp./Max. Ten All for<br>-4224/530, 3-5=-3539/452<br>=-6967/900, 10-11=-7044,<br>=-556/3787, 19-21=-556/3<br>12=-724/6501<br>=0/271, 3-19=-730/213, 7-<br>=-262/1898, 16-18=0/395,  | rces 250 (lb) or less<br>2, 5-6=-3019/425, 6-<br>/837<br>8787, 15-16=-226/36<br>-16=-1257/323, 7-13<br>, 6-16=-172/1786, 11  | except when shown.<br>7=-3057/431, 7-9=-4<br>;74, 13-15=-298/369<br>;=-97/941, 9-13=-10;<br>5-19=-301/3104, 5-1  | 512/545,<br>4, 12-13=-514/49<br>56/264,<br>6=-740/246   | 27,  |  |   |  |
|  | <ul> <li>NOTES-</li> <li>1) Unbalanced roof live</li> <li>2) Wind: ASCE 7-16; \<br/>MWFRS (envelope)<br/>Interior(1) 26-0-0 to<br/>MWFRS for reaction</li> <li>3) All plates are MT20</li> <li>4) This truss has been</li> <li>5) Bearing at joint(s) 1</li> <li>6) Provide mechanical<br/>joint 11.</li> <li>7) This truss is designer<br/>referenced standard</li> <li>8) This truss design re<br/>sheetrock be applie</li> </ul> | e loads have been conside<br>/ult=115mph (3-second g<br>gable end zone and C-C<br>46-0-0 zone; cantilever le<br>ns shown; Lumber DOL=1<br>plates unless otherwise ir<br>designed for a 10.0 psf b<br>1 considers parallel to gra<br>surface.<br>I connection (by others) of<br>ed in accordance with the<br>d ANSI/TPI 1.<br>quires that a minimum of<br>d directly to the bottom ch | ered for this design.<br>ust) Vasd=91mph; T<br>Exterior(2E) -0-10-6<br>fit and right exposed<br>.60 plate grip DOL=<br>ndicated.<br>ottom chord live loa-<br>in value using ANSI<br>truss to bearing pla<br>2018 International F<br>7/16" structural woo-<br>iord. | CDL=6.0psf; BCDL=<br>t to 2-1-8, Interior(1)<br>; end vertical left an<br>1.60<br>d nonconcurrent with<br>/TPI 1 angle to grain<br>te capable of withsta<br>Residential Code sec<br>d sheathing be appli | e4.2psf; h=15ft; C<br>2-1-8 to 23-0-0, E<br>d right exposed;C<br>n any other live lo:<br>formula. Building<br>anding 283 lb uplif<br>ations R502.11.1 a<br>ed directly to the | at. II; Exp C; En<br>Exterior(2R) 23-<br>C- for members<br>ads.<br>g designer shou<br>t at joint 2 and 2<br>and R802.10.2 a<br>top chord and 1 | closed;<br>0-0 to 26-0-0,<br>s and forces &<br>ild verify<br>266 lb uplift at<br>and<br>/2" gypsum | SCOTT<br>SEV<br>NUM<br>PE-2001              | MISSOLA<br>TM.<br>ER<br>018807<br>LL ENGINE<br>ry 4,2022 |

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- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 185 lb uplift at joint 18 and 208 lb uplift at joint 7.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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**MiTek** 



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9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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January 4,2022



| Job                          | Truss                     | Truss Type      | Qty | Ply        | SUMMIT/COBEY CREEK #16/MO                              |           |
|------------------------------|---------------------------|-----------------|-----|------------|--|-----------|
|                              |                           |                 |     |            |  | l49513007 |
| 3020681                      | A16                       | Half Hip Girder | 1   | 2          |  |           |
|                              |                           |                 |     | <b>– –</b> | Job Reference (optional)                               |           |
| Builders FirstSource (Valley | Center). Vallev Center, K | S - 67147.      | . 8 | 430 s Aug  | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:23 2022 | Page 2    |

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Builders FirstSource (Valley Center), Valley Center, KS - 67147,

NOTES-

11) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 4-0-0 oc max. starting at 18-4-8 from the left end to 22-4-8 to connect truss(es) to front face of bottom chord.

12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 4-0-0 oc max. starting at 20-4-8 from the left end to 24-4-8 to connect truss(es) to front face of bottom chord.

13) Fill all nail holes where hanger is in contact with lumber.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 286 lb down and 103 lb up at 25-8-0 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=-70, 4-7=-70, 7-8=-70, 17-18=-20, 14-16=-20, 12-13=-20, 7-11=-20, 9-20=-20 Concentrated Loads (lb)

Vert: 1=-107(F) 18=-100(F) 24=-74(F) 25=-74(F) 26=-74(F) 27=-97(F) 28=-97(F) 29=-97(F) 30=-97(F) 31=-64(F) 32=-90(F) 33=-90(F) 34=-90(F) 35=-77(F) 36=-77(F) 37=-77(F) 38=-77(F) 39=-130(F) 41=-230(F) 42=-230(F) 43=-230(F) 44=-230(F) 45=-286(F)





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8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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|   |   |  | 8-8-0  |                        |
|---|---|--|--|------------------------|
| LOADING (psf)<br>TCLL 25.0<br>TCDL 10.0<br>BCLL 0.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES | <b>CSI.</b><br>TC 0.07<br>BC 0.04<br>WB 0.05 | DEFL.         in         (loc)         l/defl         L/d         PLATES           Vert(LL)         -0.00         9         n/r         120         MT20           Vert(CT)         -0.00         9         n/r         120         MT20           Horz(CT)         0.00         10         n/a         n/a         MT20 | <b>GRIP</b><br>197/144 |
| BCDL 10.0   | Code IRC2018/TPI2014  | Matrix-R                                     | Weight: 43   | lb FT = 20%            |
| LUMBER-   |   |  | BRACING-   |                        |

| TOP CHORD | 2x4 SPF No.2 |
|-----------|--------------|
| BOT CHORD | 2x4 SPF No.2 |
| WEBS      | 2x4 SPF No.2 |
| OTHERS    | 2x4 SPF No 2 |

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 8-8-0.

(lb) -Max Horz 16=-129(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11 Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 14, 15, 12, 11

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

# NOTES-

- Unbalanced roof live loads have been considered for this design.
   Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-4-0, Exterior(2R) 4-4-0 to 7-4-0, Interior(1) 7-4-0 to 9-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).

7) Gable studs spaced at 1-4-0 oc.

- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 10, 14, 15, 12, 11.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



January 4,2022





WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **MSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

Mitek<sup>®</sup> 16023 Swingley Ridge Rd Chesterfield, MO 63017

| Job                          | Truss                     | Truss Type | Qty | Ply        | SUMMIT/COBEY CREEK #16/MO                              |           |
|------------------------------|---------------------------|------------|-----|------------|--|-----------|
|                              |                           |            |     |            |  | 149513014 |
| 3020681                      | C1                        | Flat       | 1   | 2          |  |           |
|                              |                           |            |     | <b>_</b>   | Job Reference (optional)                               |           |
| Builders FirstSource (Valley | Center), Valley Center, K | S - 67147, | 8.  | .430 s Aug | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:33 2022 | Page 2    |

021 MiTek Indu Mon Jan 3 ID:qMeyVrAyR40V1rvItLjLFlzXPDf-?3eeo3VxID?OgQGxw2?HjaeJdvlCpr4d4Rld49zz2ny

# LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf) Vert: 1-3=-70, 4-5=-20 Concentrated Loads (lb) Vert: 2=-1165 6=-1165 7=-2548





|             |     |                 |        |       |      |          |       | 2-0-  | 3      |     |              |          |
|-------------|-----|-----------------|--------|-------|------|----------|-------|-------|--------|-----|--------------|----------|
| LOADING (ps | sf) | SPACING-        | 2-0-0  | CSI.  |      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
| TCLL 25.    | .0  | Plate Grip DOL  | 1.15   | TC    | 0.31 | Vert(LL) | 0.00  | 4-5   | >999   | 240 | MT20         | 197/144  |
| TCDL 10.    | .0  | Lumber DOL      | 1.15   | BC    | 0.08 | Vert(CT) | 0.00  | 4-5   | >999   | 180 |              |          |
| BCLL 0.     | .0  | Rep Stress Incr | YES    | WB    | 0.00 | Horz(CT) | -0.01 | 3     | n/a    | n/a |              |          |
| BCDL 10.    | .0  | Code IRC2018/TF | PI2014 | Matri | x-MR |          |       |       |        |     | Weight: 8 lb | FT = 20% |

# LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD

BOT CHORD

Structural wood sheathing directly applied or 2-0-15 oc purlins, except end verticals.

Rigid ceiling directly applied or 10-0-0 oc bracing.

### REACTIONS. (size) 5=0-6-5, 3=Mechanical, 4=Mechanical

Max Horz 5=50(LC 8)

Max Uplift 5=-109(LC 8), 3=-15(LC 12), 4=-4(LC 1)

Max Grav 5=314(LC 1), 3=6(LC 22), 4=28(LC 3)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-5=-272/262

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.





Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4 except (jt=lb) 5=109.



1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-4=-70, 6-7=-20, 5-6=-20 Concentrated Loads (lb) Vert: 8=-18(F) 9=-4(B) 10=25(B) 11=-11 12=-22(B)







|  |  | 3-1-6   | 2-5-0   |
|--|--|---|---|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCode IRC2018/TPI2014 | CSI.         DEFL.           TC         0.19         Vert(LL)           BC         0.34         Vert(CT)           WB         0.00         Horz(CT)           Matrix-MR         Horz(CT)         Horz(CT) | in (loc) I/defl L/d<br>-0.02 8 >999 240<br>-0.03 8 >999 180<br>0.01 7 n/a n/a<br>Weight: 18 lb FT = 20% |

| L | U | М | в | E | F | ۲- | • |
|---|---|---|---|---|---|----|---|
|   |   |   | - |   |   | -  |   |

 TOP CHORD
 2x4 SPF No.2

 BOT CHORD
 2x4 SPF No.2 \*Except\*

 2-9: 2x6 SPF No.2

 WEBS
 2x4 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 5-6-6 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 7=Mechanical, 2=0-4-9 Max Horz 2=64(LC 5) Max Uplift 7=-61(LC 8), 2=-96(LC 4) Max Grav 7=245(LC 1), 2=339(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=-348/75

BOT CHORD 2-3=-348/75 2-9=-86/304

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; 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) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 2.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1.
- 6) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
- 7) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

### LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)
  - Vert: 1-4=-70, 4-5=-20, 9-10=-20, 6-8=-20
  - Concentrated Loads (lb) Vert: 9=-13(F=-7, B=-7)









|                      |                       |                        | 1-7-12           |                       |
|----------------------|-----------------------|------------------------|------------------|-----------------------|
| <b>_OADING</b> (psf) | <b>SPACING-</b> 2-0-0 | CSI. DEFL. in          | (loc) l/defl L/d | PLATES GRIP           |
| rcll 25.0            | Plate Grip DOL 1.15   | TC 0.31 Vert(LL) 0.00  | 4-5 >999 240     | MT20 197/144          |
| rcdl 10.0            | Lumber DOL 1.15       | BC 0.08 Vert(CT) 0.00  | 4-5 >999 180     |                       |
| BCLL 0.0             | Rep Stress Incr YES   | WB 0.00 Horz(CT) -0.01 | 3 n/a n/a        |                       |
| 3CDL 10.0            | Code IRC2018/TPI2014  | Matrix-MR              |                  | Weight: 7 lb FT = 20% |

TOP CHORD

BOT CHORD

# LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WFBS

REACTIONS. (size) 3=Mechanical, 4=Mechanical, 5=0-6-5

Max Horz 5=46(LC 8) Max Uplift 3=-18(LC 1), 4=-12(LC 1), 5=-115(LC 8)

Max Grav 3=9(LC 8), 4=21(LC 3), 5=317(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-5=-274/270

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

<sup>5)</sup> This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Structural wood sheathing directly applied or 1-8-8 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.



<sup>4)</sup> Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4 except (jt=lb) 5=115.



|               |                      |           | 1-11-6                    |                       |
|---------------|----------------------|-----------|---------------------------|-----------------------|
| LOADING (psf) | SPACING- 2-0-0       | CSI.      | DEFL. in (loc) I/defl L/d | PLATES GRIP           |
| CLL 25.0      | Plate Grip DOL 1.15  | TC 0.31   | Vert(LL) -0.00 5 >999 240 | MT20 197/144          |
| TCDL 10.0     | Lumber DOL 1.15      | BC 0.05   | Vert(CT) -0.00 5 >999 180 |                       |
| CLL 0.0       | Rep Stress Incr YES  | WB 0.00   | Horz(CT) -0.00 3 n/a n/a  |                       |
| BCDL 10.0     | Code IRC2018/TPI2014 | Matrix-MR |                           | Weight: 9 lb FT = 20% |

#### LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD

 TOP CHORD
 Structural wood sheathing directly applied or 2-0-2 oc purlins, except end verticals.

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

REACTIONS. (size) 4=Mechanical, 5=0-6-5, 3=Mechanical

## Max Ho

Max Horz 5=81(LC 11) Max Uplift 4=-12(LC 20), 5=-124(LC 8), 3=-16(LC 9) Max Grav 4=27(LC 3), 5=315(LC 1), 3=9(LC 8)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-5=-269/276

### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 studs spaced at 2-0-0 oc.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

 Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 3 except (jt=lb) 5=124.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.







| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.31<br>BC 0.08<br>WB 0.00<br>Matrix-MR | DEFL. ii<br>Vert(LL) 0.00<br>Vert(CT) 0.00<br>Horz(CT) -0.07 | n (loc)<br>0 4-5<br>0 4-5<br>3 | l/defl<br>>999<br>>999<br>n/a | L/d<br>240<br>180<br>n/a | PLATES<br>MT20<br>Weight: 8 lb | <b>GRIP</b><br>197/144<br>FT = 20% |
|--|---|--|--|--------------------------------|-------------------------------|--------------------------|--------------------------------|------------------------------------|
| LUMBER-<br>TOP CHORD 2x4 SF  | PF No.2   |  | BRACING-<br>TOP CHORD  | Structu                        | ral wood                      | sheathing di             | rectly applied or 2-0-         | 2 oc purlins,                      |

BOT CHORD

except end verticals

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

| LOWIDER   |     |
|-----------|-----|
| TOP CHORD | 2x4 |

BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WEBS

REACTIONS.

(size) 5=0-4-13, 3=Mechanical, 4=Mechanical Max Horz 5=48(LC 8)

Max Uplift 5=-110(LC 8), 3=-14(LC 12), 4=-6(LC 1)

Max Grav 5=314(LC 1), 3=3(LC 17), 4=27(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-5=-272/263

# NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4 except (it=lb) 5=110.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



January 4,2022





| Job  | Truss  | Truss Type  | Qty  | Ply                                    | SUMMIT/COBEY CREEK #16/MO  |         |  |  |  |
|--|--|---|--|--|--|---------|--|--|--|
| 3020681  | D01 ROOF SPECIAL 1 2 Interpretations (entired)   |   |  |  |  |         |  |  |  |
| Builders FirstSource (Valley   | Image: Specific Conternet of Conternet |   |  |  |  |         |  |  |  |
| NOTES-<br>9) This truss design require<br>bottom chord.<br>10) Hanger(s) or other com<br>responsibility of others.   | es that a minimum of 7/16" st<br>nection device(s) shall be pro  | ID:fq<br>ructural wood sheathing be applied directly to th<br>ovided sufficient to support concentrated load(s)   | Cw?w81K<br>e top cho<br>. The de                 | NUb7bx7><br>rd and 1/2<br>sign/selec   | Xipugryjvtv-mc7fUobyPh?FdetTOj891G_Zq8HFhJMowhh2f<br>gypsum sheetrock be applied directly to the<br>tion of such connection device(s) is the | lizz2nq |  |  |  |
| LOAD CASE(S) Standard<br>1) Dead + Roof Live (balan<br>Uniform Loads (plf)<br>Vert: 1-3=-70, 3<br>Concentrated Loads (lb)<br>Vert: 12=-905(F<br>2) Dead + 0.75 Roof Live<br>(Uniform Loads (plf)<br>Vert: 1-3=-58, 3<br>Concentrated Loads (lb)<br>Vert: 1-3=-20, 3<br>Concentrated Loads (lb)<br>Vert: 1-3=-20, 3<br>Concentrated Loads (lb)<br>Vert: 1-2=-905(F<br>4) Dead + 0.6 C-C Wind (P<br>Uniform Loads (plf)<br>Vert: 1-25=25, 3<br>Horz: 1-25=-37,<br>Concentrated Loads (lb)<br>Vert: 12=-905(F<br>5) Dead + 0.6 C-C Wind (P<br>Uniform Loads (plf) | ced): Lumber Increase=1.15<br>-10=-70, 8-10=-140, 11-24=-<br>) 16=-895(F) 9=-885(F) 28=-<br>balanced): Lumber Increase=<br>-10=-57, 8-10=-115, 11-24=-<br>) 16=-895(F) 9=-885(F) 28=-<br>tic Without Storage: Lumber<br>-10=-20, 8-10=-40, 6-24=-40<br>) 16=-895(F) 9=-885(F) 28=-<br>os. Internal) Case 1: Lumber<br>8-25=21, 3-27=28, 10-27=31,<br>3-25=-33, 3-27=40, 10-27=33<br>) 16=-895(F) 9=-885(F) 28=-<br>os. Internal) Case 2: Lumber  | , Plate Increase=1.15<br>20, 11-35=-90, 6-35=-140<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>1.15, Plate Increase=1.15<br>20, 11-35=-78, 6-35=-115<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>Increase=1.25, Plate Increase=1.25<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>Increase=1.60, Plate Increase=1.60<br>8-10=-10, 11-24=-8, 11-35=13, 6-35=-10<br>13, 6-8=31, 1-23=18<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>Increase=1.60, Plate Increase=1.60 | 905(F) 33<br>905(F) 33<br>905(F) 33<br>905(F) 33 | =-905(F) :<br>=-905(F) :<br>=-905(F) : | 34=-905(F)<br>34=-905(F)<br>34=-905(F)   |         |  |  |  |
| Vert: 1-26=21, 3<br>Horz: 1-26=-33,<br>Concentrated Loads (lb)<br>Vert: 12=-905(F<br>6) Dead + 0.6 C-C Wind (N<br>Uniform Loads (plf)<br>Vert: 1-3=-34, 3<br>Horz: 1-3=14, 3<br>Concentrated Loads (lb)  | 3-26=28, 3-10=21, 8-10=-10,<br>3-26=-40, 3-10=33, 6-8=-18<br>) 16=-895(F) 9=-885(F) 28=-<br>leg. Internal) Case 1: Lumber<br>-10=-34, 8-10=-51, 11-24=-2<br>-10=-14, 6-8=-28, 1-23=-21   | 11-24=-8, 11-35=13, 6-35=-10<br>, 1-23=-31<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>r Increase=1.60, Plate Increase=1.60<br>0, 11-35=-54, 6-35=-51  | 905(F) 33  | 5=-905(F) ;                            | 34=-905(F)   |         |  |  |  |
| Vert: 12=-905(F<br>7) Dead + 0.6 C-C Wind (N<br>Uniform Loads (plf)<br>Vert: 1-3=-34, 3<br>Horz: 1-3=14, 3<br>Concentrated Loads (lb)<br>Vert: 12=-905(F<br>8) Dead + 0.6 MWFRS Wir  | ) 16=-895(F) 9=-885(F) 28=-<br>leg. Internal) Case 2: Lumber<br>-10=-34, 8-10=-51, 11-24=-2<br>-10=-14, 6-8=21, 1-23=28<br>) 16=-895(F) 9=-885(F) 28=-<br>d (Pos. Internal) Left: Lumbe  | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>r Increase=1.60, Plate Increase=1.60<br>0, 11-35=-54, 6-35=-51<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>pr Increase=1.60, Plate Increase=1.60   | 905(F) 33<br>905(F) 33                           | ≔-905(F) :<br>;=-905(F) :              | 34=-905(F)<br>34=-905(F)   |         |  |  |  |
| Uniform Loads (plf)<br>Vert: 1-3=14, 3-<br>Horz: 1-3=-26, 3<br>Concentrated Loads (lb)<br>Vert: 12=-905(F<br>9) Dead + 0.6 MWFRS Wir<br>Uniform Loads (plf)<br>Vert: 1-3=12, 3-<br>Horz: 1-3=-24, 3  | 10=12, 8-10=-10, 11-24=-8,<br>3-10=24, 6-8=16, 1-23=15<br>) 16=-895(F) 9=-885(F) 28=-<br>Id (Pos. Internal) Right: Lumb<br>10=14, 8-10=-10, 11-24=-8,<br>3-10=26, 6-8=-11, 1-23=-19  | 11-35=-15, 6-35=-10<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>ber Increase=1.60, Plate Increase=1.60<br>11-35=-15, 6-35=-10  | 905(F) 33  | 5=-905(F) ;                            | 34=-905(F)   |         |  |  |  |
| Vert: 12=-905(F<br>10) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1-3=-4, 3<br>Horz: 1-3=-16,<br>Concentrated Loads (It  | ) 16=-895(F) 9=-885(F) 28=-<br>ind (Neg. Internal) Left: Lumi<br>-10=-6, 8-10=-51, 11-24=-20<br>3-10=14, 6-8=6, 1-23=26  | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-<br>ber Increase=1.60, Plate Increase=1.60<br>, 11-35=-45, 6-35=-51   | 905(F) 33  | =-905(F) :                             | 34=-905(F)   |         |  |  |  |
| Vert: 12=-905(<br>11) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1.3=-6, 3<br>Horz: 1.3=-14,<br>Concentrated Loads (lt<br>Vert: 12=-905(<br>12) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1.3=25, 3   | F) 16=-895(F) 9=-885(F) 28=<br>ind (Neg. Internal) Right: Lur<br>-10=-4, 8-10=-51, 11-24=-20<br>3-10=16, 6-8=-22, 1-23=-9<br>))<br>F) 16=-895(F) 9=-885(F) 28=<br>ind (Pos. Internal) 1st Paralle<br>3-10=9, 8-10=-10, 11-24=-8,   | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>nber Increase=1.60, Plate Increase=1.60<br>, 11-35=-45, 6-35=-51<br>=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>el: Lumber Increase=1.60, Plate Increase=1.60<br>11-35=-15, 6-35=-10  | -905(F) 3<br>-905(F) 3                           | 3=-905(F)<br>3=-905(F)                 | ) 34=-905(F)<br>) 34=-905(F)   |         |  |  |  |
| Horz: 1-3=-37,<br>Concentrated Loads (lb<br>Vert: 12=-905(<br>13) Dead + 0.6 MWFRS W   | 3-10=21, 6-8=14, 1-23=13<br>b)<br>F) 16=-895(F) 9=-885(F) 28=<br>ind (Pos. Internal) 2nd Parall  | =-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>el: Lumber Increase=1.60, Plate Increase=1.60  | -905(F) 3  | 3=-905(F)                              | ) 34=-905(F)   |         |  |  |  |



| Job  | Truss  | Truss Type  | Qty                      | Ply                   | SUMMIT/COBEY CREEK #16/MO   | 1/0513021         |  |  |
|--|--|---|--------------------------|-----------------------|---|-------------------|--|--|
| D20681 D01 ROOF SPECIAL 1 2 Job Reference (optional)   |  |   |                          |                       |   |                   |  |  |
| Builders FirstSource (Valley   | Center), Valley Center, K  | S - 67147,<br>ID:fg   | 8.<br>Cw?w81K            | 430 s Aug<br>NUb7bx7> | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:41 2022<br>(ipugryjvtv-mc7fUobyPh?FdetTOj891G Zq8HFhJMowhh2l | Page 3<br>Vizz2ng |  |  |
| LOAD CASE(S) Standard<br>Uniform Loads (plf)<br>Vert: 1-3=9, 3<br>Horz: 1-3=-21,<br>Concentrated Loads (It<br>Vert: 12=-905(                       | -10=25, 8-10=-10, 11-24=-8,<br>, 3-10=37, 6-8=-6, 1-23=-18<br>))<br>(F) 16=-895(F) 9=-885(F) 28=   | 11-35=-15, 6-35=-10<br>=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=  | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  | ·                 |  |  |
| 14) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1-3=14, 5<br>Horz: 1-3=-26,<br>Concentrated Loads (Ik<br>Vert: 12=-905                      | 'ind (Pos. Internal) 3rd Paralle<br>3-10=4, 8-10=-10, 11-24=-8,<br>, 3-10=16, 6-8=14, 1-23=6<br>⊳)<br>(F) 16=-895(F) 9=-885(F) 28=   | el: Lumber Increase=1.60, Plate Increase=1.60<br>11-35=-15, 6-35=-10<br>=-895(E) 29=-895(E) 30=-895(E) 31=-895(E) 32=                                   | -905(F) 3                | 3=-905(F              | ) 34=-905/F)  |                   |  |  |
| 15) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1-3=4, 3-<br>Horz: 1-3=-16,<br>Concentrated Loads (lt                                       | ind (Pos. Internal) 4th Paralle<br>-10=14, 8-10=-10, 11-24=-8,<br>, 3-10=26, 6-8=-6, 1-23=-14<br>o)<br>(E) 16895(E) 9885(E) 28-  | el: Lumber Increase=1.60, Platé Increase=1.60<br>11-35=-15, 6-35=-10<br>895(E) 29895(E) 30895(E) 31895(E) 32-   | -905(F) 3                | 3905/F                | ) 34905/F)  |                   |  |  |
| 16) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1-3=6, 3-<br>Horz: 1-3=-26,<br>Concentrated Loads (lk                                       | (1) 10=-030(1) 20=000(1) 20=<br>(ind (Neg. Internal) 1st Paralle<br>(10=-10, 8-10=-51, 11-24=-20<br>() 3-10=10, 6-8=3, 1-23=23   | el: Lumber Increase=1.60, Plate Increase=1.60<br>), 11-35=-45, 6-35=-51   | -900(1) 3                | J303(I                | ()  |                   |  |  |
| Vert: 12=905(<br>17) Dead + 0.6 MWFRS W<br>Uniform Loads (plf)<br>Vert: 1-3=-10,<br>Horz: 1-3=-10,<br>Concentrated Loads (IL                       | (F) 16=-895(F) 9=-885(F) 28=<br>find (Neg. Internal) 2nd Paral<br>3-10=6, 8-10=-51, 11-24=-20<br>, 3-10=26, 6-8=-17, 1-23=-7   | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>lel: Lumber Increase=1.60, Plate Increase=1.60<br>), 11-35=-45, 6-35=-51                                 | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  |                   |  |  |
| Vert: 12=-905(<br>18) Dead: Lumber Increase<br>Uniform Loads (plf)<br>Vert: 1-3=-20,   | (F) 16=-895(F) 9=-885(F) 28=<br>e=0.90, Plate Increase=0.90 ↓<br>3-10=-20, 8-10=-40, 11-24=-   | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>Plt. metal=0.90<br>20, 6-11=-40  | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  |                   |  |  |
| Concentrated Loads (lk<br>Vert: 12=-905(<br>19) Dead + 0.75 Roof Live<br>Uniform Loads (plf)<br>Vert: 1-3=-46,                                     | Concentrated Loads (lb)<br>Vert: 12=-905(F) 16=-895(F) 9=-885(F) 28=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-905(F) 33=-905(F) 34=-905(F)<br>9) Dead + 0.75 Roof Live (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60<br>Uniform Loads (plf)<br>Vert: 12=-905(F) 16=-895(F) 29=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-905(F) 33=-905(F) 34=-905(F) 34= |   |                          |                       |   |                   |  |  |
| Horz: 1-3=-12,<br>Concentrated Loads (It<br>Vert: 12=-905(<br>20) Dead + 0.75 Roof Live<br>Uniform Loads (plf)                                     | , 3-10=10, 6-8=4, 1-23=19<br>b)<br>(F) 16=-895(F) 9=-885(F) 28=<br>(bal.) + 0.75(0.6 MWFRS Wi  | 895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>nd (Neg. Int) Right): Lumber Increase=1.60, Pla  | -905(F) 3<br>ae Increas  | 33=-905(F<br>se=1.60  | ) 34=-905(F)  |                   |  |  |
| Vert: 1-3=-10,<br>Horz: 1-3=-10,<br>Concentrated Loads (It<br>Vert: 12=-905(<br>21) Dead + 0.75 Roof Live<br>Uniform Loads (plf)<br>Vert: 1-3=-38. | 3-10=-46, 0-10=-123, 11-24=,<br>3-10=12, 6-8=-16, 1-23=-7<br>)<br>(F) 16=-895(F) 9=-885(F) 28=<br>(bal.) + 0.75(0.6 MWFRS Wi<br>3-10=-50, 8-10=-123, 11-24=  | 20, 11-35=-61, 6-35=-123<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>nd (Neg. Int) 1st Parallel): Lumber Increase=1.6<br>20, 11-35=-81, 6-35=-123 | -905(F) 3<br>0, Plate li | 3=-905(F<br>ncrease=* | ) 34=-905(F)<br>.60   |                   |  |  |
| Horz: 1-3=-20,<br>Concentrated Loads (It<br>Vert: 12=-905(<br>22) Dead + 0.75 Roof Live  | )<br>(F) 16=-895(F) 9=-885(F) 28=<br>(bal.) + 0.75(0.6 MWFRS Wi  | =-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>nd (Neg. Int) 2nd Parallel): Lumber Increase=1.  | -905(F) 3<br>30, Plate   | 3=-905(F<br>Increase= | ) 34=-905(F)<br>1.60  |                   |  |  |
| Uniform Loads (plf)<br>Vert: 1-3=-50,<br>Horz: 1-3=-8, :<br>Concentrated Loads (Ik   | 3-10=-38, 8-10=-123, 11-24=<br>3-10=20, 6-8=-13, 1-23=-5<br>b)<br>(E) 16895(E) 9885(E) 28-   | 20, 11-35=-81, 6-35=-123<br>895(E) 29895(E) 30895(E) 31895(E) 32-   | -905(F) 3                | 3905(F                | ) 34905/F)  |                   |  |  |
| 23) Dead + 0.6 C-C Wind I<br>Uniform Loads (plf)<br>Vert: 1-3=-28,<br>Horz: 1-3=-16,   | Vin. Down: Lumber Increase=<br>3-10=-28, 8-10=-20, 11-24=-<br>3-10=-16, 6-8=-16, 1-23=-16  | e1.60, Plate Increase=1.60<br>8, 11-35=-37, 6-35=-20  | 000(1)0                  | 000(1                 | , or = 500(1)   |                   |  |  |
| 24) Dead + 0.6 C-C Wind I<br>Uniform Loads (plf)<br>Vert: 1-3=4, 3-  | (F) 16=-895(F) 9=-885(F) 28=<br>Min. Upward: Lumber Increas  | e-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>ie=1.60, Plate Increase=1.60<br>1-35=-4, 6-35=-20  | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  |                   |  |  |
| Horz: 1-3=-16,<br>Concentrated Loads (It<br>Vert: 12=-905)<br>25) 1st Dead + Roof Live (<br>Uniform Loads (plf)                                    | ,10=10, 0-8=10, 1-23=16<br>)<br>(F) 16=-895(F) 9=-885(F) 28=<br>unbalanced): Lumber Increas  | =-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=<br>se=1.15, Plate Increase=1.15   | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  |                   |  |  |
| vert: 1-3=-70,<br>Concentrated Loads (Ik<br>Vert: 12=-905(   | 3-10=-20, 8-10=-40, 11-24=-<br>b)<br>(F) 16=-895(F) 9=-885(F) 28=  | 2u, 11=-4u<br>895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=   | -905(F) 3                | 3=-905(F              | ) 34=-905(F)  |                   |  |  |



| Job     | Truss | Truss Type   | Qty | Ply | SUMMIT/COBEY CREEK #16/MO |          |
|---------|-------|--------------|-----|-----|---------------------------|----------|
| 3020681 | D01   | ROOF SPECIAL | 1   |     | l l                       | 49513021 |
| 0020001 | 501   |              |     | 2   | Job Reference (optional)  |          |
|         |       |              |     |     |                           | <b>`</b> |

Builders FirstSource (Valley Center), Valley Center, KS - 67147,

8.430 s Aug 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:41 2022 Page 4 ID:fqCw?w81KNUb7bx7Xipugryjvtv-mc7fUobyPh?FdetTOj891G\_Zq8HFhJMowhh2Mizz2nq

### LOAD CASE(S) Standard

26) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-3=-20, 3-10=-70, 8-10=-140, 11-24=-20, 11-35=-90, 6-35=-140

Concentrated Loads (lb)

Vert: 12=-905(F) 16=-895(F) 9=-885(F) 29=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-905(F) 33=-905(F) 34=-905(F) 37 27) 3rd Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-58, 3-10=-20, 8-10=-40, 11-24=-20, 6-11=-40

Concentrated Loads (lb)

Vert: 12=-905(F) 16=-895(F) 9=-885(F) 28=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-905(F) 33=-905(F) 34=-905(F) 28) 4th Dead + 0.75 Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-3=-20, 3-10=-57, 8-10=-115, 11-24=-20, 11-35=-78, 6-35=-115

Concentrated Loads (lb)

Vert: 12=-905(F) 16=-895(F) 9=-885(F) 28=-895(F) 29=-895(F) 30=-895(F) 31=-895(F) 32=-905(F) 33=-905(F) 34=-905(F)







|   |           |       | 3-0-0                           |        |         |        |         |        |   |
|---|-----------|-------|---------------------------------|--------|---------|--------|---------|--------|---|
|   | J 3-3-8 J | 8-0-8 | 8 <sub>1</sub> 4 <sub>1</sub> 8 | 13-0-0 | 17-0-14 | 21-0-0 | 25-5-15 | 30-0-0 | I |
|   | 3-3-8     | 4-9-0 | 040                             | 4-0-0  | 4-0-14  | 3-11-2 | 4-5-15  | 4-6-1  | 1 |
| 0-7-8   |           |       |                                 |        |         |        |         |        |   |
| Plate Offsets (X,Y) [2:0-3-14,0-1-2], [4:0-6-8,0-1-8], [9:Edge,0-2-8], [17:0-5-8,0-2-8], [18:0-4-0,0-4-0], [20:0-2-0,0-0-0] |           |       |                                 |        |         |        |         |        |   |
|   |           |       |                                 |        |         |        |         |        |   |

| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0           | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCodeIRC2018/TPI2014   | <b>CSI.</b><br>TC 0.60<br>BC 0.95<br>WB 0.74<br>Matrix-MS  | DEFL.         in           Vert(LL)         -0.14           Vert(CT)         -0.30           Horz(CT)         0.03 | n (loc) l/defl<br>4 12-14 >999<br>0 12-14 >860<br>3 9 n/a           | L/d<br>240<br>180<br>n/a                              | <b>PLATES</b><br>MT20<br>Weight: 134 lb             | <b>GRIP</b><br>197/144<br>FT = 20% |
|--|---|--|--|---|---|---|------------------------------------|
| LUMBER-<br>TOP CHORD 2x4 S<br>BOT CHORD 2x4 S<br>2-19:<br>WEBS 2x4 S<br>WEDGE<br>Binht: 2x4 SPE No 2   | PF No.2<br>PF No.2 *Except*<br>2x6 SPF No.2, 17-19: 2x6 SP 2400F 2.0I<br>PF No.2  | E  | BRACING-<br>TOP CHORD<br>BOT CHORD   | Structural wood<br>except<br>2-0-0 oc purlins<br>Rigid ceiling dire | sheathing dired<br>(4-3-13 max.):<br>ectly applied or | ctly applied or 3-6-11<br>4-7.<br>6-0-0 oc bracing. | 1 oc purlins,                      |
| REACTIONS. (siz<br>Max I<br>Max I<br>Max 0   | ze) 2=0-3-8, 9=0-3-8, 18=0-3-8<br>Horz 2=-64(LC 9)<br>Jplift 2=-115(LC 29), 9=-487(LC 9), 18=-<br>Grav 2=167(LC 16), 9=1319(LC 22), 18=   | 795(LC 8)<br>2208(LC 1)  |  |   |   |   |                                    |
| FORCES. (lb) - Max<br>TOP CHORD 2-3=<br>7-8=<br>BOT CHORD 2-19<br>9-11<br>WEBS 6-14<br>4-18  | . Comp./Max. Ten All forces 250 (lb) or<br>373/699, 3-4=-319/1049, 4-5=-86/534, 5<br>1883/838, 8-9=-2324/963<br>9=-639/438, 18-19=-620/419, 17-18=-456<br>=-822/2086<br>=-813/363, 6-12=-9/255, 7-12=-114/349,<br>s=-1529/651, 3-18=-613/391, 5-14=-157/5 | less except when shown.<br>5-6=-992/534, 6-7=-1681/<br>/141, 12-14=-645/1531, 1<br>8-12=-451/186, 4-17=-36<br>592, 14-17=-414/1005, 5- | 798,<br>1-12=-822/2086,<br>6/795,<br>17=-1678/661  |   |   |   |                                    |
| NOTES-<br>1) Unbalanced roof liv<br>2) Wind: ASCE 7-16;<br>MWFRS (envelope<br>grip DOL=1.60<br>3) Provide adequate c<br>4) This truss has been | re loads have been considered for this de<br>Vult=115mph (3-second gust) Vasd=91m<br>) gable end zone; cantilever left and right<br>drainage to prevent water ponding.  | sign.<br>ph; TCDL=6.0psf; BCDL=<br>exposed ; end vertical lef  | =4.2psf; h=15ft; Cat. II; E<br>it and right exposed; Lui   | Exp C; Enclosed;<br>mber DOL=1.60 pl                                | ate   | ANE OF  | MISSOL                             |

- 5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

000

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=115, 9=487, 18=795.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- B) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
   9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
- 10) 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

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017

| Job                          | Truss                     | Truss Type | Qty | Ply       | SUMMIT/COBEY CREEK #16/MO                                |          |
|------------------------------|---------------------------|------------|-----|-----------|--|----------|
|                              |                           |            |     |           |  | 49513022 |
| 3020681                      | D05                       | Hip Girder | 1   | 1         |  |          |
|                              |                           |            |     |           | Job Reference (optional)                                 |          |
| Builders FirstSource (Valley | Center), Valley Center, K | S - 67147, | 8   | 430 s Aug | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:20:43 2022 P | 'age 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=-70, 4-7=-70, 7-10=-70, 19-21=-20, 17-19=-20, 16-24=-20 Concentrated Loads (lb)

Vert: 4=-47(B) 7=-47(B) 6=-47(B) 14=-24(B) 12=-24(B) 5=-47(B) 17=-24(B) 27=-47(B) 28=-47(B) 29=-47(B) 30=-24(B) 31=-24(B) 32=-24(B) 33=-24(B) 34=-107(B) 3 35=-3(B) 36=-158(B)







| 3-3-   | 8 8-0-8  | 8 <sub>1</sub> 4 <sub>1</sub> 8  | 13-0-0   | 17-0-0  | 23-5-15   | 30-0-0   |  |  |
|--|--|--|--|---|---|--|--|--|
| 3-3-   | 8 4-9-0  | 0-4-0  | 4-7-8  | 4-0-0   | 6-5-15  | 6-6-1  |  |  |
| Plate Offsets (X,Y)  | [2:0-3-14,0-1-2]   |  |  |   |   |  |  |  |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0   | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TPI2   | 2-0-0<br>1.15<br>1.15<br>YES<br>014  | CSI.<br>TC 0.38<br>BC 0.58<br>WB 0.93<br>Matrix-AS   | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT)   | in (loc) I/defl L/d<br>-0.13 11-13 >999 240<br>-0.28 11-13 >912 180<br>0.02 14 n/a n/a  | PLATES         GRIP           MT20         197/144           Weight: 119 lb         FT = 20% |  |  |
| LUMBER-<br>TOP CHORD 2x4 SF<br>BOT CHORD 2x4 SF<br>2-15: 2<br>WEBS 2x4 SF<br>WEDGE<br>Right: 2x4 SPF No.2  | PF No.2<br>PF No.2 *Except*<br>2x6 SPF No.2<br>PF No.2   |  |  | BRACING-<br>TOP CHOR<br>BOT CHOR  | D Structural wood sheathin<br>2-0-0 oc purlins (6-0-0 m<br>D Rigid ceiling directly app   | g directly applied, except<br>ax.): 5-6.<br>lied.  |  |  |
| REACTIONS. (siz<br>Max H<br>Max U<br>Max G   | e) 2=0-3-8, 14=0-3-8, 8=0<br>lorz 2=90(LC 12)<br>lplift 2=-49(LC 12), 14=-201(<br>grav 2=370(LC 25), 14=1472   | -3-8<br>(LC 12), 8=-179<br>2(LC 1), 8=993(   | 9(LC 13)<br>(LC 1)   |   |   |  |  |  |
| FORCES. (lb) - Max. Comp./Max. Ten All forces 250 (lb) or less except when shown.         TOP CHORD       2-3=-841/128, 3-4=-70/269, 5-6=-853/237, 6-7=-1010/220, 7-8=-1651/309         BOT CHORD       2-15=-169/784, 14-15=-164/711, 13-14=-39/863, 4-14=-417/169, 11-13=-2/491, 10-11=-210/1456, 8-10=-210/1456         WEBS       3-15=0/293, 3-14=-848/228, 5-11=-82/625, 7-11=-669/200, 5-13=-1004/95  |  |  |  |   |   |  |  |  |
| <ul> <li>NOTES-</li> <li>1) Unbalanced roof live</li> <li>2) Wind: ASCE 7-16; MWFRS (envelope)<br/>Exterior(2R) 17-0-0<br/>exposed;C-C for me</li> <li>3) Provide adequate di</li> <li>4) This truss has been</li> <li>5) Bearing at joint(s) 2<br/>capacity of bearing a</li> <li>6) Provide mechanical<br/>14=201, 8=179.</li> <li>7) This truss is designer<br/>referenced standard</li> <li>8) This truss design re-<br/>sheetrock be applied</li> <li>9) Graphical purlin report</li> </ul> | e loads have been considere<br>/ult=115mph (3-second gust<br>gable end zone and C-C Ex<br>to 21-2-15, Interior(1) 21-2-1<br>embers and forces & MWFRS<br>rainage to prevent water pon<br>designed for a 10.0 psf botto<br>considers parallel to grain va<br>surface.<br>connection (by others) of tru-<br>ed in accordance with the 20<br>I ANSI/TPI 1.<br>quires that a minimum of 7/1<br>d directly to the bottom chord<br>resentation does not depict t | ed for this desig<br>) Vasd=91mph;<br>tterior(2E) -0-1(<br>15 to 30-10-8 zc<br>S for reactions s<br>om chord live lo<br>alue using ANS<br>uss to bearing p<br>18 Internationa<br>6" structural wo<br>d.<br>the size or the c | In.<br>; TCDL=6.0psf; BCDL<br>0-8 to 2-1-8, Interior(1)<br>one; cantilever left and<br>shown; Lumber DOL=<br>bad nonconcurrent wit<br>SI/TPI 1 angle to grain<br>plate capable of withst<br>al Residential Code se<br>bod sheathing be appl<br>prientation of the purlin | =4.2psf; h=15ft; Ca<br>) 2-1-8 to 13-0-0, E;<br>d right exposed ; en<br>:1.60 plate grip DOI<br>h any other live loa<br>formula. Building c<br>anding 100 lb uplift<br>ctions R502.11.1 a<br>lied directly to the to<br>n along the top and | at. II; Exp C; Enclosed;<br>xterior(2E) 13-0-0 to 17-0-0,<br>id vertical left and right<br>L=1.60<br>ds.<br>designer should verify<br>at joint(s) 2 except (jt=lb)<br>nd R802.10.2 and<br>op chord and 1/2" gypsum<br>/or bottom chord. | SCOTT M.<br>SEVIER<br>PE-2001018807  |  |  |

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| 3-3-8   | 8-0-8 8 <sub>1</sub> 4 <sub>1</sub> 8<br>4-9-0 0-4-0  | <u>15-0-0</u><br>6-7-8   | 21-5-12   | 2 22-5-15<br>1-0-3  | <u>30-0-0</u><br>7-6-1             |                                    |  |  |
|---|---|--|---|---|------------------------------------|------------------------------------|--|--|
| Plate Offsets (X,Y)   | [2:0-3-14,0-1-2], [9:0-3-8,Edge]  | 010  | 0012  |   |                                    |                                    |  |  |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0  | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014   | CSI.<br>TC 0.58<br>BC 0.54<br>WB 0.83<br>Matrix-AS   | DEFL.         in           Vert(LL)         -0.09 1           Vert(CT)         -0.21 1           Horz(CT)         0.02  | (loc) l/defl L/d<br>1-22 >999 240<br>1-22 >999 180<br>15 n/a n/a  | d PLATES<br>MT20<br>Weight: 115 lb | <b>GRIP</b><br>197/144<br>FT = 20% |  |  |
| LUMBER-<br>TOP CHORD 2x4 SI<br>BOT CHORD 2x4 SI<br>2-16: 2<br>WEBS 2x4 SI<br>WEDGE<br>Right: 2x4 SPF No.2   | PF No.2<br>PF No.2 *Except*<br>2x6 SPF No.2<br>PF No.2  | <u> </u>   | BRACING-<br>TOP CHORD S<br>BOT CHORD F  | Structural wood sheat<br>Rigid ceiling directly a   | hing directly applied.<br>pplied.  |                                    |  |  |
| REACTIONS.       (size)       2=0-3-8, 15=0-3-8, 9=0-3-8         Max Horz       2=-105(LC 17)         Max Uplift       2=-55(LC 13), 15=-207(LC 12), 9=-180(LC 13)         Max Grav       2=352(LC 25), 15=1487(LC 1), 9=989(LC 1)  |   |  |   |   |                                    |                                    |  |  |
| FORCES.         (lb) - Max.           TOP CHORD         2-3=           BOT CHORD         2-16           WEBS         3-16   | Comp./Max. Ten All forces 250 (lb) o<br>-751/110, 3-5=-83/321, 5-6=-754/218, 6<br>=-167/698, 15-16=-160/627, 5-15=-1248<br>=-2/283, 3-15=-810/220, 5-12=-31/870,  | less except when shown.<br>8=-757/202, 8-9=-1528/29<br>/221, 11-12=-173/1321, 9-<br>3-11=0/302, 8-12=-850/230  | 1<br>11=-173/1321<br>)  |   |                                    |                                    |  |  |
| NOTES-<br>1) Unbalanced roof liv<br>2) Wind: ASCE 7-16; \<br>MWFRS (envelope)<br>Interior(1) 18-0-0 to<br>& MWFRS for react<br>3) This truss has been<br>4) Bearing at joint(s) 2<br>capacity of bearing<br>5) Provide mechanical<br>15=207, 9=180.<br>6) This truss is design<br>referenced standard<br>7) This truss design re<br>sheetrock be applie | e loads have been considered for this de<br>/ult=115mph (3-second gust) Vasd=91n<br>gable end zone and C-C Exterior(2E) -<br>30-10-8 zone; cantilever left and right e<br>ions shown; Lumber DOL=1.60 plate gri<br>designed for a 10.0 psf bottom chord liv<br>considers parallel to grain value using <i>A</i><br>surface. | asign.<br>ph; TCDL=6.0psf; BCDL=-<br>0-10-8 to 2-1-8, Interior(1) 2<br>xposed ; end vertical left ar<br>p DOL=1.60<br>re load nonconcurrent with<br>NSI/TPI 1 angle to grain for<br>ng plate capable of withstar<br>onal Residential Code sect<br>I wood sheathing be applie | 4.2psf; h=15ft; Cat. II; Exp<br>2-1-8 to 15-0-0, Exterior(2<br>nd right exposed;C-C for r<br>any other live loads.<br>ormula. Building designer<br>nding 100 lb uplift at joint(<br>ions R502.11.1 and R802<br>rd directly to the top chord | <ul> <li>b C; Enclosed;</li> <li>(R) 15-0-0 to 18-0-0, nembers and forces</li> <li>c should verify</li> <li>s) 2 except (jt=lb)</li> <li>2.10.2 and</li> <li>and 1/2" gypsum</li> </ul> | STATE OF J                         | MISSOUR<br>TM.<br>HER              |  |  |

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1** Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



January 4,2022

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Scale = 1:23.1



| Plata Offecte (X   |                          | 2-3-8<br>2-3-8   | 4-0-0<br>1-8-8                                     |  | 8-0-0<br>4-0-0                            |  | 9-8-8<br>1-8-8                          |                        | 12-0-0<br>2-3-8                        |                                    |
|--|--------------------------|--|--|--|---|--|---|------------------------|--|------------------------------------|
| Plate Olisets (A   | ., t <i>)</i>            | [2.0-0-0,0-0-6], [3.0-6-0,0-   | -3-7], [4.0-3-4,                                   | 0-2-0], [0.0-0-0,0-3-7], [7.0                                  | 0-0-0,0-0-6]                              |  |   |                        |  |                                    |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0   | )<br>)<br>)              | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TP | 2-0-0<br>1.15<br>1.15<br>NO<br>12014               | <b>CSI.</b><br>TC 0.69<br>BC 0.84<br>WB 0.06<br>Matrix-MS      | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in (loc)<br>-0.14 10-11<br>-0.25 10-11<br>0.19 7 | l/defl L<br>>999 24<br>>578 18<br>n/a n | _/d<br>40<br>80<br>h/a | <b>PLATES</b><br>MT20<br>Weight: 47 lb | <b>GRIP</b><br>197/144<br>FT = 20% |
| LUMBER-       BRACING-         TOP CHORD       2x6 SPF 2100F 1.8E *Except*       TOP CHORD         4-5: 2x4 SPF No.2       TOP CHORD       Structural wood sheathing directly applied or 5-1-3 oc purlins, except         BOT CHORD       2x4 SPF No.2 *Except*       BOT CHORD       BOT CHORD         3-6: 2x4 SPF 1650F 1.5E       BOT CHORD       Rigid ceiling directly applied or 6-0-0 oc bracing.         WEBS       2x4 SPF No.2       Except * |                          |  |  |  |   |  | oc purlins, except                      |                        |  |                                    |
| REACTIONS. (size) 2=0-3-8, 7=0-3-8<br>Max Horz 2=32(LC 8)<br>Max Uplift 2=-213(LC 8), 7=-213(LC 9)<br>Max Grav 2=947(LC 1), 7=947(LC 1)  |                          |  |  |  |   |  |   |                        |  |                                    |
| FORCES. (lb)<br>TOP CHORD<br>BOT CHORD   | - Max.<br>3-14=<br>3-11= | Comp./Max. Ten All for<br>346/115, 3-4=-2489/595<br>567/2463, 10-11=-570/2     | ces 250 (lb) or<br>, 4-5=-2483/58<br>486, 6-10=-53 | less except when shown.<br>38, 5-6=-2486/580, 6-7=-3<br>5/2460 | 46/107                                    |  |   |                        |  |                                    |

### NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=213, 7=213.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 8) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 271 lb down and 121 lb up at 4-0-0, and 271 lb down and 121 lb up at 7-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

10) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf) Vert: 1-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 6-8=-70, 12-13=-20, 3-6=-20, 9-16=-20 Concentrated Loads (lb)
    - Vert: 4=-26(B) 5=-26(B) 11=-271(B) 10=-271(B) 19=-26(B) 20=-54(B)







TOP CHORD

BOT CHORD

Structural wood sheathing directly applied.

Rigid ceiling directly applied. Except:

10-0-0 oc bracing: 9-10

LUMBER-

WFBS

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPE No 2 \*Except\* 2-12.6-8: 2x6 SPF No.2

2x4 SPF No.2

REACTIONS. (size) 2=0-3-8, 6=0-3-8 Max Horz 2=45(LC 12) Max Uplift 2=-86(LC 12), 6=-86(LC 13) Max Grav 2=601(LC 1), 6=601(LC 1)

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

TOP CHORD 3-14=-687/241. 3-4=-1027/320. 4-5=-1027/320. 5-6=-687/241

- BOT CHORD 2-12=-168/506, 3-11=-54/421, 10-11=-196/927, 9-10=-196/927, 5-9=-55/421,
- 6-8=-167/506 WEBS
- 4-10=-41/341

#### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 12-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1.

6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







- MWFRS (envelope) gable end zone and C-Č Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 9-0-0, Interior(1) 9-0-0 to 12-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
  5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1. 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2
- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.









SPACING-DEFL. PLATES GRIP LOADING (psf) 2-0-0 CSI. in (loc) l/defl L/d TCLL 25.0 Plate Grip DOL 1.15 тс 0.11 Vert(LL) -0.00 3-4 >999 240 MT20 197/144 TCDL 10.0 Lumber DOL 1.15 BC 0.07 Vert(CT) -0.01 3-4 >999 180 WB 0.00 BCLL 0.0 **Rep Stress Incr** YES Horz(CT) 0.00 2 n/a n/a Code IRC2018/TPI2014 BCDL 10.0 Matrix-MR Weight: 7 lb FT = 20%

# LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD

 TOP CHORD
 Structural wood sheathing directly applied or 2-11-4 oc purlins, except end verticals.

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

REACTIONS. (size) 2=Mechanical, 3=Mechanical, 4=0-3-8

Max Horz 4=37(LC 12)

Max Uplift 2=-39(LC 12), 4=-8(LC 12)

Max Grav 2=88(LC 1), 3=52(LC 3), 4=123(LC 1)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 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 capable of withstanding 100 lb uplift at joint(s) 2, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale: 1"=1'





| LOADING (p3i)   |   | 001.      |                                    |  | I LATEO ONI   |
|---|---|-----------|------------------------------------|--|---|
| TCLL 25.0   | Plate Grip DOL 1.15                                       | TC 0.14   | Vert(LL) -0.01                     | 6 >999 240   | MT20 197/144  |
| TCDL 10.0   | Lumber DOL 1.15   | BC 0.04   | Vert(CT) -0.01                     | 6 >999 180   |   |
| BCLL 0.0  | Rep Stress Incr YES                                       | WB 0.03   | Horz(CT) 0.00                      | 2 n/a n/a  |   |
| BCDL 10.0   | Code IRC2018/TPI2014                                      | Matrix-MP |                                    |  | Weight: 10 lb FT = 20%  |
| LUMBER-<br>TOP CHORD 2x4<br>BOT CHORD 2x4<br>2-6:<br>WEBS 2x4 | SPF No.2<br>SPF No.2 *Except*<br>2x6 SPF No.2<br>SPF No.2 |           | BRACING-<br>TOP CHORD<br>BOT CHORD | Structural wood sheathing di<br>Rigid ceiling directly applied | rectly applied or 2-11-4 oc purlins.<br>or 10-0-0 oc bracing. |

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical Max Horz 2=55(LC 12) Max Uplift 4=-42(LC 12), 2=-29(LC 12) Max Grav 4=103(LC 1), 2=200(LC 1), 5=34(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

 Bearing at joint(s) 2 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 capable of withstanding 100 lb uplift at joint(s) 4, 2.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.









|  | 0-11-10  | <u>3-0-12</u><br>2-1-2   | + <u>6-0-0</u><br>2-11-4  | I   |
|--|--|--|---|---|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrNOCode IRC2018/TPI2014 | CSI.         DEFL.           TC         0.65         Vert(LL)           BC         0.41         Vert(CT)           WB         0.03         Horz(CT)           Matrix-MS         Horz(CT) | in (loc) l/defl L/d<br>-0.10 7 >656 240<br>-0.19 7 >368 180<br>) 0.04 6 n/a n/a | PLATES         GRIP           MT20         197/144           Weight: 19 lb         FT = 20% |

BRACING-

TOP CHORD

BOT CHORD

## LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

REACTIONS. (size) 6=Mechanical, 9=0-3-8

Max Horz 9=41(LC 5)

Max Uplift 6=-70(LC 5), 9=-68(LC 8)

Max Grav 6=307(LC 22), 9=345(LC 25)

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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 9.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- 10) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines
- 11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 84 lb down and 90 lb up at 0-11-10 on top chord, and 20 lb down and 16 lb up at 0-11-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-2=-70, 2-3=-70, 3-5=-70, 7-9=-20, 6-7=-20

Concentrated Loads (lb) Vert: 3=23(B) 7=-15(B) 4=-18(B) 10=-23(B) 11=-16(B)



Structural wood sheathing directly applied or 6-0-0 oc purlins,

except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.

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





|      |         | 1               |        | 1-11-10 |      | T        | 3-1-2 |       |        | +   | 6-0-0<br>0-11-4 |               |          |
|------|---------|-----------------|--------|---------|------|----------|-------|-------|--------|-----|-----------------|---------------|----------|
|      | i (psf) | SPACING-        | 2-0-0  | CSI.    |      | DEFL.    | in    | (loc) | l/defl | L/d |                 | PLATES        | GRIP     |
| TCLL | 25.0    | Plate Grip DOL  | 1.15   | TC      | 0.45 | Vert(LL) | 0.09  | 7-8   | >805   | 240 |                 | MT20          | 197/144  |
| TCDL | 10.0    | Lumber DOL      | 1.15   | BC      | 0.45 | Vert(CT) | -0.13 | 7-8   | >518   | 180 |                 |               |          |
| BCLL | 0.0     | Rep Stress Incr | YES    | WB      | 0.03 | Horz(CT) | 0.17  | 5     | n/a    | n/a |                 |               |          |
| BCDL | 10.0    | Code IRC2018/TI | PI2014 | Matrix  | k-AS |          |       |       |        |     |                 | Weight: 20 lb | FT = 20% |

## LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WFBS

BRACING-TOP CHORD

Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5. BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 5=Mechanical, 6=Mechanical, 9=0-3-8

Max Horz 9=69(LC 12)

Max Uplift 5=-49(LC 9), 6=-14(LC 8), 9=-32(LC 12) Max Grav 5=230(LC 25), 6=30(LC 26), 9=338(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6, 9.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.







|  | I   | 2-11-10                               | 2-   | 1-8 0-10-14  |  |
|--|---|---------------------------------------|--|--|--|
| Plate Offsets (X,Y)  | [3:0-6-1,Edge], [8:0-2-0,0-1-7]   |                                       |  |  |  |
| LOADING (psf)<br>TCLL 25.0<br>TCDL 10.0<br>BCLL 0.0            | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES | CSI.<br>TC 0.20<br>BC 0.19<br>WB 0.03 | <b>DEFL.</b> ir<br>Vert(LL) -0.03<br>Vert(CT) -0.05<br>Horz(CT) 0.00 | n (loc) I/defi L/d<br>7-8 >999 240<br>7-8 >999 180<br>5 n/a n/a                                    | PLATES GRIP<br>MT20 197/144                    |
| BCDL 10.0  | Code IRC2018/TPI2014  | Matrix-AS                             | - (- )   |  | Weight: 23 lb FT = 20%                         |
| LUMBER-<br>TOP CHORD 2x4 SI<br>BOT CHORD 2x4 SI<br>WEBS 2x4 SI | PF No.2<br>PF No.2<br>PF No.2<br>PF No.2  |                                       | BRACING-<br>TOP CHORD<br>BOT CHORD                                   | Structural wood sheathing dir<br>2-0-0 oc purlins (6-0-0 max.):<br>Rigid ceiling directly applied. | rectly applied, except end verticals, and 3-4. |

5-1-2

6-0-0

2-11-10

**REACTIONS.** (size) 5=Mechanical, 8=0-3-8 Max Horz 8=107(LC 9)

Max Uplift 5=-64(LC 9), 8=-40(LC 12) Max Grav 5=250(LC 1), 8=335(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-8=-296/174

### NOTES-

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-11-10, Exterior(2E) 2-11-10 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 8.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1. 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
  - sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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<sup>1)</sup> Unbalanced roof live loads have been considered for this design.



| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCode IRC2018/TPI2014 | <b>CSI.</b><br>TC 0.23<br>BC 0.20<br>WB 0.04<br>Matrix-AS | DEFL.         ir           Vert(LL)         -0.03           Vert(CT)         -0.06           Horz(CT)         0.00 | n (loc) l/defl L/d<br>6-7 >999 240<br>6-7 >999 180<br>5 n/a n/a                           | PLATES<br>MT20<br>Weight: 24 lb | <b>GRIP</b><br>197/144<br>FT = 20% |
|--|---|---|--|---|---------------------------------|------------------------------------|
| LUMBER-<br>TOP CHORD 2x4 SI<br>BOT CHORD 2x4 SI<br>WEBS 2x4 SI<br>OTHERS 2x4 SI  | PF No.2<br>PF No.2<br>PF No.2<br>PF No.2<br>PF No.2                                 |   | BRACING-<br>TOP CHORD<br>BOT CHORD   | Structural wood sheathing di<br>2-0-0 oc purlins: 3-4.<br>Rigid ceiling directly applied. | rectly applied, except          | end verticals, and                 |
| REACTIONS. (siz  | e) 5=Mechanical, 7=0-3-8  |   |  |   |                                 |                                    |

Max Horz 7=137(LC 9) Max Uplift 5=-73(LC 9), 7=-37(LC 12) Max Grav 5=250(LC 1), 7=335(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-7=-292/164

### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-10, Exterior(2E) 3-11-10 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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| TOP CHORD 2x4 SPF No.2     TOP CHORD     Structural wood sheathing di       BOT CHORD 2x4 SPF No.2     2-0-0 oc purlins (6-0-0 max.)       WEBS 2x4 SPF No.2     BOT CHORD     Rigid ceiling directly applied. | directly applied, except<br>): 3-5.<br>d. |
|--|---|
|--|---|

REACTIONS. (size) 5=Mechanical, 6=Mechanical, 8=0-3-8 Max Horz 8=160(LC 12) Max Uplift 5=-14(LC 12), 6=-89(LC 12) Max Grav 5=123(LC 3), 6=139(LC 19), 8=338(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-8=-275/89

### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-11-10, Exterior(2E) 4-11-10 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.







| ICDL         10.0           BCLL         0.0           BCDL         10.0 | Rep Stress Incr YES<br>Code IRC2018/TPI2014 | WB 0.04 He<br>Matrix-AS | z(CT) -0.13<br>z(CT) -0.10 | 4       | >534<br>n/a | 180<br>n/a  | Weight: 23 lb              | FT = 20%       |
|--|---|-------------------------|----------------------------|---------|-------------|-------------|----------------------------|----------------|
| LUMBER-<br>TOP CHORD 2x4 SF<br>BOT CHORD 2x4 SF                          | PF No.2                                     | BF<br>TC<br>BC          | ACING-<br>CHORD            | Structo | ural wood   | sheathing c | directly applied, except e | end verticals. |

REACTIONS. (size) 4=Mechanical, 5=Mechanical, 7=0-3-8 Max Horz 7=193(LC 12) Max Uplift 4=-40(LC 12), 5=-106(LC 12) Max Grav 4=127(LC 3), 5=155(LC 19), 7=338(LC 1)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-7=-275/57

#### NOTES-

WFBS

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

2x4 SPF No.2

- 4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=106.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







|  |   |  | 6-0-0<br>6-0-0   |   |
|--|---|--|--|---|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.47<br>BC 0.39<br>WB 0.10<br>Matrix-AS | DEFL.         in         (loc)         l/defl         L/d           Vert(LL)         0.08         6-7         >880         240           Vert(CT)         -0.10         6-7         >656         180           Horz(CT)         0.00         n/a         n/a | PLATES         GRIP           MT20         197/144           Weight: 24 lb         FT = 20% |

BRACING-TOP CHORD

BOT CHORD

4x6 ||

6 5

2x4 ||

Rigid ceiling directly applied.

Structural wood sheathing directly applied, except end verticals.

## LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WFBS

REACTIONS. (size) 6=Mechanical, 7=0-3-8 Max Horz 7=194(LC 12) Max Uplift 6=-150(LC 12) Max Grav 6=279(LC 19), 7=329(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-7=-283/82 WEBS 3-6=-203/271

# NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 6-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

)<del>.</del>3-8

3) Refer to girder(s) for truss to truss connections.

- 4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=150.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







Max Uplift 5=-84(LC 9), 6=-31(LC 12) Max Grav 5=253(LC 19), 6=335(LC 25)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-6=-283/167

WEBS 3-5=-349/485

## NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-11-10, Exterior(2E) 4-11-10 to 5-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.







#### NOTES-

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-10, Exterior(2E) 3-11-10 to 5-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.







| CSI.                                       | DEEL in  |   |  |
|--|--|---|--|
| TC 0.14<br>BC 0.21<br>WB 0.05<br>Matrix-AS | Vert(LL) -0.03<br>Vert(CT) -0.06<br>Horz(CT) -0.00 | (loc) //defi L/d<br>5-6 >999 240<br>5-6 >999 180<br>5 n/a n/a         | PLATES GRIP<br>MT20 197/144<br>Weight: 25 lb FT = 20%  |
|  | BRACING-<br>TOP CHORD                              | Structural wood sheathing dir<br>2-0-0 oc purlins (6-0-0 max.):       | ectly applied, except end verticals, and 3-4.  |
|  | BC 0.21<br>WB 0.05<br>Matrix-AS                    | BC 0.21<br>WB 0.05<br>Matrix-AS<br>BRACING-<br>TOP CHORD<br>BOT CHORD | BC       0.21       Vert(CT)       -0.06       5-6       >999       180         WB       0.05       Horz(CT)       -0.00       5       n/a       n/a         Matrix-AS       BRACING-         TOP CHORD       Structural wood sheathing dir         2-0-0 oc purlins (6-0-0 max.):       BOT CHORD       Rigid ceiling directly applied. |

 WEBS
 2x4 SPF No.2

 REACTIONS.
 (size)

 5=Mechanical, 6=0-3-8

Max Horz 6=121(LC 9)

Max Uplift 5=-65(LC 9), 6=-42(LC 12) Max Grav 5=250(LC 1), 6=335(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-6=-274/172

### NOTES-

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-11-10, Exterior(2E) 2-11-10 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1. 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum
  - sheetrock be applied directly to the bottom chord.

10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





<sup>1)</sup> Unbalanced roof live loads have been considered for this design.



| LUMBER-<br>TOP CHORD<br>BOT CHORD | 2x4 SPF No.2<br>2x4 SPF No.2 | BRACING-<br>TOP CHORD | Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4. |
|-----------------------------------|------------------------------|-----------------------|---|
| WEBS                              | 2x4 SPF No.2                 | BOT CHORD             | Rigid ceiling directly applied.   |

REACTIONS. (size) 5=Mechanical, 6=0-3-8 Max Horz 6=92(LC 9)

Max Uplift 5=-58(LC 9), 6=-40(LC 12) Max Grav 5=250(LC 1), 6=335(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-6=-272/178

### NOTES-

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TRL1
- referenced standard ANSI/TPI 1. 9) This truss design requires that a minimum of 7/16" structural wood sheathing
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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<sup>1)</sup> Unbalanced roof live loads have been considered for this design.



|                                       | 0 - 1  | 00   | 0   |
|---------------------------------------|--|--|---|
| I                                     | 3-4-1  | 2-7-   | 15  |
| [3:0-4-0,0-1-4]                       |  |  |   |
| SPACING- 2-0-0<br>Plate Grip DOI 1.15 | CSI. DEI   | FL. in (loc) I/defl L/d  | PLATES GRIP<br>MT20 197/144   |
| Lumber DOL 1.15<br>Rep Stress Incr NO | BC 0.10 Ver<br>WB 0.05 Hor   | t(CT) -0.01 6-7 >999 180<br>rz(CT) 0.00 5 n/a n/a  | 101/144   |
| Code IRC2018/TPI2014                  | Matrix-MP  |  | Weight: 25 lb FT = 20%  |
| PF No.2                               | BR/<br>TOF   | ACING-<br>P CHORD Structural wood sheathing c  | lirectly applied or 6-0-0 oc purlins,   |
|                                       | [3:0-4-0,0-1-4]<br>SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr NO<br>Code IRC2018/TPI2014<br>PE No.2 | 3:0-4-0,0-1-4]         3:4-1           SPACING-         2-0-0         CSI.         DEI           Plate Grip DOL         1.15         TC         0.55         Ver           Lumber DOL         1.15         BC         0.10         Ver           Rep Stress Incr         NO         WB         0.05         Hor           Code         IRC2018/TPI2014         Matrix-MP         BR.           PF No.2         TOI         TOI         TOI | Image: Second stress in cr         CSI.         DEFL.         in         (loc)         //defl         L/d           SPACING-         2-0-0         CSI.         DEFL.         in         (loc)         //defl         L/d           Plate Grip DOL         1.15         TC         0.55         Vert(LL)         -0.00         6-7         >999         240           Lumber DOL         1.15         BC         0.10         Vert(CT)         -0.01         6-7         >999         180           Rep Stress Incr         NO         WB         0.05         Horz(CT)         0.00         5         n/a         n/a           Code         IRC2018/TPI2014         Matrix-MP         BRACING-         TOP CHORD         Structural wood sheathing of the top of the to |

BOT CHORD except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4 Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=Mechanical, 7=0-3-8 Max Horz 7=62(LC 33) Max Uplift 5=-71(LC 5), 7=-71(LC 8)

2x4 SPF No.2

Max Grav 5=283(LC 22), 7=364(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 4-5=-262/77

### NOTES-

WFBS

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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) 5, 7.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
- 10) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-2=-70, 2-3=-70, 3-4=-70, 5-7=-20 Concentrated Loads (lb) Vert: 8=-3(F) 9=-3(F) 11=-27(F) 12=-27(F)







|   |    | 1   | DI |    |   |
|---|----|-----|----|----|---|
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TOP CHORD 2x4 SPF No.2 BOT CHORD 2x6 SPF No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=55(LC 12)

Max Uplift 3=-32(LC 12), 2=-30(LC 12), 4=-1(LC 12)

Max Grav 3=73(LC 1), 2=200(LC 1), 4=59(LC 3)

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

### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 2-11-4 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.



0-11-5 0-11-5

-0-10-8

0 - 10 - 8



Scale: 1"=1'

0-11-5 0-11-5

BOT CHORD

except end verticals

Rigid ceiling directly applied or 10-0-0 oc bracing.

| LUMBER-      | RD 2x4 SPI  | F No.2                             |               |             |              | BRACING-<br>TOP CHOR | RD    | Structu | ral wood | sheathing di | rectly applied or 0-11 | -5 oc purlins, |  |
|--------------|-------------|------------------------------------|---------------|-------------|--------------|----------------------|-------|---------|----------|--------------|------------------------|----------------|--|
| BCLL<br>BCDL | 0.0<br>10.0 | Rep Stress Incr<br>Code IRC2018/TF | YES<br>Pl2014 | WB<br>Matri | 0.04<br>x-MS | Horz(CT)             | -0.00 | 4       | n/a      | n/a          | Weight: 6 lb           | FT = 20%       |  |
| TCDL         | 10.0        | Lumber DOL                         | 1.15          | BC          | 0.07         | Vert(CT)             | -0.00 | 5       | >999     | 180          |                        |                |  |
| TCLL         | 25.0        | Plate Grip DOL                     | 1.15          | TC          | 0.13         | Vert(LL)             | -0.00 | 5       | >999     | 240          | MT20                   | 197/144        |  |
| LOADING      | (psf)       | SPACING-                           | 2-0-0         | CSI.        |              | DEFL.                | in    | (loc)   | l/defl   | L/d          | PLATES                 | GRIP           |  |

## OP CHORD

BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WFBS

REACTIONS. (size) 4=Mechanical, 5=0-3-8

Max Horz 5=44(LC 11) Max Uplift 4=-55(LC 20), 5=-12(LC 12)

Max Grav 4=29(LC 8), 5=157(LC 1)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







| т | IIMBER- |  |
|---|---------|--|

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x6 SPF No.2 BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 2-8-0 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

Max Horz 2=51(LC 12)

Max Uplift 3=-29(LC 12), 2=-29(LC 12), 4=-2(LC 12)

Max Grav 3=65(LC 1), 2=189(LC 1), 4=53(LC 3)

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

### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-7-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.





REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical



2-8-10



| LOADING (psf)       | SPACING-        | 2-0-0  | CSI.  | DEFL. | in (loc) l/defl | L/d     | PLATES | GRIP |  |
|---------------------|-----------------|--------|-------|-------|-----------------|---------|--------|------|--|
| Plate Offsets (X,Y) | [3:0-4-0,0-1-4] |        |       |       |                 |         |        |      |  |
|                     | 1               | 0-10-0 | 2-5-2 |       | 1               | 2-8-10  |        |      |  |
|                     | i.              | 0-10-0 | 3-3-2 |       | I.              | 5-11-12 |        | 1    |  |
|                     |                 |        |       |       |                 |         |        |      |  |

| TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr NO<br>Code IRC2018/TPI2014 | TC 0.64<br>BC 0.09<br>WB 0.05<br>Matrix-MP | Vert(LL) -0.00<br>Vert(CT) -0.01<br>Horz(CT) 0.00 | 6-7 >999 240<br>6-7 >999 180<br>5 n/a n/a  | MT20 197/144<br>Weight: 25 lb FT = 20%  |
|--|--|--|---|--|---|
| LUMBER-<br>TOP CHORD 2x<br>BOT CHORD 2x<br>WEBS 2x   | 4 SPF No.2<br>4 SPF No.2<br>4 SPF No.2   |  | BRACING-<br>TOP CHORD<br>BOT CHORD                | Structural wood sheathing dir<br>except end verticals, and 2-0<br>Rigid ceiling directly applied o | rectly applied or 5-11-12 oc purlins,<br>-0 oc purlins: 3-4.<br>or 10-0-0 oc bracing. |
| REACTIONS.<br>M  | (size) 5=Mechanical, 7=0-3-8<br>ax Horz 7=51(LC 7)                                   |  |   |  |   |

Max Uplift 5=-83(LC 5), 7=-96(LC 8) Max Grav 5=306(LC 22), 7=370(LC 1)

0-10-8

0-10-0

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 4-5=-282/90

WFBS 3-7=-259/88

## NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 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) 5, 7.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1
- 8) Girder carries hip end with 0-0-0 right side setback, 0-10-0 left side setback, and 2-8-0 end setback.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines
- 11) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-3=-70, 3-4=-79(F=-9), 5-7=-23(F=-3) Concentrated Loads (lb) Vert: 3=15(F) 11=-21(F) 12=-21(F)







|  |  | 1-5-4                         | 2-9-8                   |                                    | 5-11-12  |                        |                        |
|--|--|-------------------------------|-------------------------|------------------------------------|--|------------------------|------------------------|
|  | I  | 1-5-4                         | 1-4-4                   | 1                                  | 3-2-4  | I                      |                        |
| Plate Offsets (X,Y)  | [3:0-6-1,Edge]                                   |                               |                         |                                    |  |                        |                        |
| LOADING (psf)<br>TCLL 25.0   | SPACING-<br>Plate Grip DOL                       | 2-0-0 <b>CS</b><br>1.15 TC    | I.<br>0.21              | DEFL. ir<br>Vert(LL) -0.02         | i (loc) l/defl L/d<br>7 >999 240   | PLATES<br>MT20         | <b>GRIP</b><br>197/144 |
| TCDL         10.0           BCLL         0.0           BCDL         10.0 | Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TP | 1.15 BC<br>YES WE<br>12014 Ma | 0.26<br>0.02<br>trix-AS | Vert(CT) -0.04<br>Horz(CT) 0.02    | 7 >999 180<br>6 n/a n/a  | Weight: 21 lb          | FT = 20%               |
| LUMBER-<br>TOP CHORD 2x4 SI<br>BOT CHORD 2x4 SI<br>WEBS 2x4 SI           | PF No.2<br>PF No.2<br>PF No.2                    |                               |                         | BRACING-<br>TOP CHORD<br>BOT CHORD | Structural wood sheathing dired<br>2-0-0 oc purlins: 3-5.<br>Rigid ceiling directly applied. | ctly applied, except e | end verticals, and     |

REACTIONS. (size) 6=Mechanical, 9=0-3-8 Max Horz 9=61(LC 9) Max Uplift 6=-53(LC 9), 9=-35(LC 12)

Max Opliff 6=-53(LC 9), 9=-35(LC 12)Max Grav 6=250(LC 1), 9=334(LC 1)

BOT CHORD 6-7=-141/259

# NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 6, 9.

 This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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| LOADING (p<br>TCLL 25<br>TCDL 10<br>BCLL 0<br>BCDL 10 | psf)<br>25.0<br>0.0<br>0.0<br>0.0 | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TP | 2-0-0<br>1.15<br>1.15<br>YES<br>12014 | <b>CSI.</b><br>TC<br>BC<br>WB<br>Matrix | 0.21<br>0.22<br>0.00<br><-AS | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in<br>0.03<br>-0.04<br>0.02 | (loc)<br>7<br>7<br>6           | l/defl<br>>999<br>>999<br>n/a           | L/d<br>240<br>180<br>n/a               | PLATES<br>MT20<br>Weight: 21 lb | <b>GRIP</b><br>197/144<br>FT = 20% |
|---|-----------------------------------|--|---------------------------------------|---|------------------------------|---|-----------------------------|--------------------------------|---|--|---------------------------------|------------------------------------|
| LUMBER-<br>TOP CHORD<br>BOT CHORD<br>WEBS             | D 2x4 SPF<br>D 2x4 SPF<br>2x4 SPF | = No.2<br>= No.2<br>= No.2   |                                       |   |                              | BRACING-<br>TOP CHOF<br>BOT CHOF          | RD<br>RD                    | Structu<br>2-0-0 o<br>Rigid ce | ral wood s<br>c purlins:<br>eiling dire | sheathing dir<br>3-5.<br>ctly applied. | ectly applied, except           | end verticals, and                 |

REACTIONS. (size) 6=Mechanical, 9=0-3-8 Max Horz 9=91(LC 9)

Max Uplift 6=-60(LC 9), 9=-40(LC 12) Max Grav 6=250(LC 1), 9=334(LC 1)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-9=-299/168

### NOTES-

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-5-4, Exterior(2E) 2-5-4 to 5-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 6, 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



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<sup>1)</sup> Unbalanced roof live loads have been considered for this design.





Scale = 1:25.1



| Plate Offsets (X Y) | [4:0-6-1 Edge]       | 2-9-8     | 3              | -2-4                | 1                    |               |                    |
|---------------------|----------------------|-----------|----------------|---------------------|----------------------|---------------|--------------------|
|                     |                      |           |                |                     |                      |               |                    |
| OADING (psf)        | SPACING- 2-0-0       | CSI.      | DEFL. ir       | n (loc) l/defl      | L/d P                | PLATES        | GRIP               |
| CLL 25.0            | Plate Grip DOL 1.15  | TC 0.16   | Vert(LL) 0.02  | 2 6-7 >999          | 240 N                | MT20          | 197/144            |
| CDL 10.0            | Lumber DOL 1.15      | BC 0.16   | Vert(CT) -0.02 | 2 6-7 >999          | 180                  |               |                    |
| SCLL 0.0            | Rep Stress Incr YES  | WB 0.04   | Horz(CT) -0.02 | 2 6 n/a             | n/a                  |               |                    |
| CDL 10.0            | Code IRC2018/TPI2014 | Matrix-AS |                |                     | v                    | Veight: 26 lb | FT = 20%           |
| JMBER-              |                      |           | BRACING-       |                     |                      |               |                    |
| OP CHORD 2x4 SP     | F No.2               |           | TOP CHORD      | Structural wood s   | heathing directly ap | plied, except | end verticals, and |
| OT CHORD 2x4 SP     | F No.2               |           |                | 2-0-0 oc purlins: 4 | -5.                  |               |                    |
| VEBS 2v4 SP         | ENo 2                |           | BOT CHORD      | Rigid ceiling direc | tly applied          |               |                    |

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5-11-12

2-9-8

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REACTIONS. (size) 6=Mechanical, 9=0-3-8 Max Horz 9=120(LC 9)

Max Uplift 6=-68(LC 9), 9=-39(LC 12) Max Grav 6=250(LC 1), 9=334(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-9=-307/166

### NOTES-

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-5-4, Exterior(2E) 3-5-4 to 5-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 6, 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and

referenced standard ANSI/TPI 1.

8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of truss systems, see ANSUTP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

16023 Swingley Ridge Rd Chesterfield, MO 63017

<sup>1)</sup> Unbalanced roof live loads have been considered for this design.



1-7-12

1-6-8

5-11-12

2-9-8

2-0-8



|  |   | 2-9-8  | 1-7-12   | 1-6-8   |   |
|--|---|--|--|---|---|
| Plate Offsets (X,Y)  | [4:0-6-1,Edge]  |  |  |   |   |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.18<br>BC 0.21<br>WB 0.05<br>Matrix-AS | DEFL.         in           Vert(LL)         0.04           Vert(CT)         -0.04           Horz(CT)         -0.03 | i (loc) l/defl L/d<br>6-7 >999 240<br>6-7 >999 180<br>6 n/a n/a                           | PLATES         GRIP           MT20         197/144           Weight: 28 lb         FT = 20% |
| LUMBER-<br>TOP CHORD 2x4 SP<br>BOT CHORD 2x4 SP<br>WEBS 2x4 SP   | PF No.2<br>PF No.2<br>PF No.2   |  | BRACING-<br>TOP CHORD<br>BOT CHORD   | Structural wood sheathing di<br>2-0-0 oc purlins: 4-5.<br>Rigid ceiling directly applied. | rectly applied, except end verticals, and   |
| REACTIONS. (size   | e) 6=Mechanical, 9=0-3-8  |  |  |   |   |

1-5-1

Max Horz 9=150(LC 9) Max Uplift 6=-77(LC 9), 9=-34(LC 12)

Max Grav 6=250(LC 25), 9=334(LC 1)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-9=-306/159

WFBS 4-6=-232/262

## NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-5-4, Exterior(2E) 4-5-4 to 5-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 6, 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Scale = 1:30.5

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| Plate Offsets (X,Y) | [7:0-4-8,0-0-0]      |           |               |                                 |                       |                    |
|---------------------|----------------------|-----------|---------------|---------------------------------|-----------------------|--------------------|
| LOADING (psf)       | SPACING- 2-0-0       | CSI.      | DEFL. i       | n (loc) l/defl L/d              | PLATES                | GRIP               |
| TCLL 25.0           | Plate Grip DOL 1.15  | TC 0.44   | Vert(LL) 0.1  | 3 6-7 >554 240                  | MT20                  | 197/144            |
| TCDL 10.0           | Lumber DOL 1.15      | BC 0.36   | Vert(CT) -0.1 | 2 6-7 >574 180                  |                       |                    |
| BCLL 0.0            | Rep Stress Incr YES  | WB 0.04   | Horz(CT) -0.1 | 3 4 n/a n/a                     |                       |                    |
| BCDL 10.0           | Code IRC2018/TPI2014 | Matrix-AS |               |                                 | Weight: 23 lb         | FT = 20%           |
| LUMBER-             |                      |           | BRACING-      |                                 |                       |                    |
| TOP CHORD 2x4 SF    | PF No.2              |           | TOP CHORD     | Structural wood sheathing dire  | ectly applied, except | end verticals, and |
| BOT CHORD 2x4 SF    | PF No.2              |           |               | 2-0-0 oc purlins: 3-4.          |                       |                    |
| WEBS 2x4 SF         | PF No.2              |           | BOT CHORD     | Rigid ceiling directly applied. |                       |                    |

REACTIONS. (size) 4=Mechanical, 5=Mechanical, 7=0-3-8 Max Horz 7=175(LC 12) Max Uplift 5=-120(LC 12) Max Grav 4=161(LC 3), 5=156(LC 19), 7=337(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-7=-279/84

5-6-10

### NOTES-

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-5-4, Exterior(2E) 5-5-4 to 5-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=120.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.





<sup>1)</sup> Unbalanced roof live loads have been considered for this design.





| Plate Offsets (X,Y)  | [7:0-3-13,0-0-14]   |  |   |   |   |
|--|---|--|---|---|---|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCode IRC2018/TPI2014   | CSI.<br>TC 0.38<br>BC 0.44<br>WB 0.00<br>Matrix-AS           | DEFL.         in           Vert(LL)         0.11           Vert(CT)         -0.13           Horz(CT)         0.05 | (loc) l/defl L/d<br>5-6 >632 240<br>5-6 >552 180<br>5 n/a n/a | PLATES         GRIP           MT20         197/144           Weight: 21 lb         FT = 20% |
| LUMBER-<br>TOP CHORD 2x4 SF<br>BOT CHORD 2x4 SF<br>WEBS 2x4 SF   | PF No.2<br>PF No.2<br>PF No.2   |  | BRACING-<br>TOP CHORD<br>BOT CHORD  | Structural wood sheathing on Rigid ceiling directly applied   | directly applied, except end verticals.<br>d.   |
| REACTIONS. (size<br>Max H<br>Max U<br>Max G  | e) 4=Mechanical, 5=Mechanical, 7=0-<br>lorz 7=192(LC 12)<br> plift 4=-115(LC 12), 5=-26(LC 12)<br> rav 4=179(LC 19), 5=128(LC 3), 7=371 | 3-8<br>(LC 1)  |   |   |   |
| FORCES.(lb) - Max.TOP CHORD2-7=-BOT CHORD6-7=-   | Comp./Max. Ten All forces 250 (lb) or<br>-344/109, 2-3=-317/170<br>-469/294, 3-6=-290/457   | less except when shown.                                      |   |   |   |
| NOTES-<br>1) Wind: ASCE 7-16; V<br>MWFRS (envelope)  | /ult=115mph (3-second gust) Vasd=91m<br>gable end zone and C-C Exterior(2E) -(  | uph; TCDL=6.0psf; BCDL=4.<br>)-10-8 to 2-1-8, Interior(1) 2- | .2psf; h=15ft; Cat. II; E:<br>-1-8 to 5-11-0 zone; ca   | kp C; Enclosed;<br>ntilever left and right                    |   |

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-11-0 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 4=115.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







|              |              |                       |                    | 4-0-0  |
|--------------|--------------|-----------------------|--------------------|--|
| LOADIN       | G (psf)      | <b>SPACING-</b> 2-0-0 | CSI.               | DEFL. in (loc) l/defl L/d PLATES GRIP                                  |
| TCLL<br>TCDI | 25.0<br>10.0 | Plate Grip DOL 1.15   | TC 0.27<br>BC 0.28 | Vert(LL) 0.03 4-5 >999 240 MT20 197/144<br>Vert(CT) -0.02 4-5 >999 180 |
| BCLL         | 0.0          | Rep Stress Incr YES   | WB 0.00            | Horz(CT) -0.04 3 n/a n/a   |
| BCDL         | 10.0         | Code IRC2018/TPI2014  | Matrix-AS          | Weight: 13 lb FT = 20%   |

BRACING-TOP CHORD

BOT CHORD

## LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

REACTIONS. (size) 3=Mechanical, 4=Mechanical, 5=0-3-8

Max Horz 5=132(LC 12)

Max Uplift 3=-94(LC 12), 4=-8(LC 12) Max Grav 3=129(LC 19), 4=72(LC 3), 5=252(LC 1)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



Structural wood sheathing directly applied, except end verticals.

Rigid ceiling directly applied.





BRACING-

TOP CHORD

BOT CHORD

2-0-0 oc purlins: 3-4.

Rigid ceiling directly applied.

| FORCES.<br>WEBS |  |
|-----------------|--|
| NOTES-          |  |

LUMBER-

WFBS

TOP CHORD

BOT CHORD

REACTIONS.

1) Unbalanced roof live loads have been considered for this design.

2-6=-187/262, 3-6=-280/122

(size) 5=Mechanical, 6=0-3-8, 4=Mechanical

Max Uplift 5=-48(LC 9), 6=-27(LC 12), 4=-11(LC 8) Max Grav 5=136(LC 19), 6=248(LC 1), 4=30(LC 1)

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 3-0-0, Exterior(2E) 3-0-0 to 3-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 5, 6, 4.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and

referenced standard ANSI/TPI 1.

2x4 SPF No.2

2x4 SPF No 2

2x4 SPF No 2

Max Horz 6=115(LC 11)

- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.



Structural wood sheathing directly applied, except end verticals, and





BOT CHORD

Rigid ceiling directly applied.

BOT CHORD 2x4 SPF No 2 2x4 SPF No 2 WFBS

REACTIONS. (size) 6=0-3-8, 5=Mechanical, 4=Mechanical Max Horz 6=85(LC 11) Max Uplift 6=-33(LC 12), 5=-61(LC 9), 4=-37(LC 8) Max Grav 6=248(LC 1), 5=75(LC 10), 4=136(LC 21)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. WEBS 3-5=-107/260

### NOTES-

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding. 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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) 6, 5, 4.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

10) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.





<sup>1)</sup> Unbalanced roof live loads have been considered for this design.



TOP CHORD

BOT CHORD

LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No 2

2x4 SPF No 2 WFBS REACTIONS. (size) 5=Mechanical, 7=0-3-8

Max Horz 7=56(LC 7)

Max Uplift 5=-48(LC 5), 7=-47(LC 8) Max Grav 5=178(LC 22), 7=262(LC 1)

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

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 7. 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and
- referenced standard ANSI/TPI 1. 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 10) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
- 11) 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 + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf) Vert: 1-3=-70, 3-4=-70, 5-7=-20 Concentrated Loads (lb)

Vert: 6=-28(B) 8=-5(B)



Structural wood sheathing directly applied or 4-0-0 oc purlins,

except end verticals, and 2-0-0 oc purlins: 3-4.

Rigid ceiling directly applied or 10-0-0 oc bracing.

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| LOADING | G (psf) | SPACING- 2         | -0-0 | CSI.  |      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|---------|---------|--------------------|------|-------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL    | 25.0    | Plate Grip DOL     | 1.15 | тс    | 0.08 | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20          | 197/144  |
| TCDL    | 10.0    | Lumber DOL         | 1.15 | BC    | 0.05 | Vert(CT) | -0.00 | 4-7   | >999   | 180 |               |          |
| BCLL    | 0.0     | Rep Stress Incr    | YES  | WB    | 0.00 | Horz(CT) | 0.00  | 3     | n/a    | n/a |               |          |
| BCDL    | 10.0    | Code IRC2018/TPI20 | )14  | Matri | x-MP |          |       |       |        |     | Weight: 10 lb | FT = 20% |

BRACING-TOP CHORD

BOT CHORD

## LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x6 SPF No.2

Max Horz 2=56(LC 12)

Max Uplift 3=-33(LC 12), 2=-31(LC 12), 4=-1(LC 12)

Max Grav 3=75(LC 1), 2=203(LC 1), 4=61(LC 3)

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

## NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 2-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Structural wood sheathing directly applied or 3-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical





| Plate Offsets (X,Y)  | [7:0-2-0,0-1-3]   |   |  |  |   |
|--|---|---|--|--|---|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | <b>CSI.</b><br>TC 0.15<br>BC 0.18<br>WB 0.01<br>Matrix-MP | DEFL.         ir           Vert(LL)         0.01           Vert(CT)         -0.01           Horz(CT)         -0.02 | n (loc) l/defl L/d<br>6-7 >999 240<br>6 >999 180<br>2 4 n/a n/a                            | PLATES         GRIP           MT20         197/144           Weight: 12 lb         FT = 20% |
| LUMBER-<br>TOP CHORD 2x4 SF<br>BOT CHORD 2x4 SF<br>WEBS 2x4 SF   | 2F No.2<br>2F No.2<br>2F No.2   |   | BRACING-<br>TOP CHORD<br>BOT CHORD   | Structural wood sheathing dir<br>except end verticals.<br>Rigid ceiling directly applied c | ectly applied or 2-11-5 oc purlins,   |

REACTIONS. (size) 4=Mechanical, 5=Mechanical, 7=0-3-8 Max Horz 7=99(LC 12)

Max Uplift 4=-58(LC 12), 5=-24(LC 12)

Max Grav 4=78(LC 19), 5=50(LC 19), 7=208(LC 1)

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

## NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 1-11-4, Interior(1) 1-11-4 to 2-10-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.









|                      |                       |           | 1-9-0 0-1-13              |                       |
|----------------------|-----------------------|-----------|---------------------------|-----------------------|
| <b>_OADING</b> (psf) | <b>SPACING-</b> 2-0-0 | CSI.      | DEFL. in (loc) I/defl L/d | PLATES GRIP           |
| rcll 25.0            | Plate Grip DOL 1.15   | TC 0.11   | Vert(LL) -0.00 7 >999 240 | MT20 197/144          |
| CDL 10.0             | Lumber DOL 1.15       | BC 0.05   | Vert(CT) -0.00 6 >999 180 |                       |
| BCLL 0.0             | Rep Stress Incr YES   | WB 0.03   | Horz(CT) -0.00 4 n/a n/a  |                       |
| 3CDL 10.0            | Code IRC2018/TPI2014  | Matrix-MP | . ,                       | Weight: 9 lb FT = 20% |

## LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 WFBS

TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 1-11-5 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=Mechanical, 7=0-3-8

Max Horz 7=81(LC 12)

Max Uplift 4=-24(LC 12), 5=-35(LC 12)

Max Grav 4=43(LC 19), 5=56(LC 3), 7=185(LC 1)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:16.3




|                     | 0-<br>0-                          | 1-11<br>1-11 | <u>3-3-8</u><br>3-1-13 |          |       | l     | 4-10<br>1-6-1 | -5<br> 3 | 4             |          |
|---------------------|-----------------------------------|--------------|------------------------|----------|-------|-------|---------------|----------|---------------|----------|
| Plate Offsets (X,Y) | [2:0-3-10,0-1-0], [3:0-3-12,0-2-1 | 0]           |                        |          |       |       |               |          |               |          |
| <b>DADING</b> (psf) | SPACING- 2-0-                     | csi.         |                        | DEFL.    | in    | (loc) | l/defl        | L/d      | PLATES        | GRIP     |
| rcll 25.0           | Plate Grip DOL 1.1                | 5 TC         | 0.42                   | Vert(LL) | 0.09  | 3     | >669          | 240      | MT20          | 197/144  |
| CDL 10.0            | Lumber DOL 1.1                    | 5 BC         | 0.05                   | Vert(CT) | -0.11 | 3     | >503          | 180      |               |          |
| CLL 0.0             | Rep Stress Incr YES               | S WB         | 0.00                   | Horz(CT) | 0.08  | 5     | n/a           | n/a      |               |          |
| 3CDL 10.0           | Code IRC2018/TPI2014              | Matr         | ix-AS                  |          |       |       |               |          | Weight: 17 lb | FT = 20% |

TOP CHORD 2x4 SPF No 2 BOT CHORD

2x4 SPF No.2 \*Except\* 2-3: 2x6 SPF No.2

TOP CHORD BOT CHORD

Structural wood sheathing directly applied. Rigid ceiling directly applied.

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical Max Horz 2=85(LC 12) Max Uplift 4=-73(LC 12), 2=-52(LC 12) Max Grav 4=174(LC 1), 2=247(LC 1), 5=48(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-4-9, Interior(1) 2-4-9 to 4-9-9 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Bearing at joint(s) 2 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 capable of withstanding 100 lb uplift at joint(s) 4, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







| LOADING (psf)<br>TCLL 25.0<br>TCDI 10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15       | CSI.<br>TC 0.34<br>BC 0.51 | <b>DEFL.</b> in (loc) I/defl L/d<br>Vert(LL) 0.16 5-6 >421 240<br>Vert(CT) -0.15 5 >456 180 | PLATES         GRIP           MT20         197/144 |
|---|---|----------------------------|---|--|
| BCLL 0.0<br>BCDL 10.0                   | Rep Stress Incr YES<br>Code IRC2018/TPI2014 | WB 0.03<br>Matrix-AS       | Horz(CT) -0.11 3 n/a n/a  | Weight: 20 lb FT = 20%                             |

# LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2

2x4 SPF No.2 WFBS

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied, except end verticals. Rigid ceiling directly applied.

REACTIONS. (size) 6=Mechanical, 3=Mechanical, 4=Mechanical

Max Horz 4=161(LC 12) Max Uplift 3=-97(LC 12), 4=-48(LC 12)

Max Grav 6=254(LC 1), 3=156(LC 19), 4=119(LC 19)

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

TOP CHORD 1-2=-268/100 BOT CHORD 5-6=-143/303. 4-5=-143/303

#### NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 5-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

4) Refer to girder(s) for truss to truss connections.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 4.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.







| LOADING | (psf) | SPACING-        | 2-0-0  | CSI.  |      | DEFL.    | in    | (loc) | l/defl | L/d | PLATES       | GRIP     |
|---------|-------|-----------------|--------|-------|------|----------|-------|-------|--------|-----|--------------|----------|
| TCLL    | 25.0  | Plate Grip DOL  | 1.15   | TC    | 0.05 | Vert(LL) | -0.00 | 7     | >999   | 240 | MT20         | 197/144  |
| TCDL    | 10.0  | Lumber DOL      | 1.15   | BC    | 0.02 | Vert(CT) | -0.00 | 7     | >999   | 180 |              |          |
| BCLL    | 0.0   | Rep Stress Incr | YES    | WB    | 0.00 | Horz(CT) | 0.00  | 3     | n/a    | n/a |              |          |
| BCDL    | 10.0  | Code IRC2018/TF | 912014 | Matri | x-MP |          |       |       |        |     | Weight: 7 lb | FT = 20% |

BRACING-TOP CHORD

BOT CHORD

# LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x6 SPF No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=40(LC 12)

Max Uplift 3=-20(LC 12), 2=-27(LC 8), 4=-1(LC 12)

Max Grav 3=45(LC 1), 2=161(LC 1), 4=38(LC 3)

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

# NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2, 4.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

# SCOTT M. SEVIER NUMBER PE-2001018807 FF-55/ONAL ENGINE January 4,2022

Structural wood sheathing directly applied or 1-10-15 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.





(loc)

BRACING-

TOP CHORD

BOT CHORD

9

l/defl

n/a

n/a

n/a

L/d

999

999

n/a

PLATES

Weight: 77 lb

MT20

Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

GRIP

197/144

FT = 20%

| late Offsets | (X Y) | [13.0-3-0.0-1-4] |
|--------------|-------|------------------|

| SPACING-        | 2-0-0  | CSI.  |      | DEFL.    | in   |
|-----------------|--------|-------|------|----------|------|
| Plate Grip DOL  | 1.15   | TC    | 0.12 | Vert(LL) | n/a  |
| Lumber DOL      | 1.15   | BC    | 0.07 | Vert(CT) | n/a  |
| Rep Stress Incr | YES    | WB    | 0.08 | Horz(CT) | 0.00 |
| Code IRC2018/T  | PI2014 | Matri | x-S  |          |      |

LUMBER-TOP CHORD 2x4 SPF No.2

25.0

10.0

0.0

10.0

LOADING (psf)

TCLL

TCDL

BCLL

BCDL

BOT CHORD2x4 SIT No.2OTHERS2x4 SPF No.2

REACTIONS. All bearings 19-8-3.

(lb) - Max Horz 1=-143(LC 8)

Max Upift All upift 100 lb or less at joint(s) 1, 15, 16, 12, 11 except 17=-108(LC 12), 10=-108(LC 13) Max Grav All reactions 250 lb or less at joint(s) 1, 9, 14, 15, 16, 12, 11 except 17=313(LC 19), 10=313(LC 20)

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

## NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-14 to 3-5-14, Interior(1) 3-5-14 to 9-10-1, Exterior(2R) 9-10-1 to 12-10-1, Interior(1) 12-10-1 to 19-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) All plates are 2x4 MT20 unless otherwise indicated.

4) Gable requires continuous bottom chord bearing.

5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 15, 16, 12, 11 except (jt=lb) 17=108, 10=108.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







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

# NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-5-14 to 3-8-6, Interior(1) 3-8-6 to 5-8-6, Exterior(2R) 5-8-6 to 8-8-6, Interior(1) 8-8-6 to 10-10-15 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DDL=1.60 plate grip DDL=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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=107, 6=107.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.





| Job  | Truss                     | Truss Type | Qty | Ply       | SUMMIT/COBEY CREEK #16/MO                                     |  |  |
|--|---------------------------|------------|-----|-----------|---|--|--|
|  |                           |            |     |           | 149513065   |  |  |
| 3020681  | LG3                       | GABLE      | 1   | 1         |   |  |  |
|  |                           |            |     |           | Job Reference (optional)                                      |  |  |
| Builders FirstSource (Valley   | Center), Valley Center, K | S - 67147, | 8.  | 430 s Aug | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:21:20 2022 Page 1 |  |  |
| ID:aMevVrAvR40V1rvItLiLFIzXPDf-76 Pa83QDawipeMzAQLI7U5KJsaQK76YuFecExzz2nD |                           |            |     |           |   |  |  |

2-10-2 2-10-2 3 2x4 26.00 12 6-1-15 2x4 || 0-0-4 \*\*\*\* 3x6 // 5 4 2x4 || 3x6 ||

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| LOADING<br>TCLL<br>TCDL<br>BCLL<br>BCDL           | (psf)<br>25.0<br>10.0<br>0.0<br>10.0                 | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TI | 2-0-0<br>1.15<br>1.15<br>YES<br>PI2014 | <b>CSI.</b><br>TC<br>BC<br>WB<br>Matrix | 0.25<br>0.02<br>0.08<br><-P | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in<br>n/a<br>n/a<br>0.00 | (loc)<br>-<br>-<br>4           | l/defl<br>n/a<br>n/a<br>n/a          | L/d<br>999<br>999<br>n/a                   | <b>PLATES</b><br>MT20<br>Weight: 18 lb          | <b>GRIP</b><br>197/144<br>FT = 20% |
|---|--|--|--|---|-----------------------------|---|--------------------------|--------------------------------|--------------------------------------|--|---|------------------------------------|
| LUMBER-<br>TOP CHOR<br>BOT CHOR<br>WEBS<br>OTHERS | RD 2x4 SP<br>RD 2x4 SP<br>2x4 SP<br>2x4 SP<br>2x4 SP | PF No.2<br>PF No.2<br>PF No.2<br>PF No.2<br>PF No.2                            |  |   |                             | BRACING-<br>TOP CHOR<br>BOT CHOR          | D<br>D                   | Structur<br>except<br>Rigid ce | ral wood<br>end verti<br>eiling dire | sheathing dir<br>icals.<br>ectly applied c | ectly applied or 2-10-<br>or 10-0-0 oc bracing. | 2 oc purlins,                      |

REACTIONS. (size) 1=2-10-2, 4=2-10-2, 5=2-10-2 Max Horz 1=188(LC 9)

Max Uplift 1=-262(LC 10), 4=-158(LC 11), 5=-320(LC 12)

Max Grav 1=316(LC 9), 4=159(LC 8), 5=272(LC 19)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. 1-2=-734/620, 2-3=-333/307, 3-4=-309/317

TOP CHORD

WEBS 2-5=-375/434

# NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=262, 4=158, 5=320,

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:34.4







|              |                      |          | 14-11-1       |       |        |     | -             |          |
|--------------|----------------------|----------|---------------|-------|--------|-----|---------------|----------|
| OADING (psf) | SPACING- 2-0-0       | CSI.     | DEFL. in      | (loc) | l/defl | L/d | PLATES        | GRIP     |
| CLL 25.0     | Plate Grip DOL 1.15  | TC 0.45  | Vert(LL) n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| CDL 10.0     | Lumber DOL 1.15      | BC 0.22  | Vert(CT) n/a  | -     | n/a    | 999 |               |          |
| CLL 0.0      | Rep Stress Incr YES  | WB 0.20  | Horz(CT) 0.01 | 9     | n/a    | n/a |               |          |
| CDL 10.0     | Code IRC2018/TPI2014 | Matrix-S |               |       |        |     | Weight: 78 lb | FT = 20% |

WFBS

14-11-1

| TOP CHORD | 2x4 SPF No.2 |
|-----------|--------------|
| BOT CHORD | 2x4 SPF No.2 |
| WEBS      | 2x4 SPF No.2 |
| OTHERS    | 2x4 SPF No.2 |

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. 1 Row at midpt 1-16

REACTIONS. All bearings 14-11-1.

(lb) -Max Horz 16=-333(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 16, 15, 14, 13, 9, 12, 11, 10 Max Grav All reactions 250 lb or less at joint(s) 16, 15, 14, 13, 9, 12, 11, 10

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

TOP CHORD 4-6=-291/251, 6-7=-342/285, 7-8=-391/315, 8-9=-449/359

BOT CHORD 15-16=-303/393, 14-15=-303/393, 13-14=-303/393, 12-13=-303/393, 11-12=-303/393, 10-11=-303/393, 9-10=-303/393

#### NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 14-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) All plates are 2x4 MT20 unless otherwise indicated.

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 15, 14, 13, 9, 12, 11, 10.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:58.1



| Job                          | Truss                     | Truss Type   |             | Qty      | Ply        | SUMMIT/COBEY CREEK #16/MO                                     |
|------------------------------|---------------------------|--------------|-------------|----------|------------|---|
|                              |                           |              |             |          |            | 149513067   |
| 3020681                      | LG5                       | LAY-IN GABLE |             | 1        | 1          |   |
|                              |                           |              |             |          |            | Job Reference (optional)                                      |
| Builders FirstSource (Valley | Center), Valley Center, K | S - 67147,   |             | 8.       | 430 s Aug  | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:21:22 2022 Page 1 |
|                              |                           |              | ID:         | qMeyVrAy | R40V1rvItl | jLFIzXPDf-3U695q5gIHAR2yWLIqNmCvAgdfVpo_CrLZ7jJpzz2nB         |
|                              |                           |              | 2-11-14 4-1 | 1-14     |            |   |
|                              |                           |              | 2-11-14 2   | -0-0     |            |   |

26.00 12 2x4 II 26.00 12 2x4 II 2x4 II 2x4 II 2x4 II

# 3x6 // 7 6 5 3x6 || 2x4 || 2x4 ||

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| LOADING (ps<br>TCLL 25<br>TCDL 10<br>BCLL 0<br>BCDL 10 | sf)<br>5.0<br>0.0<br>0.0<br>0.0 | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TP | 2-0-0<br>1.15<br>1.15<br>YES<br>I2014 | <b>CSI.</b><br>TC<br>BC<br>WB<br>Matrix | 0.20<br>0.02<br>0.29<br><-P | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in<br>n/a<br>n/a<br>0.00 | (loc)<br>-<br>- | l/defl<br>n/a<br>n/a<br>n/a | L/d<br>999<br>999<br>n/a | PLATES<br>MT20<br>Weight: 39 lb | <b>GRIP</b><br>197/144<br>FT = 20% |  |
|--|---------------------------------|--|---------------------------------------|---|-----------------------------|---|--------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|------------------------------------|--|
| LUMBER-<br>TOP CHORD                                   | 2x4 SPF<br>2x4 SPF              | No.2   |                                       |   |                             | BRACING-<br>TOP CHOR                      | D                        | Structu         | ral wood                    | sheathing di             | rectly applied or 4-11-         | 14 oc purlins,                     |  |
| WEBS   | 2x4 SPF                         | No.2   |                                       |   |                             | BOT CHOR                                  | D                        | Riaid c         | eilina dire                 | ctly applied             | or 10-0-0 oc bracing.           |                                    |  |

WEBS

1 Row at midpt

4-5

#### OTHERS 2x4 SPF No.2 0x4 SPF No.2

**REACTIONS.** All bearings 4-11-14.

(lb) - Max Horz 1=366(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) except 1=-380(LC 10), 5=-124(LC 12), 7=-318(LC 12), 6=-394(LC 12), 12)

Max Grav All reactions 250 lb or less at joint(s) 5 except 1=761(LC 12), 7=266(LC 19), 6=331(LC 19)

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

TOP CHORD 1-2=-1064/808, 2-3=-669/511

WEBS 2-7=-367/426, 3-6=-455/527

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left exposed; end vertical left exposed; C-C for members

and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 380 lb uplift at joint 1, 124 lb uplift at joint 5, 318 lb uplift at joint 7 and 394 lb uplift at joint 6.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:57.6





Scale = 1:56.3



ł

|   |   |   |  |   |                             | 284                                       |                          |  |   |   |   |                                    |
|---|---|---|--|---|-----------------------------|---|--------------------------|--|---|---|---|------------------------------------|
| LOADING ((<br>TCLL 2<br>TCDL 1<br>BCLL<br>BCDL 1    | psf)<br>25.0<br>10.0<br>0.0<br>10.0                     | <b>SPACING-</b><br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/TF | 2-0-0<br>1.15<br>1.15<br>YES<br>Pl2014 | <b>CSI.</b><br>TC<br>BC<br>WB<br>Matrix | 0.21<br>0.02<br>0.36<br><-P | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in<br>n/a<br>n/a<br>0.00 | (loc)<br>-<br>-                          | l/defl<br>n/a<br>n/a<br>n/a                       | L/d<br>999<br>999<br>n/a                      | PLATES<br>MT20<br>Weight: 42 lb                       | <b>GRIP</b><br>197/144<br>FT = 20% |
| LUMBER-<br>TOP CHORI<br>BOT CHORI<br>WEBS<br>OTHERS | D 2x4 SPF<br>D 2x4 SPF<br>2x4 SPF<br>2x4 SPF<br>2x4 SPF | = No.2<br>= No.2<br>= No.2<br>= No.2  | I                                      |   |                             | BRACING-<br>TOP CHOR<br>BOT CHOR<br>WEBS  | D<br>D                   | Structu<br>except<br>Rigid ce<br>1 Row : | ral wood<br>end vertie<br>eiling dire<br>at midpt | sheathing dir<br>cals.<br>ctly applied o<br>4 | rectly applied or 4-10-<br>or 10-0-0 oc bracing.<br>5 | 8 oc purlins,                      |

REACTIONS. All bearings 4-10-8.

(lb) - Max Horz 1=357(LC 12)

Max Upift All upift 100 lb or less at joint(s) 5 except 1=-307(LC 10), 6=-296(LC 12), 7=-400(LC 12) Max Grav All reactions 250 lb or less at joint(s) 5 except 1=660(LC 12), 6=250(LC 19), 7=334(LC 19)

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

TOP CHORD 1-2=-938/716, 2-3=-436/334

WEBS 3-6=-342/397, 2-7=-460/534

### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left exposed ; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

 Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 1=307, 6=296, 7=400.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.









| L <b>OADING</b> (p<br>TCLL 25 | osf)<br>5.0 | SPACING-<br>Plate Grip DOL | 2-0-0<br>1.15 | CSI.<br>TC | 0.20 | DEFL.<br>Vert(LL) | in<br>n/a | (loc)    | l/defl<br>n/a | L/d<br>999    | PLATES<br>MT20           | <b>GRIP</b><br>197/144 |  |
|-------------------------------|-------------|----------------------------|---------------|------------|------|-------------------|-----------|----------|---------------|---------------|--------------------------|------------------------|--|
| TCDL 10                       | 0.0         | Lumber DOL                 | 1.15          | BC         | 0.08 | Vert(CT)          | n/a       | -        | n/a           | 999           |                          |                        |  |
| BCLL (                        | 0.0         | Rep Stress Incr            | YES           | WB         | 0.27 | Horz(CT)          | 0.00      | 4        | n/a           | n/a           |                          |                        |  |
| 3CDL 10                       | 0.0         | Code IRC2018/TF            | PI2014        | Matri      | x-P  |                   |           |          |               |               | Weight: 38 lb            | FT = 20%               |  |
| LUMBER-                       |             |                            |               | ·          |      | BRACING-          |           |          |               |               |                          |                        |  |
| TOP CHORD                     | 2x4 SPF I   | No.2                       |               |            |      | TOP CHOR          | D         | Structu  | ral wood      | sheathing di  | rectly applied or 4-10-8 | 8 oc purlins,          |  |
| BOT CHORD                     | 2x4 SPF I   | No.2                       |               |            |      |                   |           | except   | end verti     | cals.         |                          |                        |  |
| NEBS                          | 2x4 SPF I   | No.2                       |               |            |      | BOT CHOR          | D         | Riaid ce | eilina dire   | ectly applied | or 10-0-0 oc bracing.    |                        |  |

WEBS

1 Row at midpt

1.7

REACTIONS. All bearings 4-10-8.

(lb) - Max Horz 7=-357(LC 13)

2x4 SPF No.2

Max Uplift All uplift 100 lb or less at joint(s) except 7=-124(LC 13), 4=-384(LC 11), 6=-394(LC 13), 5=-315(LC

Max Grav All reactions 250 lb or less at joint(s) 7 except 4=760(LC 13), 6=331(LC 20), 5=263(LC 20)

0-6-12

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

TOP CHORD 2-3=-669/511, 3-4=-1059/804

BOT CHORD 6-7=-337/452, 5-6=-337/452, 4-5=-337/452

13)

WEBS 2-6=-455/528, 3-5=-363/421

#### NOTES-

OTHERS

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 7, 384 lb uplift at joint 4, 394 lb uplift at joint 6 and 315 lb uplift at joint 5.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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| LOADING (psf) | SPACING- 2-0-0       | CSI.      | DEFL. in (loc) I/defl L/d | PLATES GRIP            |
|---------------|----------------------|-----------|---------------------------|------------------------|
| TCLL 25.0     | Plate Grip DOL 1.15  | TC 0.12   | Vert(LL) -0.01 6 >999 240 | MT20 197/144           |
| TCDL 10.0     | Lumber DOL 1.15      | BC 0.19   | Vert(CT) -0.02 6 >999 180 |                        |
| BCLL 0.0      | Rep Stress Incr YES  | WB 0.00   | Horz(CT) 0.00 5 n/a n/a   |                        |
| BCDL 10.0     | Code IRC2018/TPI2014 | Matrix-MR |                           | Weight: 13 lb FT = 20% |

# LUMBER-

 TOP CHORD
 2x4 SPF No.2

 BOT CHORD
 2x4 SPF No.2 \*Except\*

 2-7: 2x6 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 4-0-0 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical Max Horz 2=72(LC 12) Max Uplift 4=-35(LC 12), 2=-35(LC 12), 5=-11(LC 12) Max Grav 4=96(LC 1), 2=245(LC 1), 5=74(LC 1)

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

### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-1, Interior(1) 2-1-1 to 3-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) Refer to girder(s) for truss to truss connections.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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<sup>4)</sup> Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 4, 35 lb uplift at joint 2 and 11 lb uplift at joint 5.





|  |   |   | 4-6-13                                    |                            |                      |                             |                          | I                               |                                    |  |
|--|---|---|---|----------------------------|----------------------|-----------------------------|--------------------------|---------------------------------|------------------------------------|--|
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.05<br>BC 0.02<br>WB 0.01<br>Matrix-P | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT) | in<br>0.00<br>0.00<br>0.00 | (loc)<br>4<br>4<br>4 | l/defl<br>n/r<br>n/r<br>n/a | L/d<br>120<br>120<br>n/a | PLATES<br>MT20<br>Weight: 12 lb | <b>GRIP</b><br>197/144<br>FT = 20% |  |
| LUMBER-  |   |   | BRACING-                                  |                            |                      |                             |                          |                                 |                                    |  |

#### LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 OTHERS

TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 4-6-13 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 6=3-3-15, 4=3-3-15, 2=3-3-15 Max Horz 2=-40(LC 10)

Max Uplift 4=-30(LC 13), 2=-25(LC 12)

Max Grav 6=123(LC 1), 4=115(LC 1), 2=115(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 25 lb uplift at joint 2.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.









|   | 1   |                                       | 4-6-13   |                                  |                             |                          |                |                        |
|---|---|---------------------------------------|--|----------------------------------|-----------------------------|--------------------------|----------------|------------------------|
| LOADING (psf)<br>TCLL 25.0<br>TCDL 10.0<br>BCLL 0.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES | CSI.<br>TC 0.05<br>BC 0.02<br>WB 0.01 | DEFL.<br>Vert(LL) 0.<br>Vert(CT) 0.<br>Horz(CT) 0. | in (loc)<br>00 4<br>00 4<br>00 4 | l/defl<br>n/r<br>n/r<br>n/a | L/d<br>120<br>120<br>n/a | PLATES<br>MT20 | <b>GRIP</b><br>197/144 |
| BCDL 10.0   | Code IRC2018/TPI2014  | Matrix-P                              |  |                                  |                             |                          | Weight: 12 lb  | FT = 20%               |
| LUMBER-   |   |                                       | BRACING-   |                                  |                             |                          |                |                        |

TOP CHORD

BOT CHORD

#### LUMBER-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 2x4 SPF No.2 OTHERS

REACTIONS. (size) 6=3-3-15, 4=3-3-15, 2=3-3-15 Max Horz 2=-40(LC 10)

Max Uplift 4=-30(LC 13), 2=-25(LC 12)

Max Grav 6=123(LC 1), 4=115(LC 1), 2=115(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 25 lb uplift at joint 2.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



Structural wood sheathing directly applied or 4-6-13 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

January 4,2022





| Job                          | Truss                     | Truss Type | Qty | Ply       | SUMMIT/COBEY CREEK #16/MO                                     |
|------------------------------|---------------------------|------------|-----|-----------|---|
|                              |                           |            |     |           | I49513073   |
| 3020681                      | PB03                      | Piggyback  | 1   | 1         |   |
|                              |                           |            |     |           | Job Reference (optional)                                      |
| Builders FirstSource (Valley | Center), Valley Center, K | S - 67147, | 8.  | 430 s Aug | 16 2021 MiTek Industries, Inc. Mon Jan 3 13:21:26 2022 Page 1 |

ID:qMeyVrAyR40V1rvItLjLFlzXPDf-yGLgwB8BpWgtXZp7XgSiMILNRHtDkrnQGB5xSbzz2n7

Scale = 1:9.6



2x4 =

| LOADING (psf)<br>TCLL 25.0<br>TCDL 10.0<br>BCLL 0.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES | CSI.<br>TC 0.08<br>BC 0.06<br>WB 0.00 | <b>DEFL.</b> in<br>Vert(LL) -0.00<br>Vert(CT) 0.00<br>Horz(CT) 0.00 | (loc)<br>1<br>1<br>5 | l/defl<br>n/r<br>n/r<br>n/a | L/d<br>120<br>120<br>n/a | PLATES<br>MT20 | <b>GRIP</b><br>197/144 |
|---|---|---------------------------------------|---|----------------------|-----------------------------|--------------------------|----------------|------------------------|
| LUMBER-   | Code IRC2018/TPI2014  | Matrix-P                              | BRACING-  |                      |                             |                          | Weight: 8 lb   | FI = 20%               |

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 WFBS

2x4 SPF No.2

TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=2-2-13, 4=2-2-13, 2=2-2-13 Max Horz 2=52(LC 11) Max Uplift 4=-21(LC 12), 2=-31(LC 12)

Max Grav 4=100(LC 1), 2=161(LC 1)

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

### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 4 and 31 lb uplift at
- joint 2. 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.







6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







|         | 0-0-10 |                     |                  |      | 7-9-0<br>7-8-6 |      |       |        |     |               |          |
|---------|--------|---------------------|------------------|------|----------------|------|-------|--------|-----|---------------|----------|
| LOADING | (psf)  | SPACING- 2-0        | )-0 <b>CSI</b> . |      | DEFL.          | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
| TCLL    | 25.0   | Plate Grip DOL 1.   | 15 TC            | 0.17 | Vert(LL)       | n/a  | -     | n/a    | 999 | MT20          | 197/144  |
| TCDL    | 10.0   | Lumber DOL 1.       | 15 BC            | 0.08 | Vert(CT)       | n/a  | -     | n/a    | 999 |               |          |
| BCLL    | 0.0    | Rep Stress Incr YI  | ES WB            | 0.03 | Horz(CT)       | 0.00 | 3     | n/a    | n/a |               |          |
| BCDL    | 10.0   | Code IRC2018/TPI201 | 4 Matri          | x-P  |                |      |       |        |     | Weight: 18 lb | FT = 20% |
|         |        |                     | I                |      | BRACINC        |      |       |        |     | 1             |          |

TOP CHORD

BOT CHORD

#### LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2OTHERS2x4 SPF No.2

REACTIONS. (size) 1=7-7-13, 3=7-7-13, 4=7-7-13 Max Horz 1=-21(LC 13)

Max Uplift 1=-30(LC 12), 3=-33(LC 13), 4=-13(LC 12) Max Grav 1=139(LC 1), 3=139(LC 1), 4=283(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1, 33 lb uplift at joint 3 and 13 lb uplift at joint 4.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.





2x4 ⋍

2x4 🗢

Rigid ceiling directly applied or 10-0-0 oc bracing.

| H  |   |   | 3-8-6<br>3-8-6  | 3 <sub>1</sub> 9-0<br>0-b-10   |
|--|---|---|---|--|
| Plate Offsets (X,Y)  | [2:0-2-0,Edge]  | -   |   |  |
| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCode IRC2018/TPI2014 | CSI.<br>TC 0.03<br>BC 0.05<br>WB 0.00<br>Matrix-P | <b>DEFL.</b> in (loc) I/defl L/d<br>Vert(LL) n/a - n/a 999<br>Vert(CT) n/a - n/a 999<br>Horz(CT) 0.00 3 n/a n/a | PLATES         GRIP           MT20         197/144           Weight: 7 lb         FT = 20% |
| LUMBER-<br>TOP CHORD 2x4 SPI<br>BOT CHORD 2x4 SPI  | F No.2<br>F No.2  |   | BRACING-<br>TOP CHORD Structural wood sheathing di<br>BOT CHORD Rigid ceiling directly applied                  | rectly applied or 3-9-0 oc purlins.<br>or 10-0-0 oc bracing.                               |

REACTIONS.

(size) 1=3-7-13, 3=3-7-13 Max Horz 1=8(LC 16) Max Uplift 1=-13(LC 12), 3=-13(LC 13)

Max Grav 1=101(LC 1), 3=101(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 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 13 lb uplift at joint 3.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







2-8-12



SPACING-CSI. DEFL. PLATES GRIP LOADING (psf) 2-0-0 in (loc) l/defl L/d TCLL 25.0 Plate Grip DOL 1.15 тс 0.09 Vert(LL) n/a n/a 999 MT20 197/144 TCDL 10.0 Lumber DOL 1.15 BC 0.04 Vert(CT) n/a n/a 999 YES WB 0.00 Horz(CT) BCLL 0.0 Rep Stress Incr 0.00 3 n/a n/a Code IRC2018/TPI2014 Weight: 8 lb BCDL 10.0 Matrix-P FT = 20% LUMBER-BRACING-TOP CHORD 2x4 SPF No.2 TOP CHORD Structural wood sheathing directly applied or 2-8-12 oc purlins, BOT CHORD 2x4 SPF No.2 except end verticals 2x4 SPF No.2 BOT CHORD WFBS Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=2-8-7, 3=2-8-7

Max Horz 1=65(LC 11) Max Uplift 1=-4(LC 12), 3=-32(LC 12)

Max Grav 1=98(LC 1), 3=108(LC 19)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1 and 32 lb uplift at

joint 3.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:14.3







| LOADING (psf)<br>TCLL 25.0<br>TCDL 10.0<br>BCLL 0.0<br>BCDL 10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.19<br>BC 0.10<br>WB 0.00<br>Matrix-P | DEFL.iVert(LL)n/Vert(CT)n/Horz(CT)0.00 | n (loc) l/defi L/d<br>a - n/a 999<br>a - n/a 999<br>D 3 n/a n/a | PLATES         GRIP           MT20         197/144           Weight: 12 lb         FT = 20% |
|--|---|---|--|---|---|
| LUMBER-<br>TOP CHORD 2x4 SP<br>BOT CHORD 2x4 SP                  | PF No.2<br>PF No.2  |   | BRACING-<br>TOP CHORD                  | Structural wood sheathing di except end verticals.              | rectly applied or 3-8-12 oc purlins,  |

ł

REACTIONS. (size) 1=3-8-7, 3=3-8-7

Max Horz 1=95(LC 9) Max Uplift 1=-5(LC 12), 3=-47(LC 12)

Max Grav 1=143(LC 1), 3=157(LC 19)

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

### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1 and 47 lb uplift at

joint 3.

5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCode IRC2018/TPI2014 | CSI.<br>TC 0.34<br>BC 0.18<br>WB 0.00<br>Matrix-P | DEFL. ii<br>Vert(LL) n/z<br>Vert(CT) n/z<br>Horz(CT) 0.00 | n (loc) l/defl L/d<br>a - n/a 999<br>a - n/a 999<br>) 3 n/a n/a | PLATES         GRIP           MT20         197/144           Weight: 16 lb         FT = 20% |
|--|---|---|---|---|---|
| LUMBER-<br>TOP CHORD 2x4 SF  | PF No.2   |   | BRACING-<br>TOP CHORD                                     | Structural wood sheathing di                                    | rectly applied or 4-8-12 oc purlins,  |
| WEBS 2x4 SE  | 2F No.2<br>2F No.2  |   | BOT CHORD   | except end verticals.   | or 10-0-0 oc bracing  |

REACTIONS.

(size) 1=4-8-7, 3=4-8-7

Max Horz 1=125(LC 9) Max Uplift 1=-7(LC 12), 3=-61(LC 12)

Max Grav 1=188(LC 1), 3=207(LC 19)

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

### NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior(1) 3-4-13 to 4-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 1 and 61 lb uplift at joint 3.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=100, 6=100.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







| LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0 | SPACING- 2-0-0<br>Plate Grip DOL 1.15<br>Lumber DOL 1.15<br>Rep Stress Incr YES<br>Code IRC2018/TPI2014 | CSI.<br>TC 0.54<br>BC 0.29<br>WB 0.00<br>Matrix-P | DEFL. ir<br>Vert(LL) n/a<br>Vert(CT) n/a<br>Horz(CT) 0.00 | n (loc) l/defl L/d<br>- n/a 999<br>- n/a 999<br>3 n/a n/a                                  | PLATES         GRIP           MT20         197/144           Weight: 16 lb         FT = 20% | 6 |
|--|---|---|---|--|---|---|
| LUMBER-<br>TOP CHORD 2x4 SP<br>BOT CHORD 2x4 SP<br>WEBS 2x4 SP<br>REACTIONS (size  | F No.2<br>F No.2<br>F No.2  |   | BRACING-<br>TOP CHORD<br>BOT CHORD                        | Structural wood sheathing dir<br>except end verticals.<br>Rigid ceiling directly applied o | ectly applied or 6-0-0 oc purlins,<br>or 10-0-0 oc bracing.                                 |   |

ACTIONS. (SIZE) 1=0-1-0, 3=0-Max Harz 1-96(LC 0)

Max Horz 1=86(LC 9) Max Uplift 1=-34(LC 12), 3=-51(LC 12)

Max Grav 1=237(LC 1), 3=237(LC 1)

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

### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior(1) 3-9-1 to 6-0-4 zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

2) Gable requires continuous bottom chord bearing.

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







REACTIONS. (size) 1=7-8-3, 3=7-8-3, 4=7-8-3

Max Horz 1=-21(LC 13)

Max Uplift 1=-30(LC 12), 3=-33(LC 13), 4=-13(LC 12)

Max Grav 1=140(LC 1), 3=140(LC 1), 4=285(LC 1)

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

# NOTES-

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



State OF MISSOL SCOTT M. SEVIER PE-2001018807 PE-2001018807 January 4,2022



2-9-0



|          |                        | 1                  |        | 1      |      | 1        |      |         | 1                     |                      | 1                       |               |
|----------|------------------------|--------------------|--------|--------|------|----------|------|---------|-----------------------|----------------------|-------------------------|---------------|
| LOADING  | (psf)                  | SPACING-           | 2-0-0  | CSI.   |      | DEFL.    | in   | (loc)   | l/defl                | L/d                  | PLATES                  | GRIP          |
| TCLL     | 25.0                   | Plate Grip DOL     | 1.15   | TC     | 0.09 | Vert(LL) | n/a  | -       | n/a                   | 999                  | MT20                    | 197/144       |
| TCDL     | 10.0                   | Lumber DOL         | 1.15   | BC     | 0.04 | 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 IRC2018/TI    | PI2014 | Matrix | k-P  |          |      |         |                       |                      | Weight: 8 lb            | FT = 20%      |
| LUMBER-  |                        |                    |        |        |      | BRACING- |      | o       |                       |                      |                         | o             |
| BOT CHOR | RD 2x4 SF<br>RD 2x4 SF | PF N0.2<br>PF N0.2 |        |        |      | TOP CHOR | U    | except  | rai wood<br>end verti | sheathing d<br>cals. | irectly applied or 2-9- | o oc purlins, |
| WEBS     | 2x4 SF                 | PF No.2            |        |        |      | BOT CHOR | D    | Rigid c | eiling dire           | ectly applied        | or 10-0-0 oc bracing.   |               |

L

REACTIONS. (size) 1=2-8-11, 3=2-8-11

Max Horz 1=66(LC 9) Max Uplift 1=-4(LC 12), 3=-32(LC 12)

Max Grav 1=99(LC 1), 3=109(LC 19)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:14.4







ł CSI. DEFL. GRIP in (loc) l/defl L/d PLATES тс 0.20 Vert(LL) n/a n/a 999 MT20 197/144 BC 0.10 Vert(CT) n/a n/a 999 WB 0.00 Horz(CT) 0.00 3 n/a n/a Weight: 12 lb Matrix-P FT = 20%

except end verticals

Structural wood sheathing directly applied or 3-9-0 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing.

BRACING-

TOP CHORD

BOT CHORD

## LUMBER-

TCLL

TCDL

BCLL

BCDL

LOADING (psf)

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

25.0

10.0

0.0

10.0

REACTIONS. (size) 1=3-8-11, 3=3-8-11

Max Horz 1=95(LC 11) Max Uplift 1=-5(LC 12), 3=-47(LC 12)

SPACING-

Plate Grip DOL

Rep Stress Incr

Code IRC2018/TPI2014

Lumber DOL

Max Grav 1=144(LC 1), 3=158(LC 19)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Gable requires continuous bottom chord bearing.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

2-0-0

1.15

1.15

YES

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Scale = 1:18.6



