

Trenco 818 Soundside Rd Edenton, NC 27932

Re: J1120-5148 Lot 3122 Old Stage Road

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

Pages or sheets covered by this seal: E15059059 thru E15059086

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

North Carolina COA: C-0844



November 4,2020

# Gilbert, Eric

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



|  |  | 9-1-12  | + 19                                   | 9-0-3                            |                             | 29-0-3  |                                      |   | 38-7   | -4   | 45-9-0  |                                     |
|--|--|---|--|----------------------------------|-----------------------------|---|--------------------------------------|---|--|--|---|-------------------------------------|
| Plate Offsets (2   | X,Y) [   | <u>5:0-5-4,0-3-0], [14:0-4-1]</u>   |  | 2-12,0-3-0]                      |                             | 10-0-0  |                                      |   | 9-7-   | 1  | 7-1-12  |                                     |
| LOADING (ps<br>TCLL 20.<br>TCDL 10.<br>BCLL 0.<br>BCDL 10.   | sf)<br>.0<br>.0<br>.0 *<br>.0                      | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>Rep Stress Incr<br>Code IRC2018/T | 2-0-0<br>1.15<br>1.15<br>YES<br>PI2014 | CSI.<br>TC<br>BC<br>WB<br>Matrix | 0.49<br>0.33<br>0.84<br><-S | DEFL.<br>Vert(LL)<br>Vert(CT)<br>Horz(CT)<br>Wind(LL) | in<br>-0.06<br>-0.09<br>0.01<br>0.06 | (loc)<br>12-14<br>12-14<br>12<br>2-17             | l/defl<br>>999<br>>999<br>n/a<br>>999                            | L/d<br>360<br>240<br>n/a<br>240                          | PLATES<br>MT20<br>Weight: 361 lb  | <b>GRIP</b><br>244/190<br>FT = 20%  |
| LUMBER-<br>TOP CHORD<br>BOT CHORD<br>WEBS  | 2x6 SP<br>2x6 SP<br>14-15: 2<br>2x4 SP<br>9-11: 2x | No.1<br>No.1 *Except*<br>2x4 SP No.2<br>No.2 *Except*<br>x6 SP No.1           |  |                                  |                             | BRACING-<br>TOP CHOR<br>BOT CHOR<br>WEBS              | D<br>D                               | Structu<br>except<br>Rigid co<br>6-0-0 o<br>1 Row | ral wood :<br>end vertic<br>eiling dire<br>c bracing<br>at midpt | sheathing d<br>cals, and 2-(<br>ctly applied<br>: 12-14. | irectly applied or 6-0-0 c<br>0-0 oc purlins (6-0-0 ma<br>or 10-0-0 oc bracing, f<br>5-15, 6-14, 5-14 | oc purlins,<br>x.): 5-6.<br>Except: |
| REACTIONS.       (size)       2=0-3-8, 17=0-3-8, 12=0-3-8         Max Horz       2=257(LC 11)         Max Uplift       2=-54(LC 8), 17=-58(LC 9), 12=-16(LC 13)         Max Grav       2=434(LC 25), 17=1768(LC 19), 12=2054(LC 2)   |  |   |  |                                  |                             |   |                                      |   |  |  |   |                                     |
| FORCES. (Ib) - Max. Comp./Max. Ten All forces 250 (Ib) or less except when shown.<br>TOP CHORD 2-3=-324/151, 3-5=-949/163, 5-6=-638/176, 6-8=-859/127, 8-9=-115/484<br>BOT CHORD 14-15=-267/40, 12-14=-310/176<br>WFDP 244 245 (1972) - 244 237/445 8 44 40/4074 8 42 4500/054 |  |   |  |                                  |                             |   |                                      |   |  |  |   |                                     |

WEBS 3-17=-1295/184, 3-15=0/657, 6-14=-277/145, 8-14=-48/1074, 8-12=-1596/254, 9-12=-364/181

#### NOTES-

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

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-5 to 3-7-8, Interior(1) 3-7-8 to 19-0-3, Exterior(2R) 19-0-3 to 25-2-14, Interior(1) 25-2-14 to 29-0-3, Exterior(2R) 29-0-3 to 35-2-14, Interior(1) 35-2-14 to 46-6-5 zone; cantilever right exposed; end vertical right exposed; porch left 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) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 17, 12.

- 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.







| L  | 9-1-12  | 19-0-3   | 24-11-8 29-0-3  | 38-7-4  | 45-9-0   |
|--|---|--|---|---|--|
|  | 9-1-12  | 9-10-7   | 5-11-5 4-0-11   | 9-7-1   | 7-1-12   |
| Plate Offsets (X,Y) [4:0-  | 0-0,0-2-12], [4:0-2-8,0-4-4], [9:0-4-   | 0,0-1-0], [33:0-2-0,0-0-0]   |   |   |  |
| LOADING (psf)<br>TCLL 20.0<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 0.49<br>BC 0.35<br>WB 0.88<br>Matrix-S  | DEFL. in<br>Vert(LL) -0.07<br>Vert(CT) -0.13<br>Horz(CT) 0.01<br>Wind(LL) 0.07  | (loc) l/defl L/d<br>16-18 >999 360<br>16-18 >999 240<br>12 n/a n/a<br>2-18 >999 240   | PLATES         GRIP           MT20         244/190           Weight: 503 lb         FT = 20%                   |
|  | 0000  | indani o   |   | 2.0 ,000 2.0  |  |
| LUMBER-<br>TOP CHORD 2x6 SP No.<br>BOT CHORD 2x6 SP No.<br>WEBS 2x4 SP No.<br>9-11: 2x6 S<br>OTHERS 2x4 SP No.   | 1<br>1<br>2 *Except*<br>P No.1<br>2   |  | BRACING-<br>TOP CHORD<br>BOT CHORD<br>WEBS  | Structural wood sheathing dii<br>except end verticals, and 2-0<br>Rigid ceiling directly applied<br>1 Row at midpt 5  | rectly applied or 6-0-0 oc purlins,<br>I-0 oc purlins (6-0-0 max.): 5-6.<br>or 6-0-0 oc bracing.<br>5-16, 6-14 |
| REACTIONS. All bearin<br>(lb) - Max Horz<br>Max Uplift<br>Max Grav   | gs 0-3-8.<br>2=320(LC 11)<br>All uplift 100 lb or less at joint(s) e<br>All reactions 250 lb or less at joint   | except 2=-274(LC 8), 18=-<br>(s) 2 except 18=2314(LC   | -422(LC 12), 12=-284(LC<br>19), 12=1936(LC 2), 15=  | 13)<br>363(LC 18)   |  |
| FORCES.         (lb) - Max. Con           TOP CHORD         2-3=-504/           BOT CHORD         2-18=-46'           WEBS         3-18=-18'           8-12=-145'  | np./Max. Ten All forces 250 (lb) o<br>914, 3-5=-790/239, 5-6=-539/236,<br>1/198, 16-18=-461/198, 15-16=-25/<br>15/527, 3-16=-216/1086, 5-16=-330<br>59/358, 9-12=-362/277   | r less except when showr<br>6-8=-738/186, 8-9=-167//<br>541, 14-15=-25/541, 12-1<br>)/240, 6-14=-325/139, 8-1  | n.<br>482<br>14=-318/244<br>14=-37/955,   |   |  |
| <ul> <li>NOTES-</li> <li>1) Unbalanced roof live load</li> <li>2) Wind: ASCE 7-16; Vult=<br/>Roof; Hip Truss; MWFRS<br/>19-0-3 to 23-5-0, Interior<br/>; end vertical right expos<br/>plate grip DOL=1.60</li> <li>3) Truss designed for wind<br/>Gable End Details as ap</li> <li>4) Provide adequate draina</li> <li>5) All plates are 2x4 MT20</li> <li>6) Gable studs spaced at 2</li> <li>7) This truss has been desi</li> <li>8) * This truss has been desi</li> <li>8) * This truss has been de will fit between the bottor</li> <li>9) Provide mechanical com-<br/>joint 18 and 284 lb uplift</li> <li>10) This truss is designed i</li> </ul> | ds have been considered for this de<br>120mph (3-second gust) Vasd=95n<br>S (envelope) gable end zone and C<br>(1) 23-5-0 to 29-0-3, Exterior(2R) 2<br>ed; porch left exposed;C-C for men<br>loads in the plane of the truss only.<br>plicable, or consult qualified buildin<br>ge to prevent water ponding.<br>unless otherwise indicated.<br>-0-0 oc.<br>gned for a 10.0 psf bottom chord liv<br>signed for a live load of 30.0psf on<br>n chord and any other members, w<br>tection (by others) of truss to bearin<br>at joint 12.<br>n accordance with the 2018 Interna | esign.<br>nph; TCDL=6.0psf; BCDL<br>-C Exterior(2E) -0-9-5 to<br>9-0-3 to 33-5-0, Interior(1)<br>nbers and forces & MWFI<br>. For studs exposed to wi<br>g designer as per ANSI/T<br>ve load nonconcurrent wit<br>the bottom chord in all ar<br>rith BCDL = 10.0psf.<br>ng plate capable of withst<br>titonal Residential Code s | L=6.0psf; h=15ft; Cat. II; E<br>3-7-8, Interior(1) 3-7-8 to<br>) 33-5-0 to 46-6-5 zone; c<br>RS for reactions shown; L<br>ind (normal to the face), s<br>'PI 1.<br>th any other live loads.<br>eas where a rectangle 3-6<br>canding 274 lb uplift at join<br>sections R502.11.1 and R | xp C; Enclosed; Gable<br>19-0-3, Exterior(2R)<br>antilever right exposed<br>umber DOL=1.60<br>ee Standard Industry<br>6-0 tall by 2-0-0 wide<br>t 2, 422 lb uplift at<br>802.10.2 and | SEAL<br>036322   |

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



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| L  | 9-1-12   | 19-0-3  | 24-9-                       | 12 29-0  | )-3                                      | 38  | 3-7-4   | 45-9-0  |                                     |
|--|--|---|-----------------------------|--|--|---|---|---|-------------------------------------|
|  | 9-1-12   | 9-10-7  | 5-9-                        | 9 4-2-   | -7 '                                     | 9   | -7-1  | 7-1-12  | I                                   |
| Plate Offsets (X,Y   | ) [5:0-5-4,0-3-0], [14:0-4-12  | 2,0-3-0], [15:0-2-12,0-3-0]                                       |                             |  |  |   |   |   |                                     |
| LOADING(psf)TCLL20.0TCDL10.0BCLL0.0BCDL10.0  | SPACING-<br>Plate Grip DOL<br>Lumber DOL<br>* Rep Stress Incr<br>Code IRC2018/TF                 | 2-0-0 <b>CSI.</b><br>1.15 TC<br>1.15 BC<br>YES WB<br>Pl2014 Matri | 0.51<br>0.51<br>0.72<br>x-S | <b>DEFL.</b><br>Vert(LL)<br>Vert(CT)<br>Horz(CT)<br>Wind(LL) | in<br>-0.12 1<br>-0.21 1<br>0.05<br>0.04 | (loc) l/defl<br>5-17 >999<br>5-17 >999<br>12 n/a<br>2-17 >999                         | L/d<br>360<br>240<br>n/a<br>240   | PLATES<br>MT20<br>Weight: 361 lb  | <b>GRIP</b><br>244/190<br>FT = 20%  |
| LUMBER-<br>TOP CHORD 2x<br>BOT CHORD 2x<br>14<br>WEBS 2x<br>9-   | x6 SP No.1<br>x6 SP No.1 *Except*<br>4-15: 2x4 SP No.2<br>x4 SP No.2 *Except*<br>11: 2x6 SP No.1 |   |                             | BRACING-<br>TOP CHORE<br>BOT CHORE<br>WEBS                   | D 8<br>6<br>D F<br>6<br>1                | Structural woo<br>except end ve<br>Rigid ceiling d<br>6-0-0 oc braci<br>1 Row at midp | od sheathing dir<br>rticals, and 2-0<br>irectly applied o<br>ng: 12-14.<br>ot 3 | rectly applied or 4-4-13<br>-0 oc purlins (6-0-0 may<br>or 10-0-0 oc bracing, E<br>i-15, 6-14, 8-12, 5-14 | oc purlins,<br>k.): 5-6.<br>Except: |
| REACTIONS. (size) 2=0-3-8, 12=0-3-8<br>Max Horz 2=257(LC 11)<br>Max Uplift 2=-18(LC 12)<br>Max Grav 2=1812(LC 19), 12=2460(LC 2) |  |   |                             |  |  |   |   |   |                                     |
| FORCES. (Ib) - Max. Comp./Max. Ten All forces 250 (Ib) or less except when shown.  |  |   |                             |  |  |   |   |   |                                     |

BOT CHORD 2-17=-84/2482, 15-17=-84/2482, 14-15=-17/1485, 12-14=-308/175

WEBS 3-17=0/620, 3-15=-1151/162, 5-15=0/903, 8-14=-67/1475, 8-12=-1959/256, 9-12=-362/180, 5-14=-733/85

#### NOTES-

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

- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-5 to 3-7-8, Interior(1) 3-7-8 to 19-0-3, Exterior(2R) 19-0-3 to 25-2-14, Interior(1) 25-2-14 to 29-0-3, Exterior(2R) 29-0-3 to 35-2-14, Interior(1) 35-2-14 to 46-6-5 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
- 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.

\* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide 5) will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 2.
- 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.



🔺 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 design parameters and READ NOTES ON TIPS ON TIPS ON TIPS AND INCLODED MITER REFERENCE PAGE mit-14/3 feV, 3/92/20 BEFORE USE. Design valid for use only with MiTeR with MiteR 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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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Max Grav 2=1775(LC 12), 9=1680(LC 2)

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

TOP CHORD 2-3=-2729/107, 3-5=-1681/171, 5-6=-882/174, 6-7=-1078/150

BOT CHORD 2-14=-203/2378, 12-14=-203/2378, 11-12=-102/1379

WEBS 3-14=0/620, 3-12=-1153/162, 5-12=0/904, 5-11=-783/76, 7-11=-74/1216, 7-9=-1502/170

## NOTES-

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

2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-5 to 3-7-8, Interior(1) 3-7-8 to 19-0-3, Exterior(2R) 19-0-3 to 25-2-14, Interior(1) 25-2-14 to 29-0-3, Exterior(2R) 29-0-3 to 35-2-14, Interior(1) 35-2-14 to 36-3-4 zone; 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) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

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

7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 2.

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.



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- BOT CHORD 2-16=-84/537, 15-16=-84/539, 13-14=-1402/137, 8-13=-382/125
- WEBS 3-16=0/380, 3-15=-734/124, 5-15=-527/111, 9-13=-782/84, 7-13=-796/141

#### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-9-5 to 3-7-8, Interior(1) 3-7-8 to 19-0-3, Exterior(2R) 19-0-3 to 25-2-14, Interior(1) 25-2-14 to 29-0-3, Exterior(2E) 29-0-3 to 31-10-8 zone; 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) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 15.
- 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.



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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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A MITEK Affiliat 818 Soundside Road

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November 4,2020



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## ENGINEERING BY REENCO A MITEK Affiliate 818 Soundside Road

Edenton, NC 27932



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.









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11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 2, 30, 11, 22, 23, 24, 25, 27, 28, 29, 31, 32, 33, 34, 35, 21 except (jt=lb) 36=108.

12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 20, 11, 22, 23, 24, 25, 27, 28, 29, 21. 13) 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.

14) 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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Edenton, NC 27932

November 4,2020



TRENCO AMITEK Affiliate 818 Soundside Road

Edenton, NC 27932

a truss system and to use only with the outputs the outputs that begins based only door parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly incorporate this design into the overall building designer must verify the applicability of design parameters and properly damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANS/TPIT Quality Criteria**, **DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

| Job                    | Truss             | Truss Type | Qty      | Ply       | Lot 3122 Old Stage Road                                   |         |
|------------------------|-------------------|------------|----------|-----------|---|---------|
| 11120-5148             | BICE              | GARLE      | 1        | 1         | E15   | 5059070 |
| J1120-3146             | DIGE              | GABLE      | '        | '         | Job Reference (optional)                                  |         |
| Comtech, Inc, Fayettev | ille, NC - 28314, |            | . 8      | 330 s Oct | 7 2020 MiTek Industries, Inc. Wed Nov 4 15:29:07 2020 Pag | ige 2   |
| ID:jCm                 |                   |            | IBXdM3tF | yeyc0bSvk | CQhzuApV-rQE7jN8JeKVaYl0UYkDRITntgzSIFRCqvcCuLuyM         | WIQ     |

## NOTES-

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

14) Attic room checked for L/360 deflection.







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/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

A MiTek Affil 818 Soundside Road Edenton, NC 27932



a truss system. Before use, the building designer must verify the applicability of design parameters and roperty 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 **ANS/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

818 Soundside Road Edenton, NC 27932

| Job           | Truss                     | Truss Type   | Qty | Ply        | Lot 3122 Old Stage Road                             |           |
|---------------|---------------------------|--|-----|------------|---|-----------|
| 11100 5149    | DOCED                     |  | 4   | _          |   | E15059072 |
| J1120-5146    | BZGRD                     | PIGGTBACK ATTIC  | 1   | 3          | Job Reference (optional)                            |           |
| Comtech, Inc, | Fayetteville, NC - 28314, |  | 8   | .330 s Oct | 7 2020 MiTek Industries, Inc. Wed Nov 4 15:29:09 20 | 20 Page 2 |
|               | -                         | ID:jCmlBXdM3tFyeyc0bSvKQhzuApV-opMt839ZAxlHn29tg9FvNut?um0wjI07Mwh?QnyMŴlO |     |            |   |           |

## NOTES-

14) Attic room checked for L/360 deflection.

## LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 13-14=-55, 11-13=-110, 10-11=-55, 1-2=-165, 2-3=-220, 3-4=-165, 6-7=-165, 7-8=-220, 8-9=-165, 4-6=-165, 3-7=-55 Drag: 2-13=-27, 8-11=-27

Concentrated Loads (lb)

Vert: 2=-420(F) 8=-420(F) 15=-634(F) 5=-177(F) 16=-1395(F) 17=-1395(F) 18=-177(F) 19=-177(F) 20=-634(F) 21=-634(F)











BRACING-

TOP CHORD

BOT CHORD

| LU | MB | ER | - |
|----|----|----|---|
|----|----|----|---|

BCDL

TOP CHORD2x6 SP No.1BOT CHORD2x6 SP No.1OTHERS2x4 SP No.2

(lb) -

10.0

REACTIONS. All bearings 21-3-0.

Max Horz 2=170(LC 11) Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14 Max Grav All reactions 250 lb or less at joint(s) 2, 19, 20, 21, 22, 23, 18, 16, 15, 14, 12

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

Code IRC2018/TPI2014

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-9-5 to 3-7-8, Exterior(2N) 3-7-8 to 10-7-8, Corner(3R) 10-7-8 to 15-0-5, Exterior(2N) 15-0-5 to 22-0-5 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

Matrix-S

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 20, 21, 22, 23, 18, 16, 15, 14.
- 10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.
- 11) 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.



Weight: 158 lb

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

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

FT = 20%





(size) 2=8-3-11, 4=8-3-11, 6=8-3-11 Max Horz 2=56(LC 11) Max Uplift 2=-23(LC 12), 4=-29(LC 13) Max Grav 2=210(LC 1), 4=210(LC 1), 6=311(LC 1)

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

### NOTES-

REACTIONS.

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

2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-3-8 to 4-8-4, Interior(1) 4-8-4 to 5-0-0, Exterior(2R) 5-0-0 to 9-1-13, Interior(1) 9-1-13 to 9-8-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.







REACTIONS. All bearings 10-0-0.

(lb) - Max Horz 1=-70(LC 8)

Max Uplift All uplift 100 lb or less at joint(s) 1, 7, 2, 6, 10, 8 Max Grav All reactions 250 lb or less at joint(s) 1, 7, 2, 6, 9, 10, 8

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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-8 to 4-8-4, Interior(1) 4-8-4 to 5-0-0, Exterior(2R) 5-0-0 to 9-1-13, Interior(1) 9-1-13 to 9-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7, 2, 6, 10, 8.
- 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.
- 10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.







REACTIONS. All bearings 5-7-15.

(Ib) - Max Horz 1=54(LC 9) Max Uplift All uplift 100 lb or less at joint(s) 5, 4 except 1=-122(LC 19), 2=-103(LC 12) Max Grav All reactions 250 lb or less at joint(s) 1, 5, 4, 6 except 2=257(LC 19)

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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 1, 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 4 except (jt=lb) 1=122, 2=103.
- 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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.







#### LUMBER-

TOP CHORD2x4 SP No.1BOT CHORD2x4 SP No.1OTHERS2x4 SP No.2

BRACING-TOP CHORD

BOT CHORD

Structural wood sheathing directly applied or 5-7-15 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 2=4-6-5, 4=4-6-5, 6=4-6-5 Max Horz 2=-54(LC 10)

Max Uplift 2=-14(LC 13), 4=-17(LC 13)

Max Grav 2=134(LC 1), 4=134(LC 1), 6=140(LC 3)

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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.







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.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60
- plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
   5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
- will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.













## November 4,2020

ENGINEERING BY ERENCOD A MITER Attiliate 818 Soundside Road Edenton, NC 27932









(size) 1=12-0-7, 3=12-0-7, 4=12-0-7 Max Horz 1=-116(LC 10) Max Uplift 1=-19(LC 13), 3=-19(LC 13) Max Grav 1=257(LC 1), 3=257(LC 1), 4=393(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=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-4-4 to 4-9-0, Interior(1) 4-9-0 to 6-0-4, Exterior(2R) 6-0-4 to 10-5-0, Interior(1) 10-5-0 to 11-8-3 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.







REACTIONS.

(size) 1=9-8-7, 3=9-8-7, 4=9-8-7 Max Horz 1=-92(LC 8) Max Uplift 1=-15(LC 13), 3=-15(LC 13) Max Grav 1=204(LC 1), 3=204(LC 1), 4=312(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.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60
- plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.







REACTIONS.

(size) 1=7-4-7, 3=7-4-7, 4=7-4-7 Max Horz 1=68(LC 9) Max Uplift 1=-18(LC 13), 3=-18(LC 13) Max Grav 1=162(LC 1), 3=162(LC 1), 4=209(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.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60
- plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.







REACTIONS.

(size) 1=5-0-7, 3=5-0-7, 4=5-0-7 Max Horz 1=44(LC 9) Max Uplift 1=-12(LC 13), 3=-12(LC 13) Max Grav 1=106(LC 1), 3=106(LC 1), 4=136(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.

 Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60

plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 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.





