

E21103962 - E21103964  
E21103978  
E21104028 - E21104031  
E21104051 - E21104053  
E21104139 - E21104140  
E21104287 - E21104297  
E21104245 - E21104258  
E21104367, E21104369  
E21104371 - E21104374  
E21104390 - E21104396

BEARING SCAB  
REQUIRED, SEE  
SHOP DRAWINGS

12" FIN. OH.  
RSD HEEL-0"DROP  
(2"x6" FASCIA)-FM  
ASPHALT SHINGLES  
2"x6"BRG./BRK.

PARTYWALL:  
2-2"x4" STUD WALL  
w/1-2"x4" STUD WALL  
(G.T. = 3 1/2" BEARING  
w/ MIN. 4" STAGGER)

PIGGYBACK TRS  
PURLINS BY OTHERS

PL: 111206(TYP.), 114170E



Job Track: **45147**  
Layout ID: **336327**  
Plan Log: **113123**

Builder / Location:  
**GOLD PARK HOMES / VAUGHAN**  
Project: **PINE VALLEY**  
Date: **9/28/2021** Designer: **JBURROWS/C**

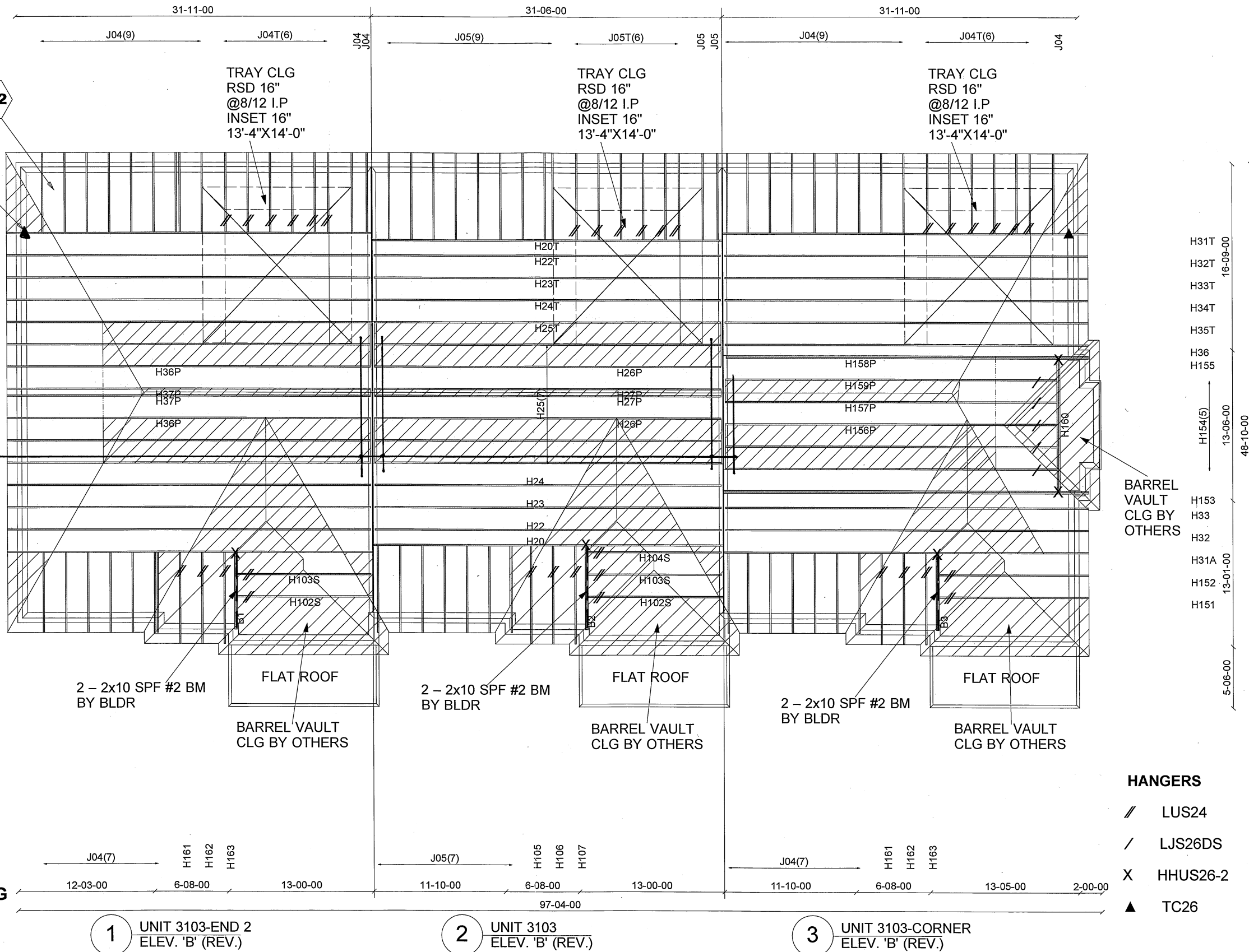
Model / Elevation:  
**BLOCK 7 / UNIT 1-3**

THESE DRAWINGS CONSTITUTE THE PROPERTY OF ALPA ROOF TRUSSES INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY ALPA ROOF TRUSSES INC AND WILL BE RETRACTED BY ALPA ROOF TRUSSES INC IF UTILIZED FOR ANY OTHER PURPOSE.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 O.B.C. LATEST EDITION. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE 2X4 SPF #2 @ 24" O.C WITH A VERT. POST TO THE TRUSS UNDERNEATH AT EACH CROSS POINT. VERT. POSTS LONGER THAN 6' TO HAVE LATERAL BRACING SO THAT THE DISTANCE BETWEEN END POINTS & BETWEEN ROWS OF BRACING DOES NOT EXCEED 6'

Mitek V. 2.0

CONVEN  
FRAMING  
OTHERS



AL A-BARRIE

# EWP DESIGN INC.

(905) 832-2250

FAX (905) 832-0286

## RESPONSIBILITIES AND SPECIFICATIONS

### **RESPONSIBILITIES**

1. EWP DESIGN INC. is responsible for the design of trusses as individual components.
2. It is the responsibility of others to ascertain that the design loads utilized on each drawing meet or exceed the actual dead load imposed by the structure, the live load imposed by the intended use and the snow load imposed by local building code or authorities with jurisdictions.
3. All dimensions are to be verified by the owner, contractor, architect or other authorities with jurisdictions before truss fabrication.
4. EWP DESIGN INC. bears no responsibility for the erection of trusses. Persons erecting trusses are cautioned to seek professional advice regarding the temporary and permanent bracing for the system. Bracing shown on EWP DESIGN INC. drawing is specified for the truss as a component only and forms an integral part of the truss design.
5. It is the truss manufacturer's responsibility to ensure that trusses are manufactured in conformance with specifications of EWP DESIGN INC. as outlined below.

### **SPECIFICATIONS**

1. Trusses designed by EWP DESIGN INC. conform to the relevant section of the Ontario Building Code of Canada (Part 9 or Part 4) or to the Canadian code for farm buildings, whichever applies to the building type, as indicated on the EWP DESIGN INC. drawings, and conform to the design procedures established by the Truss Plate Institute of Canada. Unit stresses used for truss designs are as per the edition of CSA-O86 shown on EWP DESIGN INC. drawings.
2. Lumber is to be the size, species and grade as specified on EWP DESIGN INC. drawings.
3. Moisture content of lumber shall not exceed 19% in service unless specified otherwise.
4. Metal connector plates shall be applied to both faces of truss at each joint and shall be positioned as specified.
5. Top chords of trusses are assumed to be continuously braced laterally by roof sheathing or by purlins at intervals not exceeding 12.5 times the thickness of top chord member.
6. Bottom chords shall be laterally braced at intervals not exceeding 3M (10') o.c., where rigid ceiling is not applied directly to the underside of chords.

THESE DRAWINGS CONSTITUTE THE PROPERTY OF EWP DESIGN INC., SHALL NOT BE REPRODUCED, PUBLISHED, OR REDISTRIBUTED IN ANY MANNER OR UTILIZED FOR ANY PURPOSE OTHER THAN THE MANUFACTURE OF TRUSSES BY THE ALPA LUMBER GROUP, AND WILL BE RETRACTED BY EWP DESIGN INC. IF UTILIZED FOR ANY OTHER PURPOSE.

# LUS – Double Shear Joist Hangers



All LUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections.

**Material:** 18 gauge

**Finish:** G90 galvanized

**Design:**

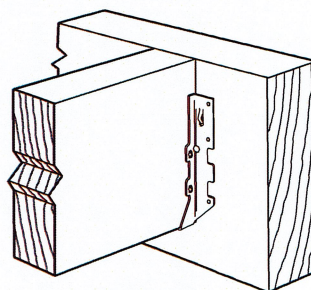
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

**Installation:**

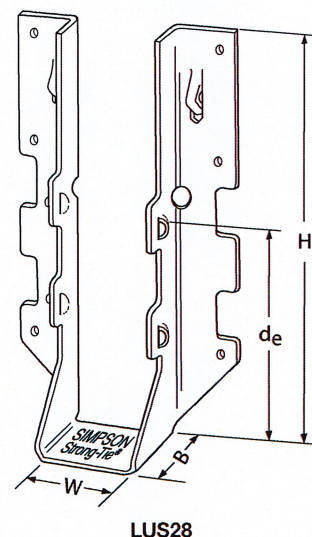
- Use all specified fasteners.
- Nails: 16d = 0.162" dia. x 3½" long common wire, 10d = 0.148" x 3" long common wire.
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

**Options:**

- These hangers cannot be modified



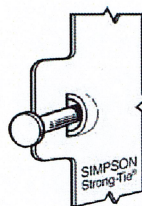
Typical LUS Installation



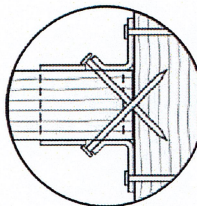
LUS28

| Model No. | Ga. | Dimensions (in.) |         |    |                             | Fasteners |         | Factored Resistance (lb.)        |                                  |                                  |                                  |
|-----------|-----|------------------|---------|----|-----------------------------|-----------|---------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|           |     | W                | H       | B  | d <sub>e</sub> <sup>1</sup> | Face      | Joist   | D.Fir-L                          |                                  | S-P-F                            |                                  |
|           |     |                  |         |    |                             |           |         | Uplift<br>(K <sub>p</sub> =1.15) | Normal<br>(K <sub>p</sub> =1.00) | Uplift<br>(K <sub>p</sub> =1.15) | Normal<br>(K <sub>p</sub> =1.00) |
| LUS24     | 18  | 1½               | 3½      | 1¾ | 1 15/16                     | (4) 10d   | (2) 10d | 710                              | 1630                             | 645                              | 1155                             |
| LUS24-2   | 18  | 3½               | 3½      | 2  | 1 13/16                     | (4) 16d   | (2) 16d | 835                              | 2020                             | 590                              | 1435                             |
| LUS26     | 18  | 1½               | 4¾      | 1¾ | 3½                          | (4) 10d   | (4) 10d | 1420                             | 2170                             | 1290                             | 1630                             |
| LUS26-2   | 18  | 3½               | 4¾      | 2  | 4                           | (4) 16d   | (4) 16d | 1720                             | 2595                             | 1545                             | 1920                             |
| LUS26-3   | 18  | 4½               | 4¾      | 2  | 3¼                          | (4) 16d   | (4) 16d | 1720                             | 2595                             | 1545                             | 2340                             |
| LUS28     | 18  | 1½               | 6½      | 1¾ | 3¾                          | (6) 10d   | (6) 10d | 1420                             | 2520                             | 1290                             | 1790                             |
| LUS28-2   | 18  | 3½               | 7       | 2  | 4                           | (6) 16d   | (4) 16d | 1720                             | 3325                             | 1545                             | 2575                             |
| LUS28-3   | 18  | 4½               | 6¼      | 2  | 3¼                          | (6) 16d   | (4) 16d | 1720                             | 3325                             | 1545                             | 2375                             |
| LUS210    | 18  | 1½               | 7 15/16 | 1¾ | 3¾                          | (8) 10d   | (4) 10d | 1420                             | 2785                             | 1290                             | 2210                             |
| LUS210-2  | 18  | 3½               | 9       | 2  | 6                           | (8) 16d   | (6) 16d | 2580                             | 4500                             | 2320                             | 3195                             |
| LUS210-3  | 18  | 4½               | 8¾      | 2  | 5¼                          | (8) 16d   | (6) 16d | 2580                             | 3345                             | 2320                             | 2375                             |

1. d<sub>e</sub> is the distance from the seat of the hanger to the highest joist nail.



Dome Double Shear Nailing prevents tabs breaking off (available on some models).  
U.S. Patent 5,603,580



Double Shear Nailing Top View.



LIMIT STATES DESIGN

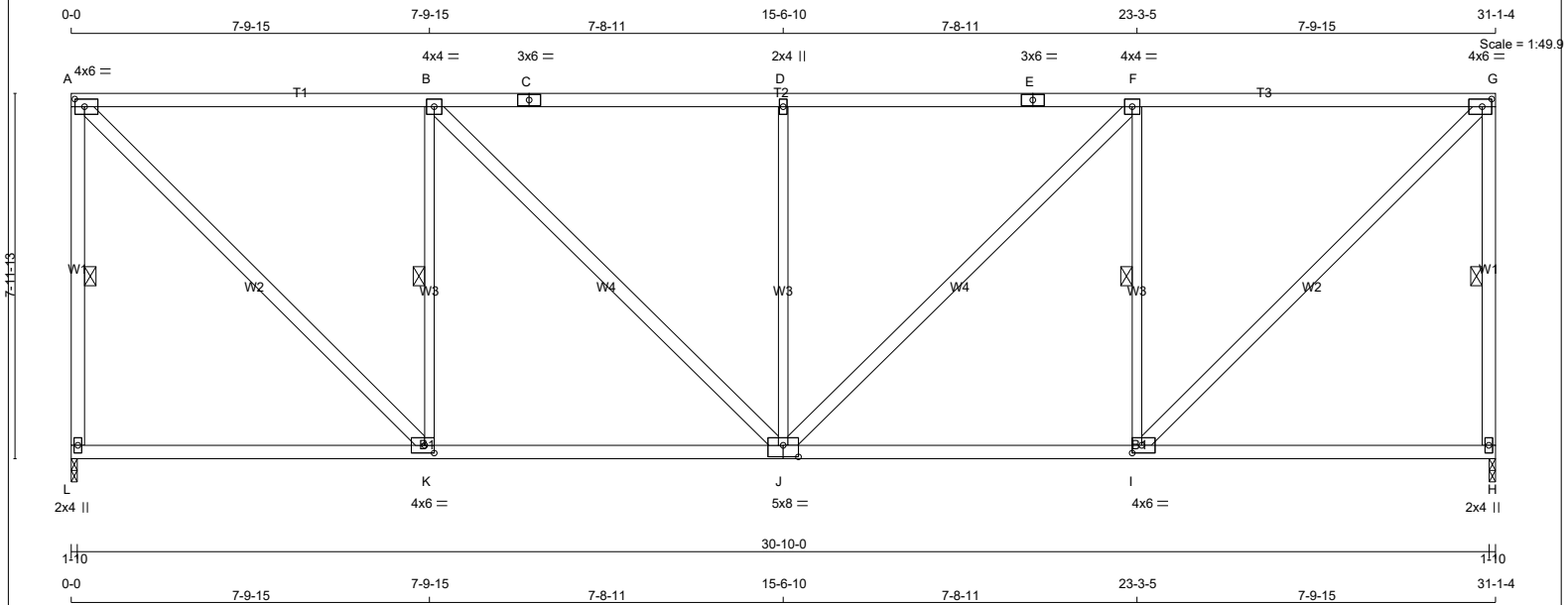
This technical bulletin is effective until June 30, 2022, and reflects information available as of April 1, 2020. This information is updated periodically and should not be relied upon after June 30, 2022. Contact Simpson Strong-Tie for current information and limited warranty or see [strongtie.com](http://strongtie.com).

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T-SPECLUS20 3/20 exp. 6/22

(800) 999-5099  
[strongtie.com](http://strongtie.com)

JSI GRIP= 0.88 (G) (INPUT = 0.90 )  
JSI METAL= 0.36 (G) (INPUT = 1.00 )



TOTAL WEIGHT = 154 lb

**LUMBER**

| N. L. G. A. RULES  |      |     |        |       |
|--------------------|------|-----|--------|-------|
| CHORDS             | SIZE |     | LUMBER | DESCR |
| L - A              | 2x4  | DRY | No.2   | SPF   |
| A - C              | 2x4  | DRY | No.2   | SPF   |
| C - E              | 2x4  | DRY | No.2   | SPF   |
| E - G              | 2x4  | DRY | No.2   | SPF   |
| H - G              | 2x4  | DRY | No.2   | SPF   |
| L - J              | 2x4  | DRY | No.2   | SPF   |
| J - H              | 2x4  | DRY | No.2   | SPF   |
| ALL WEBS<br>EXCEPT | 2x4  | DRY | No.2   | SPF   |
| K - B              | 2x3  | DRY | No.2   | SPF   |
| J - D              | 2x3  | DRY | No.2   | SPF   |
| I - F              | 2x3  | DRY | No.2   | SPF   |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE     | PLATES | W   | LEN | Y    | X    |
|----|----------|--------|-----|-----|------|------|
| A  | TMWV-t   | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| B  | TMWV-t   | MT20   | 4.0 | 4.0 |      |      |
| C  | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| D  | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| E  | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| F  | TMWV-t   | MT20   | 4.0 | 4.0 |      |      |
| G  | TMV-t    | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| H  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| I  | BMWV-t   | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| J  | BSWVVV-I | MT20   | 5.0 | 8.0 | 3.00 | 4.00 |
| K  | BMWV-t   | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| L  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

## BEARINGS

|    | FACTORED       |      | MAXIMUM FACTORED |      |        | INPUT | REQRD |
|----|----------------|------|------------------|------|--------|-------|-------|
|    | GROSS REACTION |      | GROSS REACTION   |      |        | BRG   | BRG   |
| JT | VERT           | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |
| L  | 1500           | 0    | 1500             | 0    | 0      | 1-10  | 1-10  |
| H  | 1500           | 0    | 1500             | 0    | 0      | 1-10  | 1-10  |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| L         | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |
| H         | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, H

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.99 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF A-L, G-H, B-K, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

## LOADING

**TOTAL LOAD CASES: (4)**

| CHORDS        |           |            |          |          | WEBS          |       |            |          |  |
|---------------|-----------|------------|----------|----------|---------------|-------|------------|----------|--|
| MAX. FACTORED |           | FACTORED   |          |          | MAX. FACTORED |       |            |          |  |
| MEMB.         | FORCE     | VERT. LOAD | LC1      | MAX      | MAX.          | MEMB. | MAX. FORCE | MAX      |  |
|               | (LBS)     | (PLF)      | CSI (LC) | UNBRAC   |               |       | (LBS)      | CSI (LC) |  |
| FR-TO         |           | FROM TO    |          | LENGTH   | FR-TO         |       |            |          |  |
| L-A           | -1445 / 0 | 0.0        | 0.0      | 0.41 (1) | 5.44          | A-K   | 0 / 1718   | 0.28 (1) |  |
| A-B           | -1225 / 0 | -78.0      | -78.0    | 0.84 (1) | 4.46          | K-B   | -1026 / 0  | 0.41 (1) |  |
| B-C           | -1558 / 0 | -78.0      | -78.0    | 0.90 (1) | 3.99          | B-J   | 0 / 470    | 0.08 (1) |  |
| C-D           | -1558 / 0 | -78.0      | -78.0    | 0.90 (1) | 3.99          | J-D   | -556 / 0   | 0.67 (1) |  |
| D-E           | -1558 / 0 | -78.0      | -78.0    | 0.90 (1) | 3.99          | J-F   | 0 / 470    | 0.08 (1) |  |
| E-F           | -1558 / 0 | -78.0      | -78.0    | 0.90 (1) | 3.99          | I-F   | -1026 / 0  | 0.41 (1) |  |
| F-G           | -1225 / 0 | -78.0      | -78.0    | 0.84 (1) | 4.46          | I-G   | 0 / 1718   | 0.28 (1) |  |
| H-G           | -1445 / 0 | 0.0        | 0.0      | 0.41 (1) | 5.44          |       |            |          |  |
|               |           |            |          |          |               |       |            |          |  |
| L-K           | 0 / 0     | -18.5      | -18.5    | 0.32 (4) | 10.00         |       |            |          |  |
| K-J           | 0 / 1225  | -18.5      | -18.5    | 0.44 (4) | 10.00         |       |            |          |  |
| J-I           | 0 / 1225  | -18.5      | -18.5    | 0.44 (4) | 10.00         |       |            |          |  |
| I-H           | 0 / 0     | -18.5      | -18.5    | 0.32 (4) | 10.00         |       |            |          |  |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



## DESIGN CRITERIA

SPECIFIED LOADS:

|     |     |    |   |      |     |
|-----|-----|----|---|------|-----|
| TOP | CH. | LL | = | 21.0 | PSF |
|     |     | DL | = | 6.0  | PSF |
| BOT | CH. | LL | = | 0.0  | PSF |
|     |     | DL | = | 7.4  | PSF |

TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.20")

CSI: TC=0.90/1.00 (B-D:1), BC=0.44/1.00 (J-K:4), WB=0.67/1.00 (D-J:1), SSI=0.29/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

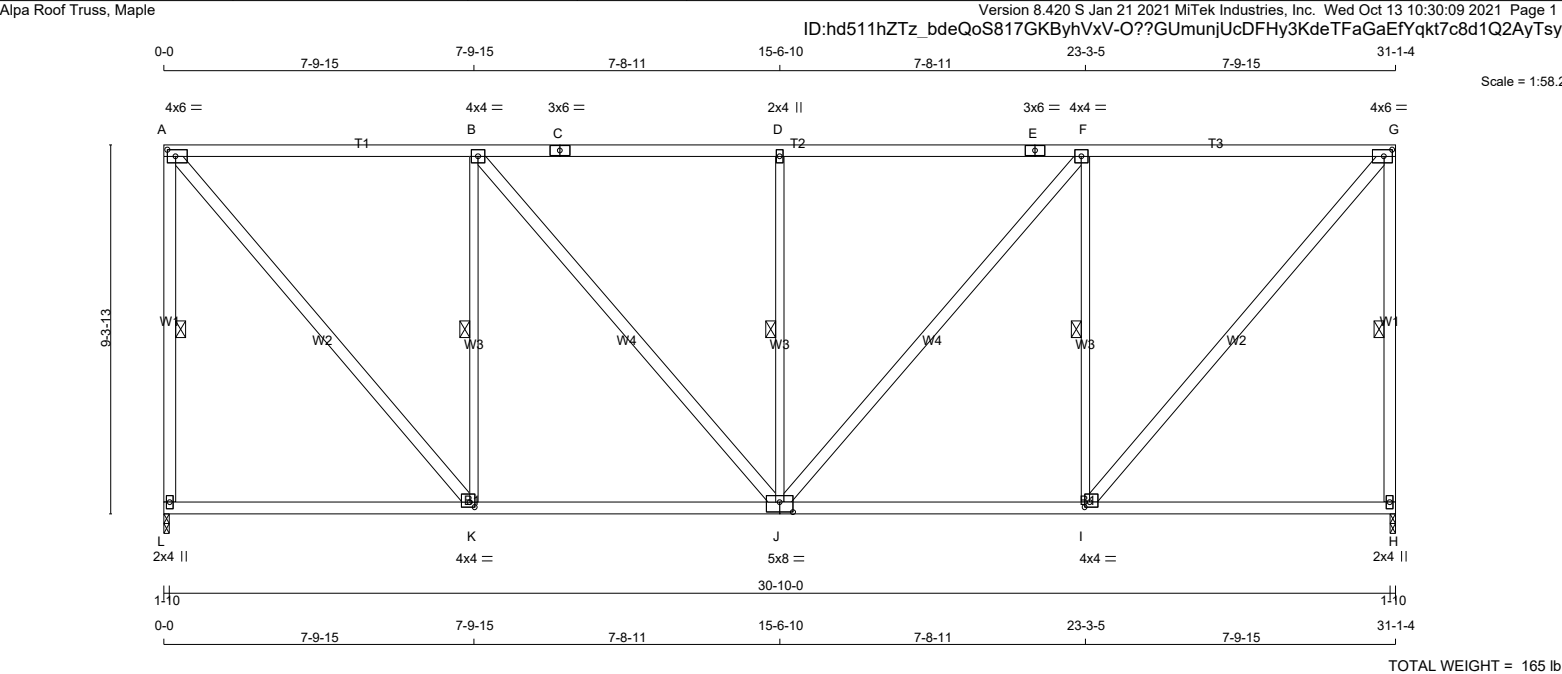
| NAIL VALUES |           |     |       |     |           |
|-------------|-----------|-----|-------|-----|-----------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION   |
|             | (PSI)     |     | (PLI) |     | (PLI)     |
|             | MAX       | MIN | MAX   | MIN | MAX MIN   |
| MT20        | 650       | 371 | 1747  | 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (I) (INPUT = 0.90 )  
JSI METAL= 0.34 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336321   | H24        |          | 1   | TRUSS DESC. JT 45147 | E21103964 |



|                       |      |        |        |                                                                                                      |                                         |          |                  |       |           |        |                               |         |                                                             |          |     |
|-----------------------|------|--------|--------|------------------------------------------------------------------------------------------------------|-----------------------------------------|----------|------------------|-------|-----------|--------|-------------------------------|---------|-------------------------------------------------------------|----------|-----|
| <b>LUMBER</b>         |      |        |        | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> |                                         |          |                  |       |           |        | <b>DESIGN CRITERIA</b>        |         |                                                             |          |     |
| N. L. G. A. RULES     |      |        |        | <b>BEARINGS</b>                                                                                      |                                         |          |                  |       |           |        | SPECIFIED LOADS:              |         |                                                             |          |     |
| CHORDS                | SIZE | LUMBER | DESCR. | SPF                                                                                                  | GROSS REACTION                          |          | MAXIMUM FACTORED |       | INPUT     | REQRD  |                               | TOP CH. | LL = 21.0                                                   | PSF      |     |
| L - A                 | 2x4  | DRY    | No.2   | SPF                                                                                                  | JT                                      | VERT     | HORZ             | DOWN  | HORZ      | UPLIFT | IN-SX                         | IN-SX   | DL = 6.0                                                    | PSF      |     |
| A - C                 | 2x4  | DRY    | No.2   | SPF                                                                                                  | L                                       | 1500     | 0                | 1500  | 0         | 0      | 1-10                          | 1-10    | BOT CH.                                                     | LL = 0.0 | PSF |
| C - E                 | 2x4  | DRY    | No.2   | SPF                                                                                                  | H                                       | 1500     | 0                | 1500  | 0         | 0      | 1-10                          | 1-10    | DL = 7.4                                                    | PSF      |     |
| E - G                 | 2x4  | DRY    | No.2   | SPF                                                                                                  | TOTAL LOAD = 34.4 PSF                   |          |                  |       |           |        |                               |         |                                                             |          |     |
| H - G                 | 2x4  | DRY    | No.2   | SPF                                                                                                  |                                         |          |                  |       |           |        |                               |         |                                                             |          |     |
| L - J                 | 2x4  | DRY    | No.2   | SPF                                                                                                  |                                         |          |                  |       |           |        |                               |         |                                                             |          |     |
| J - H                 | 2x4  | DRY    | No.2   | SPF                                                                                                  |                                         |          |                  |       |           |        |                               |         |                                                             |          |     |
| ALL WEBS 2x4 DRY No.2 |      |        |        | <b>UNFACTORED REACTIONS</b>                                                                          |                                         |          |                  |       |           |        | <b>SPACING = 24.0 IN. C/C</b> |         |                                                             |          |     |
| EXCEPT                |      |        |        | SPF                                                                                                  | 1ST LCASE MAX./MIN. COMPONENT REACTIONS |          |                  |       |           |        |                               |         |                                                             |          |     |
| K - B                 | 2x3  | DRY    | No.2   | SPF                                                                                                  | JT                                      | COMBINED | SNOW             | LIVE  | PERM.LIVE | WIND   | DEAD                          | SOIL    | LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM |          |     |
| J - D                 | 2x3  | DRY    | No.2   | SPF                                                                                                  | L                                       | 1070     | 653 / 0          | 0 / 0 | 0 / 0     | 0 / 0  | 417 / 0                       | 0 / 0   | THIS TRUSS IS DESIGNED FOR RESIDENTIAL                      |          |     |
| I - F                 | 2x3  | DRY    | No.2   | SPF                                                                                                  | H                                       | 1070     | 653 / 0          | 0 / 0 | 0 / 0     | 0 / 0  | 417 / 0                       | 0 / 0   |                                                             |          |     |

DRY: SEASONED LUMBER.

|                                    |         |        |     |     |      |                |                       |  |  |  |  |
|------------------------------------|---------|--------|-----|-----|------|----------------|-----------------------|--|--|--|--|
| <b>PLATES (table is in inches)</b> |         |        |     |     |      | <b>LOADING</b> |                       |  |  |  |  |
| JT                                 | TYPE    | PLATES | W   | LEN | Y    | X              | TOTAL LOAD CASES: (4) |  |  |  |  |
| A                                  | TMVW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.50           | CHORDS                |  |  |  |  |
| B                                  | TMWW-t  | MT20   | 4.0 | 4.0 |      |                | MAX. FACTORED         |  |  |  |  |
| C                                  | TS-t    | MT20   | 3.0 | 6.0 |      |                | MEMB. FORCE (LBS)     |  |  |  |  |
| D                                  | TMW+w   | MT20   | 2.0 | 4.0 |      |                | FACTORED              |  |  |  |  |
| E                                  | TS-t    | MT20   | 3.0 | 6.0 |      |                | VERT. LOAD LC1        |  |  |  |  |
| F                                  | TMWW-t  | MT20   | 4.0 | 4.0 |      |                | MAX. UNBRAC           |  |  |  |  |
| G                                  | TMVW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.50           | LENGTH FR-TO          |  |  |  |  |
| H                                  | BMV1+p  | MT20   | 2.0 | 4.0 |      |                | MEMB. FORCE (LBS)     |  |  |  |  |
| I                                  | BMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.50           | MAX. FACTORED         |  |  |  |  |
| J                                  | BSWWW-I | MT20   | 5.0 | 8.0 | 3.00 | 4.00           | MEMB. FORCE (LBS)     |  |  |  |  |
| K                                  | BMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.50           | MAX. FACTORED         |  |  |  |  |
| L                                  | BMV1+p  | MT20   | 2.0 | 4.0 |      |                | MEMB. FORCE (LBS)     |  |  |  |  |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

Y. WIDYA  
100225448  
10/13/2021  
PROVINCE OF ONTARIO

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL)= L/999 (0.07")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL)= L/999 (0.18")

CSI: TC=0.86/1.00 (B-D:1) , BC=0.42/1.00 (J-K:4) , WB=0.59/1.00 (F-I:1) , SSI=0.29/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

|       |           |       |                    |
|-------|-----------|-------|--------------------|
| PLATE | GRIP(DRY) | SHEAR | SECTION            |
|       | (PSI)     | (PLI) | (PLI)              |
| MT20  | 650       | 371   | 1747 788 1987 1873 |

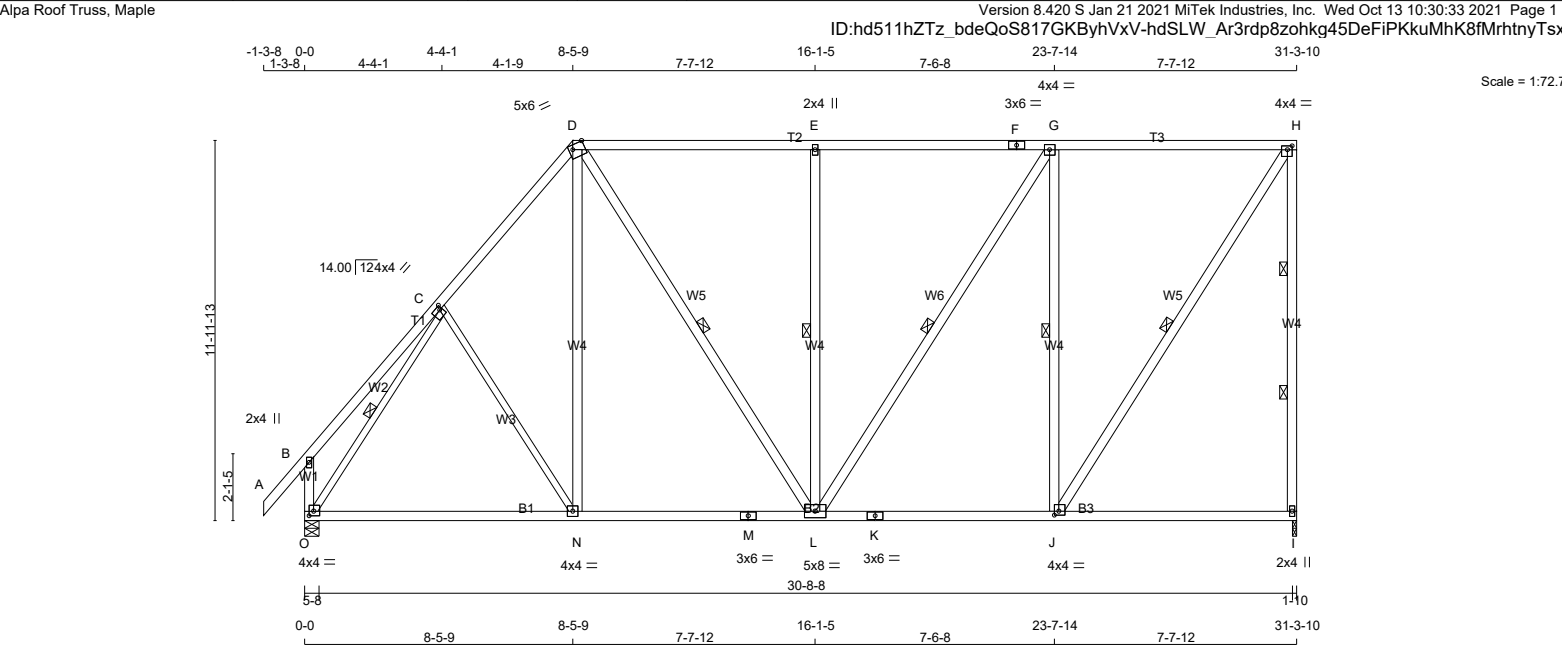
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (G) (INPUT = 0.90 )

JSI METAL= 0.36 (K) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336321   | H36        |          | 1   | TRUSS DESC. JT 45147 | E21103978 |



|                       |      |        |        |
|-----------------------|------|--------|--------|
| <b>LUMBER</b>         |      |        |        |
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - D                 | 2x4  | DRY    | No.2   |
| D - F                 | 2x4  | DRY    | No.2   |
| F - H                 | 2x4  | DRY    | No.2   |
| I - H                 | 2x4  | DRY    | No.2   |
| O - B                 | 2x4  | DRY    | No.2   |
| O - M                 | 2x4  | DRY    | No.2   |
| M - K                 | 2x4  | DRY    | No.2   |
| K - I                 | 2x4  | DRY    | No.2   |
| ALL WEBS              | 2x4  | DRY    | No.2   |
| EXCEPT                |      |        |        |
| C - N                 | 2x3  | DRY    | No.2   |
| O - C                 | 2x3  | DRY    | No.2   |
| DRY: SEASONED LUMBER. |      |        |        |

|                                                                   |         |        |     |     |           |
|-------------------------------------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b>                                |         |        |     |     |           |
| JT                                                                | TYPE    | PLATES | W   | LEN | Y X       |
| B                                                                 | TMV+p   | MT20   | 2.0 | 4.0 |           |
| C                                                                 | TMWW-t  | MT20   | 4.0 | 4.0 | 1.50 1.00 |
| D                                                                 | TTWW-m  | MT20   | 5.0 | 6.0 | Edge 4.50 |
| E                                                                 | TMW+w   | MT20   | 2.0 | 4.0 |           |
| F                                                                 | TS-t    | MT20   | 3.0 | 6.0 |           |
| G                                                                 | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| H                                                                 | TMVW-t  | MT20   | 4.0 | 4.0 | 1.50 1.75 |
| I                                                                 | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| J                                                                 | BMWW-t  | MT20   | 4.0 | 4.0 | 1.50 1.75 |
| K                                                                 | BS-t    | MT20   | 3.0 | 6.0 |           |
| L                                                                 | BMWWW-t | MT20   | 5.0 | 8.0 |           |
| M                                                                 | BS-t    | MT20   | 3.0 | 6.0 |           |
| N                                                                 | BMWW-t  | MT20   | 4.0 | 4.0 |           |
| O                                                                 | BMVW1-t | MT20   | 4.0 | 4.0 | 1.75 1.75 |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |         |        |     |     |           |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT  |       | REQRD |       |
|----|-------------------------|------|---------------------------------|------|--------|-------|-------|-------|
|    | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT | IN-SX | BRG   | IN-SX |
| I  | 1510                    | 0    | 1510                            | 0    | 0      | 1-10  | 1-10  |       |
| O  | 1619                    | 0    | 1619                            | 0    | 0      | 5-8   | 1-12  |       |

| UNFACTORED REACTIONS |          |                               |       |           |       |         |       |
|----------------------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| 1ST LCASE            |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
| JT                   | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| I                    | 1076     | 657 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 419 / 0 | 0 / 0 |
| O                    | 1152     | 716 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 436 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.99 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2 LATERAL BRACE(S) AT 1/3 LENGTH OF H-I.  
1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-L, E-L, G-L, G-J, H-J, C-O.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

| CHORDS |                           |                           |                  | WEBS               |       |                           |              |
|--------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM TO                   |                  |                    | FR-TO |                           |              |
| A-B    | 0 / 42                    | -78.0 -78.0               | 0.11 (1)         | 10.00              | C-N   | -45 / 26                  | 0.06 (1)     |
| B-C    | 0 / 29                    | -78.0 -78.0               | 0.22 (1)         | 10.00              | N-D   | 0 / 211                   | 0.04 (4)     |
| C-D    | -1279 / 0                 | -78.0 -78.0               | 0.28 (1)         | 5.40               | D-L   | 0 / 438                   | 0.07 (1)     |
| D-E    | -1053 / 0                 | -78.0 -78.0               | 0.71 (1)         | 5.00               | L-E   | -644 / 0                  | 0.51 (1)     |
| E-F    | -1053 / 0                 | -78.0 -78.0               | 0.72 (1)         | 4.99               | L-G   | 0 / 478                   | 0.08 (1)     |
| F-G    | -1053 / 0                 | -78.0 -78.0               | 0.72 (1)         | 4.99               | J-G   | -1052 / 0                 | 0.83 (1)     |
| G-H    | -794 / 0                  | -78.0 -78.0               | 0.68 (1)         | 5.59               | J-H   | 0 / 1451                  | 0.23 (1)     |
| I-H    | -1454 / 0                 | 0.0 0.0                   | 0.48 (1)         | 5.43               | O-C   | -1563 / 0                 | 0.64 (1)     |
| O-B    | -234 / 0                  | 0.0 0.0                   | 0.03 (1)         | 7.81               |       |                           |              |
| O-N    | 0 / 835                   | -18.5 -18.5               | 0.39 (4)         | 10.00              |       |                           |              |
| N-M    | 0 / 812                   | -18.5 -18.5               | 0.40 (4)         | 10.00              |       |                           |              |
| M-L    | 0 / 812                   | -18.5 -18.5               | 0.40 (4)         | 10.00              |       |                           |              |
| L-K    | 0 / 794                   | -18.5 -18.5               | 0.35 (4)         | 10.00              |       |                           |              |
| K-J    | 0 / 794                   | -18.5 -18.5               | 0.35 (4)         | 10.00              |       |                           |              |
| J-I    | 0 / 0                     | -18.5 -18.5               | 0.27 (4)         | 10.00              |       |                           |              |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.17")

CSI: TC=0.72/1.00 (E-G:1) , BC=0.40/1.00 (L-N:4) , WB=0.83/1.00 (G-J:1) , SSI=0.28/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

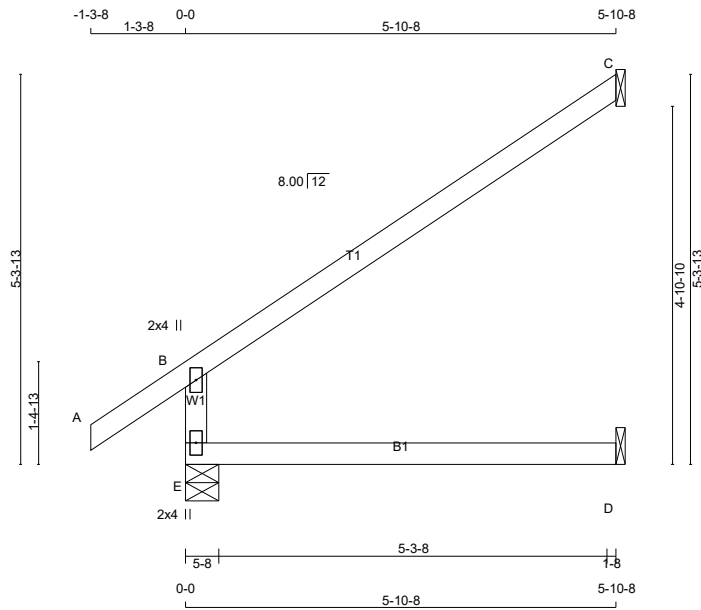
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90 )  
JSI METAL= 0.53 (C) (INPUT = 1.00 )

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:03 2021 Page 1  
ID:hd511hZTz bdeQoS817GKByhVxV-3xuNPiGItVz2xog ?ZhCsc 8icW3SaVOMNeS1ayTswQ

Scale = 1:31.4



TOTAL WEIGHT =  $83 \times 18 = 1480 \text{ lb}$

| N. L. G. A. RULES |      |          |        |
|-------------------|------|----------|--------|
| CHORDS            | SIZE | LUMBER   | DESCR. |
| E - B             | 2x4  | DRY No.2 | SPF    |
| A - C             | 2x4  | DRY No.2 | SPF    |
| E - D             | 2x4  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

| JT | TYPE   | PLATES | W   | LEN | Y | X |
|----|--------|--------|-----|-----|---|---|
| B  | TMV+p  | MT20   | 2.0 | 4.0 |   |   |
| E  | BMV1+p | MT20   | 2.0 | 4.0 |   |   |

| JT | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|-------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX       |
| E  | 456                        | 0    | 456                                | 0    | 0      | 5-8          | 1-8         |
| C  | 172                        | 0    | 172                                | 0    | 0      | 1-8          | 1-8         |
| D  | 46                         | 0    | 51                                 | 0    | 0      | 1-8          | 1-8         |

| JT | COMBINED | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|-----------|-------|---------|-------|
| E  | 323      | 212 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |
| C  | 119      | 93 / 0  | 0 / 0 | 0 / 0     | 0 / 0 | 26 / 0  | 0 / 0 |
| D  | 36       | 0 / 0   | 0 / 0 | 0 / 0     | 0 / 0 | 36 / 0  | 0 / 0 |

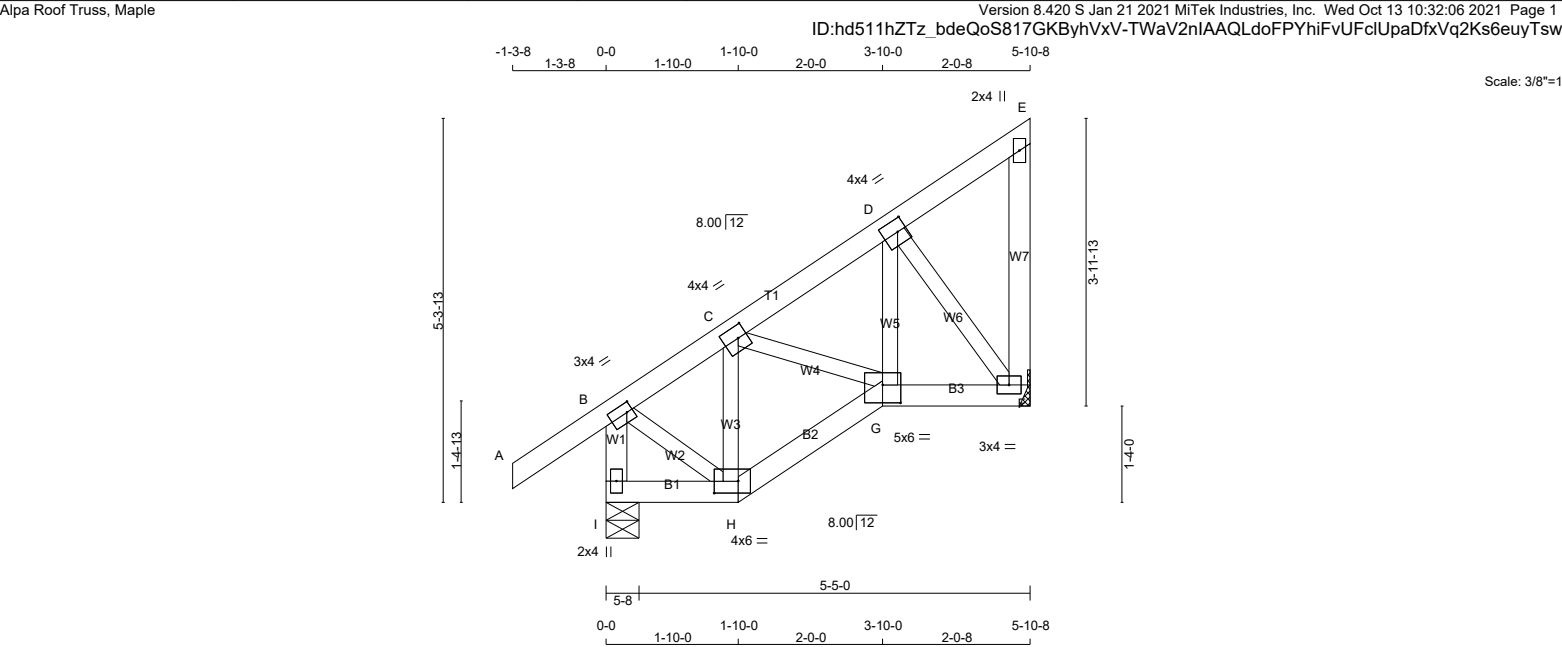
| CHORDS |                        |                   |                    | WEBS            |                          |       |                        |                 |
|--------|------------------------|-------------------|--------------------|-----------------|--------------------------|-------|------------------------|-----------------|
| MEMB.  | MAX. FACTORED<br>(LBS) | FACTORED<br>(PLF) | VERT. LOAD<br>(LC) | MAX<br>CSI (LC) | MAX.<br>UNBRAC<br>LENGTH | MEMB. | MAX. FACTORED<br>(LBS) | MAX<br>CSI (LC) |
| FR-TO  |                        | FROM              | TO                 |                 |                          | FR-TO |                        |                 |
| E-B    | -393 / 0               | 0.0               | 0.0                | 0.12 (4)        | 7.81                     |       |                        |                 |
| A-B    | 0 / 30                 | -78.0             | -78.0              | 0.10 (1)        | 10.00                    |       |                        |                 |
| B-C    | -32 / 0                | -78.0             | -78.0              | 0.06 (1)        | 6.25                     |       |                        |                 |
| E-D    | 0 / 0                  | -18.5             | -18.5              | 0.13 (4)        | 10.00                    |       |                        |                 |

SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

JSI GRIP= 0.24 (B) (INPUT = 0.90 )  
JSI METAL= 0.20 (B) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336321   | J04T       |          | 1   | TRUSS DESC. JT 45147 | E21104029 |



|                       |      |          |        |  |
|-----------------------|------|----------|--------|--|
| <b>LUMBER</b>         |      |          |        |  |
| N. L. G. A. RULES     |      |          |        |  |
| CHORDS                | SIZE | LUMBER   | DESCR. |  |
| I - B                 | 2x4  | DRY No.2 | SPF    |  |
| A - E                 | 2x4  | DRY No.2 | SPF    |  |
| F - E                 | 2x4  | DRY No.2 | SPF    |  |
| I - H                 | 2x4  | DRY No.2 | SPF    |  |
| H - G                 | 2x4  | DRY No.2 | SPF    |  |
| G - F                 | 2x4  | DRY No.2 | SPF    |  |
| ALL WEBS 2x3 DRY No.2 |      |          |        |  |
| DRY: SEASONED LUMBER. |      |          |        |  |

|                                    |         |        |     |               |
|------------------------------------|---------|--------|-----|---------------|
| <b>PLATES (table is in inches)</b> |         |        |     |               |
| JT                                 | TYPE    | PLATES | W   | LEN Y X       |
| B                                  | TMVW-t  | MT20   | 3.0 | 4.0 1.50 1.00 |
| C                                  | TMWW-t  | MT20   | 4.0 | 4.0 2.00 1.50 |
| D                                  | TMWW-t  | MT20   | 4.0 | 4.0 2.00 1.50 |
| E                                  | TMV+p   | MT20   | 2.0 | 4.0           |
| F                                  | BMVW1-t | MT20   | 3.0 | 4.0           |
| G                                  | BBWW-I  | MT20   | 5.0 | 6.0 3.00 3.00 |
| H                                  | BBWW-I  | MT20   | 4.0 | 6.0 2.00 4.00 |
| I                                  | BMV1+p  | MT20   | 2.0 | 4.0           |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|    | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG IN-SX | REQD BRG IN-SX |
|----|-------------------------|------|---------------------------------|------|-----------------|----------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |                 |                |
| JT | 403                     | 0    | 403                             | 0    | 5-8             | 1-8            |
| F  | 271                     | 0    | 271                             | 0    | MECHANICAL      |                |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

**UNFACTORED REACTIONS**

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |        |       |
|-----------|----------|-------------------------------|-------|-----------|-------|--------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
| I         | 285      | 188 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 97 / 0 | 0 / 0 |
| F         | 193      | 117 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 77 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                  | WEBS                 |       |                           |              |
|--------|---------------------------|---------------------------|------------------|----------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM TO                   |                  | FR-TO                |       |                           |              |
| I-B    | -386 / 0                  | 0.0                       | 0.0 0.04 (1)     | 7.81                 | B-H   | 0 / 161                   | 0.04 (1)     |
| A-B    | 0 / 30                    | -78.0                     | -78.0 0.10 (1)   | 10.00                | H-C   | -134 / 0                  | 0.02 (1)     |
| B-C    | -188 / 0                  | -78.0                     | -78.0 0.10 (1)   | 6.25                 | C-G   | 0 / 35                    | 0.01 (1)     |
| C-D    | -192 / 0                  | -78.0                     | -78.0 0.05 (1)   | 6.25                 | G-D   | 0 / 114                   | 0.03 (4)     |
| D-E    | -10 / 0                   | -78.0                     | -78.0 0.05 (1)   | 6.25                 | D-F   | -254 / 0                  | 0.05 (1)     |
| F-E    | -57 / 0                   | 0.0                       | 0.0 0.01 (1)     | 7.81                 |       |                           |              |
| I-H    | 0 / 0                     | -18.5                     | -18.5 0.02 (4)   | 10.00                |       |                           |              |
| H-G    | 0 / 160                   | -18.5                     | -18.5 0.04 (1)   | 10.00                |       |                           |              |
| G-F    | 0 / 160                   | -18.5                     | -18.5 0.04 (1)   | 10.00                |       |                           |              |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |           |     |
|------------|-----------|-----|
| TOP CH.    | LL = 21.0 | PSF |
|            | DL = 6.0  | PSF |
| BOT CH.    | LL = 0.0  | PSF |
|            | DL = 7.4  | PSF |
| TOTAL LOAD | = 34.4    | PSF |

**SPACING = 24.0 IN./C**

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

**THIS DESIGN COMPLIES WITH:**

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

**DESIGN ASSUMPTIONS**

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.10/1.00 (A-B:1) , BC=0.04/1.00 (F-G:1) ,  
WB=0.05/1.00 (D-F:1) , SSI=0.07/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

**NAIL VALUES**

| PLATE GRIP(DRY) | SHEAR (PSI) | SECTION (PLI)      |
|-----------------|-------------|--------------------|
|                 |             |                    |
| MAX MIN         | MAX MIN     | MAX MIN            |
| MT20            | 650 371     | 1747 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.50 (B) (INPUT = 0.90 )  
JSI METAL= 0.10 (B) (INPUT = 1.00 )

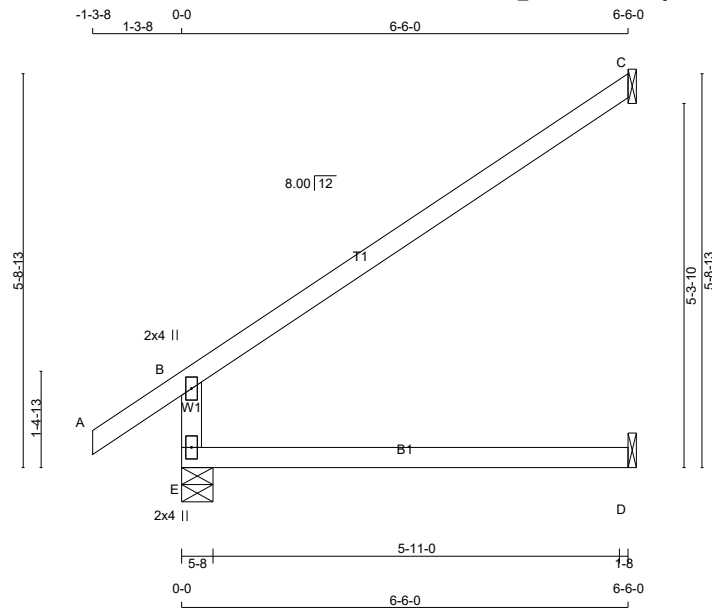
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:07 2021 Page 1  
ID:hd511hZTz bdeQoS817GKByhVxV-xi8tF7JoxkTUPPzIEPm81S9r3DuZOOU H cfBLyTsw

Scale = 1:33.5



TOTAL WEIGHT =  $17 \times 19 = 330 \text{ lb}$

| N. L. G. A. RULES |      |          |        |
|-------------------|------|----------|--------|
| CHORDS            | SIZE | LUMBER   | DESCR. |
| E - B             | 2x4  | DRY No.2 | SPF    |
| A - C             | 2x4  | DRY No.2 | SPF    |
| E - D             | 2x4  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

| JT | TYPE   | PLATES | W   | LEN | Y | X |
|----|--------|--------|-----|-----|---|---|
| B  | TMV+p  | MT20   | 2.0 | 4.0 |   |   |
| E  | BMV1+p | MT20   | 2.0 | 4.0 |   |   |

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|-------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX       |
| E  | 494                        | 0    | 494                                | 0    | 0      | 5-8          | 1-8         |
| C  | 190                        | 0    | 190                                | 0    | 0      | 1-8          | 1-8         |
| D  | 50                         | 0    | 56                                 | 0    | 0      | 1-8          | 1-8         |

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D

| JT | 1ST LCASE<br>COMBINED | MAX. MIN. COMPONENT REACTIONS |       |            |       |         |       |
|----|-----------------------|-------------------------------|-------|------------|-------|---------|-------|
|    |                       | SNOW                          | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| E  | 349                   | 228 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 121 / 0 | 0 / 0 |
| C  | 132                   | 102 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 29 / 0  | 0 / 0 |
| D  | 40                    | 0 / 0                         | 0 / 0 | 0 / 0      | 0 / 0 | 40 / 0  | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

TOTAL LOAD CASES: (4)

| CHORDS |                        |                   |                        | WEBS     |                        |                   |                        |
|--------|------------------------|-------------------|------------------------|----------|------------------------|-------------------|------------------------|
| MEMB.  | MAX. FACTORED<br>(LBS) | FACTORED<br>(PLF) | MAX. FACTORED<br>(LBS) | MEMB.    | MAX. FACTORED<br>(LBS) | FACTORED<br>(LBS) | MAX. FACTORED<br>(LBS) |
| FR-TO  |                        | VERT. LOAD        | MAX. UNBRAC<br>LENGTH  | FR-TO    |                        |                   |                        |
| E-B    | -424 / 0               | 0.0               | 0.0                    | 0.13 (4) | 7.81                   |                   |                        |
| A-B    | 0 / 30                 | -78.0             | -78.0                  | 0.10 (1) | 10.00                  |                   |                        |
| B-C    | -35 / 0                | -78.0             | -78.0                  | 0.44 (1) | 6.25                   |                   |                        |
| E-D    | 0 / 0                  | -18.5             | -18.5                  | 0.16 (4) | 10.00                  |                   |                        |

SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.44/1.00 (B-C:1) , BC=0.16/1.00 (D-E:4) ,  
WB=0.00/1.00 (n/a:0) , SSI=0.21/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE RIGHT HEEL ONLY

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |           |     |       |     |           |
|-------------|-----------|-----|-------|-----|-----------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION   |
|             | (PSI)     |     | (PLI) |     | (PLI)     |
|             | MAX       | MIN | MAX   | MIN | MAX MIN   |
| MT20        | 650       | 371 | 1747  | 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.26 (B) (INPUT = 0.90 )  
JSI METAL= 0.22 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2

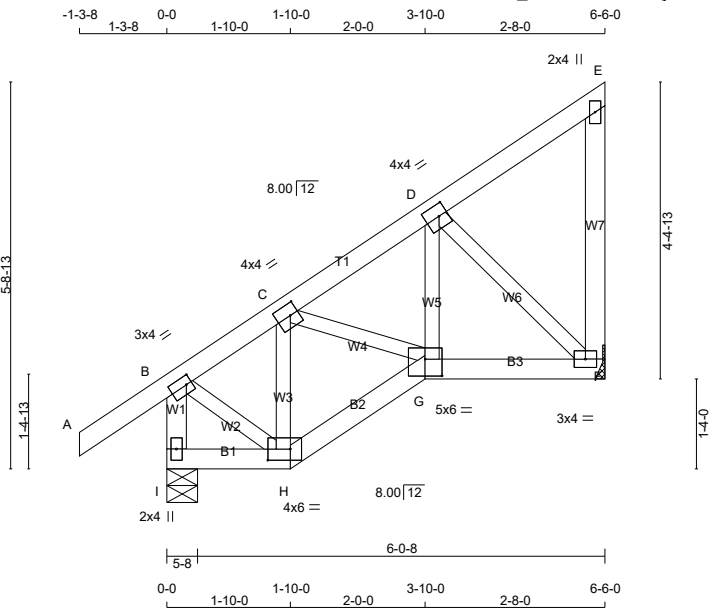


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336321   | J05T       |          | 1   | TRUSS DESC. JT 45147 | E21104031 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 10:32:09 2021 Page 1

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TOTAL WEIGHT = 7 X 33 = 232 lb

[M][F]

| LUMBER                    |      |          |        |  |
|---------------------------|------|----------|--------|--|
| N. L. G. A. RULES         |      |          |        |  |
| CHORDS                    | SIZE | LUMBER   | DESCR. |  |
| I - B                     | 2x4  | DRY No.2 | SPF    |  |
| A - E                     | 2x4  | DRY No.2 | SPF    |  |
| F - E                     | 2x4  | DRY No.2 | SPF    |  |
| I - H                     | 2x4  | DRY No.2 | SPF    |  |
| H - G                     | 2x4  | DRY No.2 | SPF    |  |
| G - F                     | 2x4  | DRY No.2 | SPF    |  |
| ALL WEBS 2x3 DRY No.2 SPF |      |          |        |  |
| DRY: SEASONED LUMBER.     |      |          |        |  |

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| B                           | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 1.00 |
| C                           | TMWW-t  | MT20   | 4.0 | 4.0 | 2.00 1.50 |
| D                           | TMWW-t  | MT20   | 4.0 | 4.0 | 2.00 1.50 |
| E                           | TMV+p   | MT20   | 2.0 | 4.0 |           |
| F                           | BMVW1-t | MT20   | 3.0 | 4.0 |           |
| G                           | BBWW-I  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| H                           | BBWW-I  | MT20   | 4.0 | 6.0 | 2.00 4.00 |
| I                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|    | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG IN-SX | REQRD BRG IN-SX |
|----|-------------------------|------|---------------------------------|------|-----------------|-----------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |                 |                 |
| JT | 432                     | 0    | 432                             | 0    | 5-8             | 1-8             |
| F  | 302                     | 0    | 302                             | 0    | 0               | MECHANICAL      |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

**UNFACTORED REACTIONS**

|    | 1ST LCASE MAX./MIN. COMPONENT REACTIONS |         |       |           |       |         |       |
|----|-----------------------------------------|---------|-------|-----------|-------|---------|-------|
|    | COMBINED                                | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| JT | 305                                     | 200 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 105 / 0 | 0 / 0 |
| F  | 216                                     | 130 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 85 / 0  | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |         |              | WEBS               |       |                           |              |  |
|--------|---------------------------|---------------------------|---------|--------------|--------------------|-------|---------------------------|--------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX | MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |         |              |                    | FR-TO |                           |              |  |
| I-B    | -415 / 0                  | 0.0                       | 0.0     | 0.04 (1)     | 7.81               | B-H   | 0 / 185                   | 0.04 (1)     |  |
| A-B    | 0 / 30                    | -78.0                     | -78.0   | 0.10 (1)     | 10.00              | H-C   | -160 / 0                  | 0.03 (1)     |  |
| B-C    | -215 / 0                  | -78.0                     | -78.0   | 0.08 (1)     | 6.25               | C-G   | 0 / 73                    | 0.02 (1)     |  |
| C-D    | -253 / 0                  | -78.0                     | -78.0   | 0.05 (1)     | 6.25               | G-D   | 0 / 118                   | 0.03 (4)     |  |
| D-E    | -11 / 0                   | -78.0                     | -78.0   | 0.05 (1)     | 6.25               | D-F   | -293 / 0                  | 0.06 (1)     |  |
| F-E    | -80 / 0                   | 0.0                       | 0.0     | 0.02 (1)     | 7.81               |       |                           |              |  |
| I-H    | 0 / 0                     | -18.5                     | -18.5   | 0.02 (4)     | 10.00              |       |                           |              |  |
| H-G    | 0 / 184                   | -18.5                     | -18.5   | 0.04 (1)     | 10.00              |       |                           |              |  |
| G-F    | 0 / 215                   | -18.5                     | -18.5   | 0.06 (4)     | 10.00              |       |                           |              |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC2018, ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.10/1.00 (A-B:1) , BC=0.06/1.00 (F-G:4) , WB=0.06/1.00 (D-F:1) , SSI=0.08/1.00 (D-E:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |           |       |         |         |           |
|-------------|-----------|-------|---------|---------|-----------|
| PLATE       | GRIP(DRY) | SHEAR | SECTION | (PSI)   | (PLI)     |
|             |           |       |         | MAX MIN | MAX MIN   |
| MT20        | 650       | 371   | 1747    | 788     | 1987 1873 |

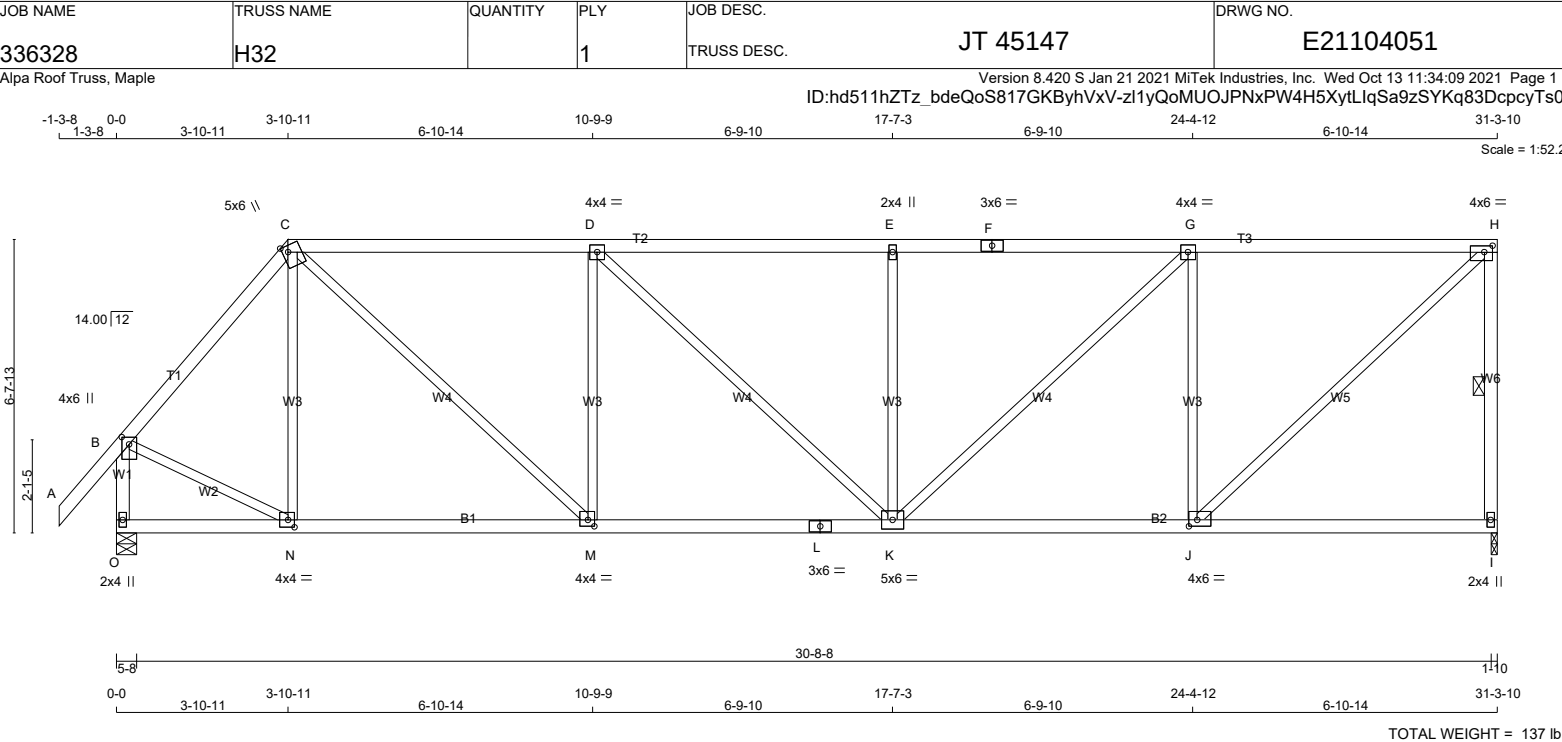
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.57 (B) (INPUT = 0.90 )  
JSI METAL= 0.11 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2





LUMBER

N. L. G. A. RULES

CHORDS

SIZE

DRY

No.2

DESCR.

SPF

A - C

2x4

DRY

No.2

SPF

C - F

2x4

DRY

No.2

SPF

F - H

2x4

DRY

No.2

SPF

I - H

2x4

DRY

No.2

SPF

O - B

2x4

DRY

No.2

SPF

O - L

2x4

DRY

No.2

SPF

L - I

2x4

DRY

No.2

SPF

ALL WEBS EXCEPT

2x3

DRY

No.2

SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT

TYPE

PLATES

W

LEN

Y

X

B

TMVW+p

MT20

4.0

6.0

2.00

2.00

C

TTWW+m

MT20

5.0

6.0

1.75

1.50

D

TMWW-t

MT20

4.0

4.0

E

TMW+w

MT20

2.0

4.0

F

TS-t

MT20

3.0

6.0

G

TMWW-t

MT20

4.0

4.0

H

TMVW-t

MT20

4.0

6.0

1.75

2.25

I

BMV1+p

MT20

2.0

4.0

J

BMWW-t

MT20

4.0

6.0

1.75

2.25

K

BMWWW-t

MT20

5.0

6.0

L

BS-t

MT20

3.0

6.0

M

BMWW-t

MT20

4.0

4.0

1.75

1.75

N

BMWW-t

MT20

4.0

4.0

2.00

1.75

O

BMV1+p

MT20

2.0

4.0

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

BEARINGS

FACTORED GROSS REACTION

MAXIMUM FACTORED GROSS REACTION

INPUT BRG

REQRD BRG

JT

VERT

HORZ

DOWN

HORZ

UPLIFT

IN-SX

IN-SX

I

1510

0

1510

0

0

1-10

1-10

O

1619

0

1619

0

0

5-8

1-12

UNFACTORED REACTIONS

1ST LCASE

MAX./MIN. COMPONENT REACTIONS

JT

COMBINED

SNOW

LIVE

PERM.LIVE

WIND

DEAD

SOIL

I

1076

657 / 0

0 / 0

0 / 0

0 / 0

419 / 0

0 / 0

O

1152

716 / 0

0 / 0

0 / 0

0 / 0

436 / 0

0 / 0

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.07 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF H-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

CHORDS

MEMB.

MAX. FACTORED FORCE (LBS)

FACTORED VERT. LOAD (PLF)

LC1

MAX

CS1 (LC)

MAX. UNBRAC LENGTH

WEBS

MEMB.

MAX. FACTORED FORCE (LBS)

MAX CS1 (LC)

FR-TO

A- B

-1280 / 0

-78.0

-78.0

0.11 (1)

10.00

N- C

-247 / 0

0.18 (1)

B- C

-1750 / 0

-78.0

-78.0

0.25 (1)

5.43

C- M

0 / 1255

0.28 (1)

C- D

-1876 / 0

-78.0

-78.0

0.70 (1)

4.21

M- D

-718 / 0

0.53 (1)

D- E

-1876 / 0

-78.0

-78.0

0.71 (1)

4.08

D- K

0 / 172

0.04 (1)

E- F

-1876 / 0

-78.0

-78.0

0.71 (1)

4.07

K- E

-489 / 0

0.36 (1)

F- G

-1876 / 0

-78.0

-78.0

0.71 (1)

4.07

K- G

0 / 718

0.16 (1)

G- H

-1352 / 0

-78.0

-78.0

0.64 (1)

4.71

J- G

-1101 / 0

0.81 (1)

H- I

-1458 / 0

0.0

0.0

0.30 (1)

5.42

J- H

0 / 1838

0.41 (1)

O- B

-1597 / 0

0.0

0.0

0.19 (1)

6.54

B- N

0 / 904

0.20 (1)

O- N

0 / 0

-18.5

-18.5

0.13 (4)

10.00

N- M

0 / 825

-18.5

-18.5

0.25 (4)

10.00

M- L

0 / 1751

-18.5

-18.5

0.38 (1)

10.00

L- K

0 / 1751

-18.5

-18.5

0.38 (1)

10.00

K- J

0 / 1352

-18.5

-18.5

0.34 (4)

10.00

J- I

0 / 0

-18.5

-18.5

0.21 (4)

10.00

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.

LL

=

21.0

PSF

DL

=

6.0

PSF

BOT CH.

LL

=

0.0

PSF

DL

=

7.4

PSF

TOTAL LOAD

=

34.4

PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019

- PART 9 OF OBC 2012 (2019 AMENDMENT)

- CSA 086-14

- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.19")

CSI: TC=0.71/1.00 (E-G:1) , BC=0.38/1.00 (K-M:1) , WB=0.81/1.00 (G-J:1) , SSI=0.25/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

PLATE GRIP(DRY) SHEAR SECTION

(PSI) (PLI) (PLI)

MAX MIN MAX MIN MAX MIN

MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90 )

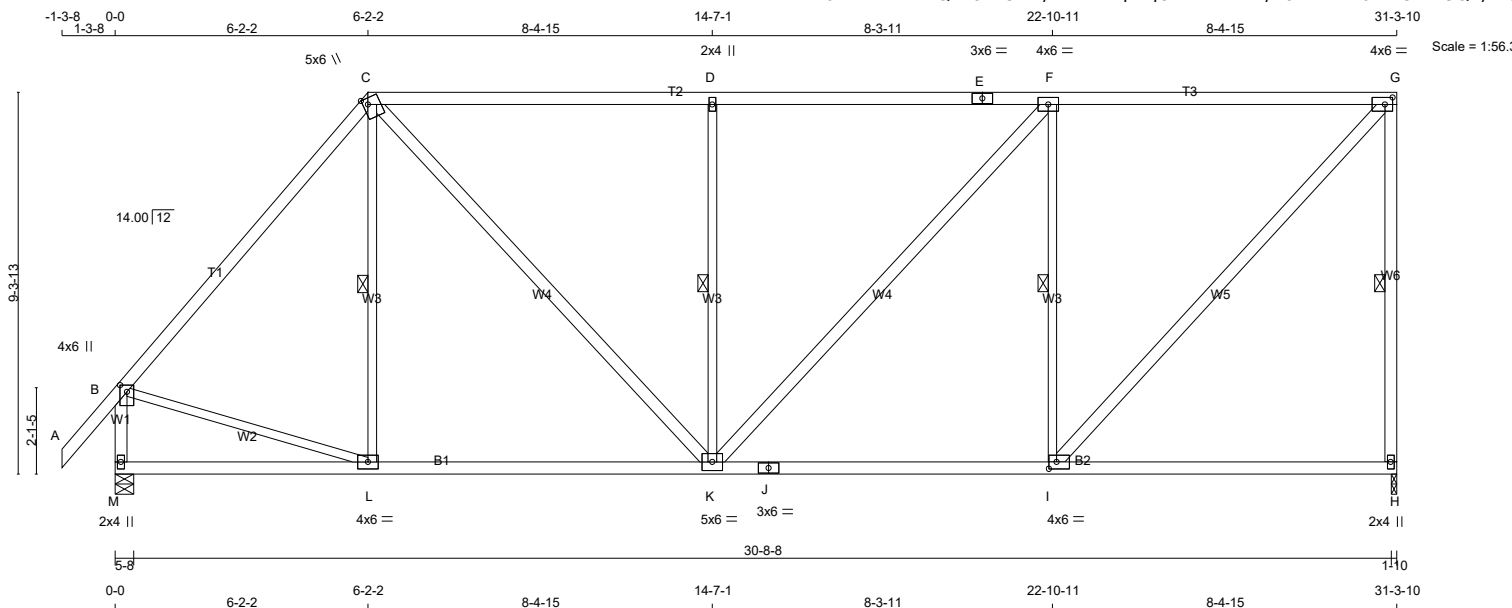
JSI METAL= 0.54 (L) (INPUT = 1.00 )

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 11:34:10 2021 Page 1



DRY: SEASONED LUMBER.

JSI GRIP= 0.90 (B) (INPUT = 0.90 )  
JSI METAL= 0.51 (L) (INPUT = 1.00 )



TOTAL WEIGHT = 157 lb

## LUMBER

| N. L. G. A. RULES  |      |     |        |      |       |
|--------------------|------|-----|--------|------|-------|
| CHORDS             | SIZE |     | LUMBER | 1.8E | DESCR |
| A - C              | 2x4  | DRY | 2100F  |      | SPF   |
| C - E              | 2x4  | DRY | No.2   |      | SPF   |
| E - G              | 2x4  | DRY | No.2   |      | SPF   |
| H - G              | 2x4  | DRY | No.2   |      | SPF   |
| M - B              | 2x4  | DRY | No.2   |      | SPF   |
| M - J              | 2x4  | DRY | No.2   |      | SPF   |
| J - H              | 2x4  | DRY | No.2   |      | SPF   |
| ALL WEBS<br>EXCEPT | 2x3  | DRY | No.2   |      | SPF   |
| C - K              | 2x4  | DRY | No.2   |      | SPF   |
| K - F              | 2x4  | DRY | No.2   |      | SPF   |
| I - G              | 2x4  | DRY | No.2   |      | SPF   |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| J | T        | TYPE | PLATES | W   | LEN  | Y    | X |
|---|----------|------|--------|-----|------|------|---|
| B | TMVW+p   | MT20 | 4.0    | 6.0 | 2.00 | 2.00 |   |
| C | TTWW+m   | MT20 | 5.0    | 6.0 | 1.75 | 1.50 |   |
| D | TMVW+w   | MT20 | 2.0    | 4.0 |      |      |   |
| E | TS-t     | MT20 | 3.0    | 6.0 |      |      |   |
| F | TMVWV-t  | MT20 | 4.0    | 6.0 |      |      |   |
| G | TMVW-t   | MT20 | 4.0    | 6.0 | 2.00 | 2.25 |   |
| H | BMV1+p   | MT20 | 2.0    | 4.0 |      |      |   |
| I | BMVWV-t  | MT20 | 4.0    | 6.0 | 2.00 | 2.25 |   |
| J | BS-t     | MT20 | 3.0    | 6.0 |      |      |   |
| K | BMVWVW-t | MT20 | 5.0    | 6.0 |      |      |   |
| L | BMVWV-t  | MT20 | 4.0    | 6.0 |      |      |   |
| M | BMV1+p   | MT20 | 2.0    | 4.0 |      |      |   |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**  
**BEARINGS**

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|-------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX       |
| H  | 1510                       | 0    | 1510                               | 0    | 0      | 1-10         | 1-10        |
| M  | 1619                       | 0    | 1619                               | 0    | 0      | 5-8          | 1-12        |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H         | 1076     | 657 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 419 / 0 | 0 / 0 |
| M         | 1152     | 716 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 436 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, M

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.03 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF G-H, C-L, D-K, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

## LOADING

**TOTAL LOAD CASES: (4)**

| C H O R D S |                           |                           |       |               | W E B S     |       |                           |                   |  |
|-------------|---------------------------|---------------------------|-------|---------------|-------------|-------|---------------------------|-------------------|--|
| MEMB.       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX. CSI (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED CSI (LC) |  |
| FR-TO       |                           | FROM                      | TO    |               | LENGTH      | FR-TO |                           |                   |  |
| A-B         | 0 / 42                    | -78.0                     | -78.0 | 0.07 (1)      | 10.00       | L-C   | -82 / 76                  | 0.05 (1)          |  |
| B-C         | -1304 / 0                 | -78.0                     | -78.0 | 0.42 (1)      | 6.17        | C-K   | 0 / 772                   | 0.12 (1)          |  |
| C-D         | -1373 / 0                 | -78.0                     | -78.0 | 0.96 (1)      | 4.05        | K-D   | -709 / 0                  | 0.40 (1)          |  |
| D-E         | -1373 / 0                 | -78.0                     | -78.0 | 0.96 (1)      | 4.03        | F-K   | 0 / 398                   | 0.06 (1)          |  |
| E-F         | -1373 / 0                 | -78.0                     | -78.0 | 0.96 (1)      | 4.03        | I-F   | -1009 / 0                 | 0.58 (1)          |  |
| F-G         | -1103 / 0                 | -78.0                     | -78.0 | 0.91 (1)      | 4.46        | I-G   | 0 / 1619                  | 0.26 (1)          |  |
| H-G         | -1448 / 0                 | 0.0                       | 0.0   | 0.59 (1)      | 5.43        | B-L   | 0 / 878                   | 0.20 (1)          |  |
| M-B         | -1577 / 0                 | 0.0                       | 0.0   | 0.19 (1)      | 6.57        |       |                           |                   |  |
|             |                           |                           |       |               |             |       |                           |                   |  |
| M-L         | 0 / 0                     | -18.5                     | -18.5 | 0.24 (4)      | 10.00       |       |                           |                   |  |
| L-K         | 0 / 845                   | -18.5                     | -18.5 | 0.32 (4)      | 10.00       |       |                           |                   |  |
| K-J         | 0 / 1103                  | -18.5                     | -18.5 | 0.42 (4)      | 10.00       |       |                           |                   |  |
| J-I         | 0 / 1103                  | -18.5                     | -18.5 | 0.42 (4)      | 10.00       |       |                           |                   |  |
| I-H         | 0 / 0                     | -18.5                     | -18.5 | 0.32 (4)      | 10.00       |       |                           |                   |  |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



## DESIGN CRITERIA

SPECIFIED LOADS:

|     |     |      |      |     |
|-----|-----|------|------|-----|
| TOP | CH. | LL = | 21.0 | PSF |
|     |     | DL = | 6.0  | PSF |
| BOT | CH. | LL = | 0.0  | PSF |
|     |     | DL = | 7.4  | PSF |

TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.16")

CSI: TC=0.96/1.00 (C-D:1) , BC=0.42/1.00 (I-K:4) ,  
WB=0.58/1.00 (F-I:1) , SSI=0.31/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

## NAIL VALUES

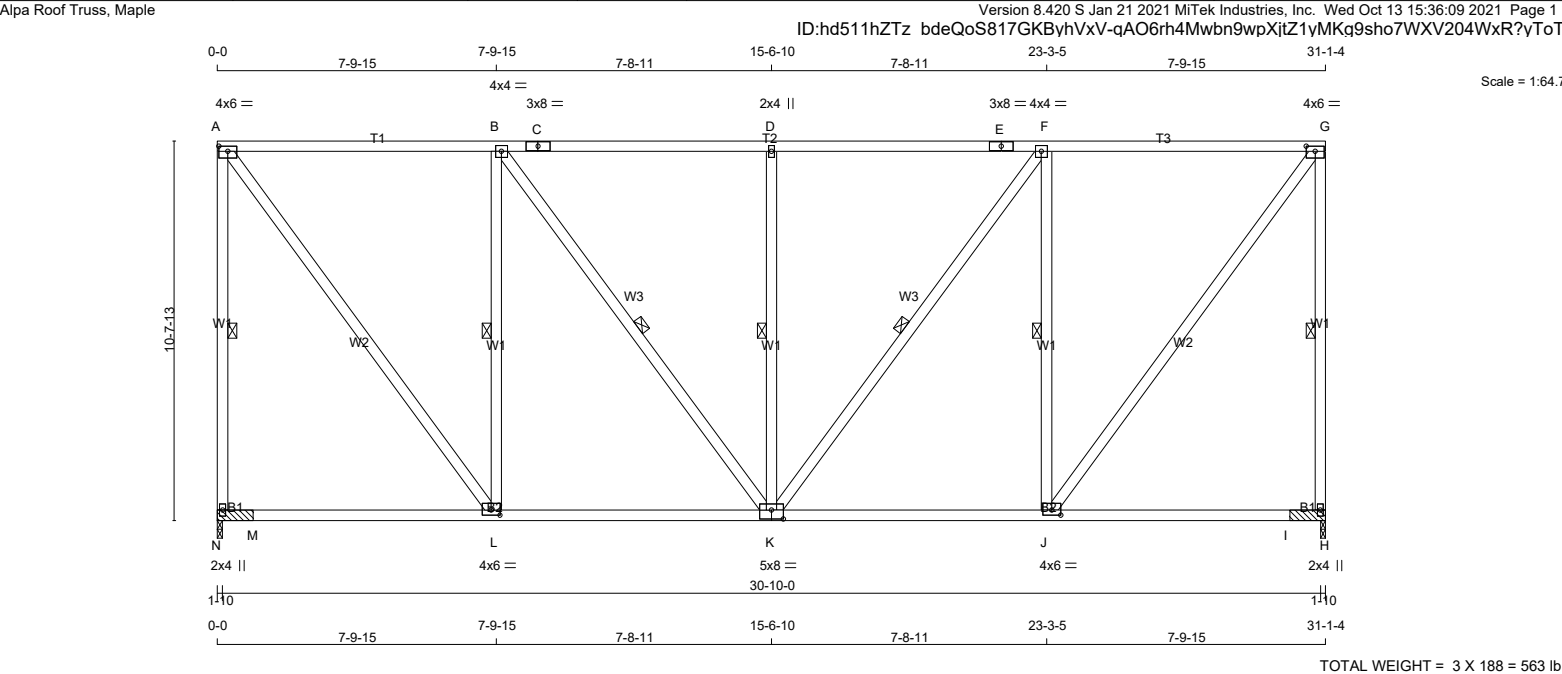
| PLATE | GRIP(DRY)<br>(PSI) |     | SHEAR<br>(PLI) |     | SECTION<br>(PLI) |      |
|-------|--------------------|-----|----------------|-----|------------------|------|
|       | MAX                | MIN | MAX            | MIN | MAX              | MIN  |
| MT20  | 650                | 371 | 1747           | 788 | 1987             | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (G) (INPUT = 0.90 )  
JSI METAL= 0.52 (B) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336336   | H25        |          | 1   | TRUSS DESC. JT 45147 | E21104139 |



TOTAL WEIGHT = 3 X 188 = 563 lb [M]

| N. L. G. A. RULES |  |      |  | BUILDING DESIGNER |  |        |  |                |  |                  |  |       |  | DESIGN CRITERIA |  |                       |  |
|-------------------|--|------|--|-------------------|--|--------|--|----------------|--|------------------|--|-------|--|-----------------|--|-----------------------|--|
| CHORDS            |  | SIZE |  | LUMBER            |  | DESCR. |  | BEARINGS       |  | MAXIMUM FACTORED |  | INPUT |  | REQRD           |  | SPECIFIED LOADS:      |  |
|                   |  |      |  |                   |  |        |  | FACTORED       |  | GROSS REACTION   |  | BRG   |  | BRG             |  | TOP CH. LL = 21.0 PSF |  |
|                   |  |      |  |                   |  |        |  | GROSS REACTION |  | DOWN             |  | HORIZ |  | UPLIFT          |  | BOT CH. LL = 6.0 PSF  |  |
|                   |  |      |  |                   |  |        |  | HORIZ          |  | IN-SX            |  | IN-SX |  |                 |  | DL = 0.0 PSF          |  |
| N - A             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  | N                |  | 1617  |  | 0               |  | 1-10                  |  |
| A - C             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  | H                |  | 1617  |  | 0               |  | 1-10                  |  |
| C - E             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  |                  |  |       |  |                 |  | 1-10 & BLOCK          |  |
| E - G             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  |                  |  |       |  |                 |  | 1-10 & BLOCK          |  |
| H - G             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  |                  |  |       |  |                 |  | DL = 7.4 PSF          |  |
| N - K             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  |                  |  |       |  |                 |  | TOTAL LOAD = 34.4 PSF |  |
| K - H             |  | 2x4  |  | DRY               |  | No.2   |  | SPF            |  |                  |  |       |  |                 |  |                       |  |

|                       |     |     |      |     |
|-----------------------|-----|-----|------|-----|
| ALL WEBS              | 2x4 | DRY | No.2 | SPF |
| DRY: SEASONED LUMBER. |     |     |      |     |

PLATES (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| A  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| B  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| C  | TS-t    | MT20   | 3.0 | 8.0 |      |      |
| D  | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| E  | TS-t    | MT20   | 3.0 | 8.0 |      |      |
| F  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| G  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| H  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| J  | BMWW-t  | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| K  | BSWWW-t | MT20   | 5.0 | 8.0 | 3.00 | 4.00 |
| L  | BMWW-t  | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| N  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



| UNFACTORED REACTIONS |           |           |                     |           |       |         |       |  |  |
|----------------------|-----------|-----------|---------------------|-----------|-------|---------|-------|--|--|
| JT                   | 1ST LCASE | MAX./MIN. | COMPONENT REACTIONS |           |       |         |       |  |  |
| JT                   | COMBINED  | SNOW      | LIVE                | PERM.LIVE | WIND  | DEAD    | SOIL  |  |  |
| N                    | 1163      | 653 / 0   | 0 / 0               | 0 / 0     | 0 / 0 | 510 / 0 | 0 / 0 |  |  |
| H                    | 1163      | 653 / 0   | 0 / 0               | 0 / 0     | 0 / 0 | 510 / 0 | 0 / 0 |  |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) N, H

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. N ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. H ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

BRACING

FOR SECTION A-G, MAX. PURLIN SPACING = 2.00 FT.

FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 0.00 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF A-N, G-H, B-L, B-K, D-K, F-K, F-J.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |         |          | WEBS               |       |                           |              |  |
|--------|---------------------------|---------------------------|---------|----------|--------------------|-------|---------------------------|--------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX | CS1 (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CS1 (LC) |  |
| FR-TO  |                           | FROM                      | TO      |          |                    | FR-TO |                           |              |  |
| N-A    | -1562 / 0                 | 0.0                       | 0.0     | 0.89 (1) | 5.27               | A-L   | 0 / 1626                  | 0.26 (1)     |  |
| A-B    | -981 / 0                  | -85.5                     | -85.5   | 0.88 (1) | 2.00               | L-B   | -1119 / 0                 | 0.64 (1)     |  |
| B-C    | -1248 / 0                 | -85.5                     | -85.5   | 0.92 (1) | 2.00               | B-K   | 0 / 447                   | 0.07 (1)     |  |
| C-D    | -1248 / 0                 | -85.5                     | -85.5   | 0.92 (1) | 2.00               | K-D   | -609 / 0                  | 0.35 (1)     |  |
| D-E    | -1248 / 0                 | -85.5                     | -85.5   | 0.92 (1) | 2.00               | K-F   | 0 / 447                   | 0.07 (1)     |  |
| E-F    | -1248 / 0                 | -85.5                     | -85.5   | 0.92 (1) | 2.00               | J-F   | -1119 / 0                 | 0.64 (1)     |  |
| F-G    | -981 / 0                  | -85.5                     | -85.5   | 0.88 (1) | 2.00               | J-G   | 0 / 1626                  | 0.26 (1)     |  |
| H-G    | -1562 / 0                 | 0.0                       | 0.0     | 0.89 (1) | 5.27               |       |                           |              |  |
| N-M    | 0 / 0                     | -18.5                     | -18.5   | 0.32 (4) | 10.00              |       |                           |              |  |
| M-L    | 0 / 0                     | -18.5                     | -18.5   | 0.32 (4) | 10.00              |       |                           |              |  |
| L-K    | 0 / 981                   | -18.5                     | -18.5   | 0.43 (4) | 10.00              |       |                           |              |  |
| K-J    | 0 / 981                   | -18.5                     | -18.5   | 0.43 (4) | 10.00              |       |                           |              |  |
| J-I    | 0 / 0                     | -18.5                     | -18.5   | 0.32 (4) | 10.00              |       |                           |              |  |
| I-H    | 0 / 0                     | -18.5                     | -18.5   | 0.32 (4) | 10.00              |       |                           |              |  |

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.92/1.00 (B-D:1) , BC=0.43/1.00 (J-K:4) , WB=0.64/1.00 (B-L:1) , SSI=0.32/1.00 (A-B:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

| PLATE | GRIP(DRY) | SHEAR | SECTION |
|-------|-----------|-------|---------|
|       | (PSI)     | (PLI) | (PLI)   |
|       | MAX       | MIN   | MAX     |
| MIN   | MAX       | MIN   | MAX     |

MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (L) (INPUT = 0.90 )

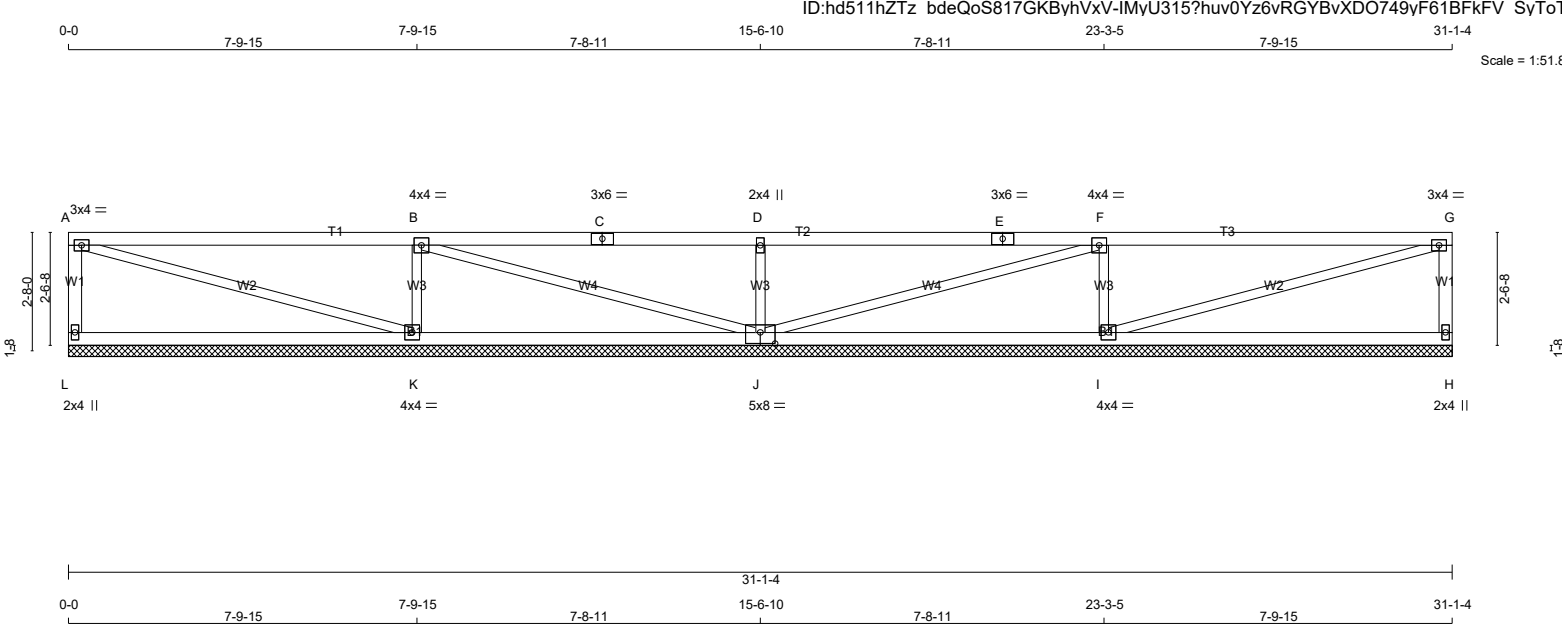
JSI METAL= 0.34 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336336   | H26P       |          | 1   | TRUSS DESC. JT 45147 | E21104140 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Wed Oct 13 15:36:10 2021 Page 1

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| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR.<br>L - A 2x4 DRY No.2 SPF<br>A - C 2x4 DRY No.2 SPF<br>C - E 2x4 DRY No.2 SPF<br>E - G 2x4 DRY No.2 SPF<br>H - G 2x4 DRY No.2 SPF<br>L - J 2x4 DRY No.2 SPF<br>J - H 2x4 DRY No.2 SPF<br><br>ALL WEBS 2x3 DRY No.2 SPF<br>DRY: SEASONED LUMBER. |                         |      |                                 |      | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b> <table><tr><th></th><th colspan="2">FACTORED GROSS REACTION</th><th colspan="2">MAXIMUM FACTORED GROSS REACTION</th><th>INPUT BRG</th><th>REQRD BRG</th></tr><tr><th>JT</th><th>VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th><th>UPLIFT</th><th>IN-SX</th><th>IN-SX</th></tr><tr><td>L</td><td>296</td><td>0</td><td>296</td><td>0</td><td>0</td><td>31-1-4</td><td>(15-6-109)</td></tr><tr><td>H</td><td>296</td><td>0</td><td>296</td><td>0</td><td>0</td><td>31-1-4</td><td>(15-6-109)</td></tr><tr><td>K</td><td>864</td><td>0</td><td>864</td><td>0</td><td>0</td><td>31-1-4</td><td>(15-6-109)</td></tr><tr><td>J</td><td>681</td><td>0</td><td>681</td><td>0</td><td>0</td><td>31-1-4</td><td>(15-6-109)</td></tr><tr><td>I</td><td>864</td><td>0</td><td>864</td><td>0</td><td>0</td><td>31-1-4</td><td>(15-6-109)</td></tr></table><br><u>VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH</u> |           |            |  |  |  |  |  |  |  |  | FACTORED GROSS REACTION |  | MAXIMUM FACTORED GROSS REACTION |  | INPUT BRG | REQRD BRG | JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX | L | 296 | 0 | 296 | 0 | 0 | 31-1-4 | (15-6-109) | H | 296 | 0 | 296 | 0 | 0 | 31-1-4 | (15-6-109) | K | 864 | 0 | 864 | 0 | 0 | 31-1-4 | (15-6-109) | J | 681 | 0 | 681 | 0 | 0 | 31-1-4 | (15-6-109) | I | 864 | 0 | 864 | 0 | 0 | 31-1-4 | (15-6-109) | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 21.0 PSF<br>DL = 6.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.4 PSF<br>TOTAL LOAD = 34.4 PSF<br><br><b>SPACING = 24.0 IN. C/C</b> |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------|---------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|--|--|--|--|--|--|--|--|-------------------------|--|---------------------------------|--|-----------|-----------|----|------|------|------|------|--------|-------|-------|---|-----|---|-----|---|---|--------|------------|---|-----|---|-----|---|---|--------|------------|---|-----|---|-----|---|---|--------|------------|---|-----|---|-----|---|---|--------|------------|---|-----|---|-----|---|---|--------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|                                                                                                                                                                                                                                                                                                                 | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | REQRD BRG |            |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| JT                                                                                                                                                                                                                                                                                                              | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IN-SX     | IN-SX      |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| L                                                                                                                                                                                                                                                                                                               | 296                     | 0    | 296                             | 0    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 31-1-4    | (15-6-109) |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| H                                                                                                                                                                                                                                                                                                               | 296                     | 0    | 296                             | 0    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 31-1-4    | (15-6-109) |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| K                                                                                                                                                                                                                                                                                                               | 864                     | 0    | 864                             | 0    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 31-1-4    | (15-6-109) |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| J                                                                                                                                                                                                                                                                                                               | 681                     | 0    | 681                             | 0    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 31-1-4    | (15-6-109) |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |
| I                                                                                                                                                                                                                                                                                                               | 864                     | 0    | 864                             | 0    | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 31-1-4    | (15-6-109) |  |  |  |  |  |  |  |  |                         |  |                                 |  |           |           |    |      |      |      |      |        |       |       |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |   |     |   |     |   |   |        |            |                                                                                                                                                                                               |  |  |  |  |

| <b>PLATES (table is in inches)</b> |          |        |     |     |      |      |
|------------------------------------|----------|--------|-----|-----|------|------|
| JT                                 | TYPE     | PLATES | W   | LEN | Y    | X    |
| A                                  | TMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| B                                  | TMWW-t   | MT20   | 4.0 | 4.0 |      |      |
| C                                  | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| D                                  | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| E                                  | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| F                                  | TMWW-t   | MT20   | 4.0 | 4.0 |      |      |
| G                                  | TMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| H                                  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| I                                  | BMWW1-t  | MT20   | 4.0 | 4.0 |      |      |
| J                                  | BSWWW1-I | MT20   | 5.0 | 8.0 | 3.00 | 4.00 |
| K                                  | BMWW1-t  | MT20   | 4.0 | 4.0 |      |      |
| L                                  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Structural steel truss diagram showing members and dimensions. Key dimensions include 14.00, 5.8, 30.8-8, and 8.10-12. Scale = 1:54.4.

|          |            |          |     |           |              |
|----------|------------|----------|-----|-----------|--------------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO.     |
| 336322   | H153       |          | 2   | JT 45147  | E21104287(2) |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:00 2021 Page 2

ID:hd511hZTz\_bdeQoS817GKByhVxV-?cq4mdDwL17XOdeHWM V3Y1ian0s\_ynzZADvE0yTY3T

PLATES (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 5.0 | 8.0 | 1.75 | 2.50 |
| C  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.75 |
| D  | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 | 1.50 |
| E  | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| F  | TS-t    | MT20   | 3.0 | 6.0 |      |      |
| G  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| H  | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| I  | BMVK1+p | MT20   | 6.0 | 9.0 | Edge | 3.00 |
| J  | BMWW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| K  | BS-t    | MT20   | 4.0 | 6.0 |      |      |
| L  | BMWWW-t | MT20   | 5.0 | 6.0 |      |      |
| M  | BMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| N  | BMWW+t  | MT20   | 4.0 | 9.0 |      |      |
| O  | BMV1+p  | MT20   | 3.0 | 5.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

NAIL VALUES

| PLATE | GRIP(DRY) | SHEAR    | SECTION   |
|-------|-----------|----------|-----------|
|       | (PSI)     | (PLI)    | (PLI)     |
|       | MAX MIN   | MAX MIN  | MAX MIN   |
| MT20  | 650 371   | 1747 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (H) (INPUT = 0.90 )

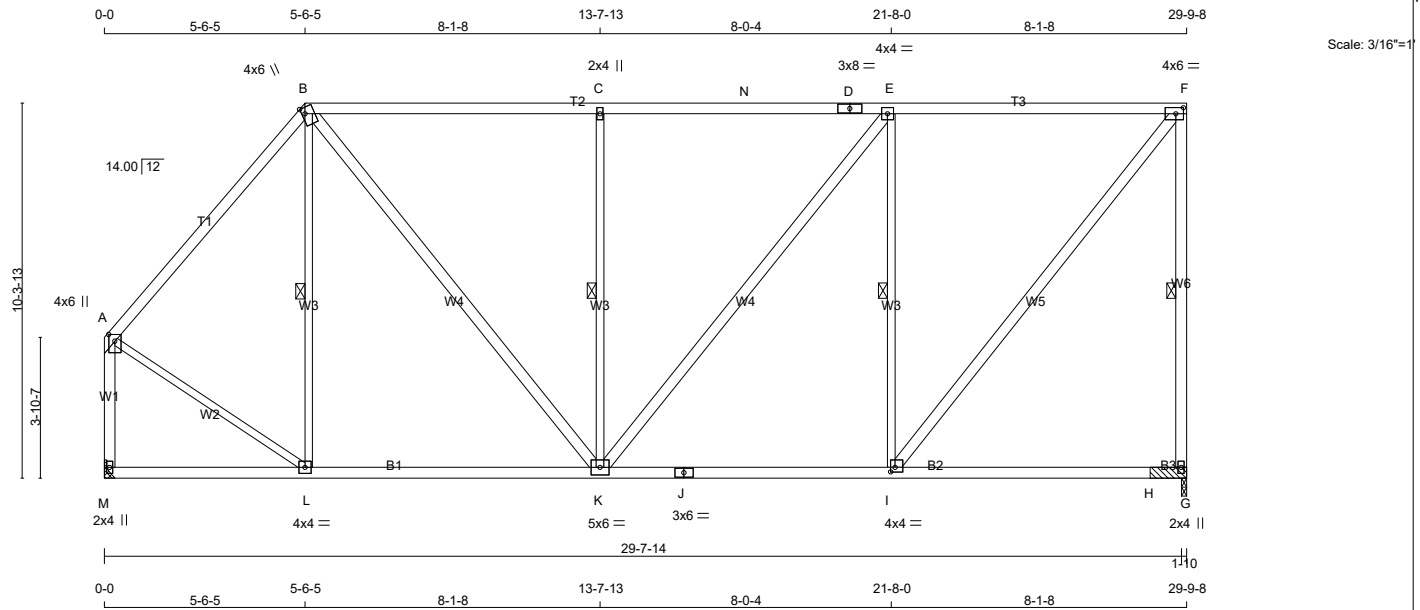
JSI METAL= 0.73 (N) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:14:34 2021 Page 1  
ID:hd511hZTz bdeQoS817GKByhVxV-W3eZjDB bclK4Q3ITIRKaPTwt6d0q 5JnoNLC?yTY4



**TOTAL WEIGHT = 5 X 159 = 797 lb**

| N. L. G. A. RULES  |      |     |        |       |
|--------------------|------|-----|--------|-------|
| CHORDS             | SIZE |     | LUMBER | DESCR |
| A - B              | 2x4  | DRY | No.2   | SPF   |
| B - D              | 2x4  | DRY | No.2   | SPF   |
| D - F              | 2x4  | DRY | No.2   | SPF   |
| G - F              | 2x4  | DRY | No.2   | SPF   |
| M - A              | 2x4  | DRY | No.2   | SPF   |
| M - J              | 2x4  | DRY | No.2   | SPF   |
| J - G              | 2x4  | DRY | No.2   | SPF   |
| ALL WEBS<br>EXCEPT | 2x3  | DRY | No.2   | SPF   |
| B - K              | 2x4  | DRY | No.2   | SPF   |
| K - E              | 2x4  | DRY | No.2   | SPF   |
| I - F              | 2x4  | DRY | No.2   | SPF   |

DRY: SEASONED LUMBER.

| J | TYPE     | PLATES | W   | LEN | Y    | X    |
|---|----------|--------|-----|-----|------|------|
| A | TMVW+p   | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| B | TTWW+m   | MT20   | 4.0 | 6.0 | 2.00 | 1.00 |
| C | TMVW     | MT20   | 2.0 | 4.0 |      |      |
| D | TS-t     | MT20   | 3.0 | 8.0 |      |      |
| E | TMVWV-t  | MT20   | 4.0 | 4.0 |      |      |
| F | TMVW-t   | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| G | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| I | BMVWV-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.50 |
| J | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| K | BMVWVW-t | MT20   | 5.0 | 6.0 |      |      |
| L | BMVWV-t  | MT20   | 4.0 | 4.0 |      |      |
| M | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| G  | 1545                       | 0    | 1545                               | 0    | 0      | 1-10         | 1-10 & BLOCK |
| M  | 1511                       | 0    | 1511                               | 0    | 0      | MECHANICAL   |              |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M. MINIMUM BEARING LENGTH AT JOINT M = 1-10.

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| G         | 1111     | 625 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 486 / 0 | 0 / 0 |
| M         | 1084     | 625 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 459 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. G ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

FOR SECTION B-F, MAX. PURLIN SPACING = 2.00 FT.  
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.43 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/ 2 LENGTH OF F-G, B-L, C-K, E-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

TOTAL LOAD CASES: (4)

| C H O R D S |                           |                           |       |              | W E B S     |       |                           |              |  |
|-------------|---------------------------|---------------------------|-------|--------------|-------------|-------|---------------------------|--------------|--|
| MEMB.       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX CSI (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |  |
| FR-TO       |                           | FROM                      | TO    |              | LENGTH      | FR-TO |                           |              |  |
| A-B         | -1082 / 0                 | -78.0                     | -78.0 | 0.52 (1)     | 5.43        | L-B   | -294 / 0                  | 0.22 (1)     |  |
| B-C         | -1199 / 0                 | -85.5                     | -85.5 | 0.93 (1)     | 2.00        | B-K   | 0 / 794                   | 0.13 (1)     |  |
| C-N         | -1200 / 0                 | -85.5                     | -85.5 | 0.93 (1)     | 2.00        | K-C   | -751 / 0                  | 0.55 (1)     |  |
| N-D         | -1200 / 0                 | -85.5                     | -85.5 | 0.93 (1)     | 2.00        | K-E   | 0 / 356                   | 0.06 (1)     |  |
| D-E         | -1200 / 0                 | -85.5                     | -85.5 | 0.93 (1)     | 2.00        | I-E   | -1037 / 0                 | 0.76 (1)     |  |
| E-F         | -977 / 0                  | -85.5                     | -85.5 | 0.89 (1)     | 2.00        | I-F   | 0 / 1552                  | 0.25 (1)     |  |
| G-F         | -1485 / 0                 | 0.0                       | 0.0   | 0.78 (1)     | 5.38        | A-L   | 0 / 826                   | 0.19 (1)     |  |
| M-A         | -1475 / 0                 | 0.0                       | 0.0   | 0.38 (1)     | 6.74        |       |                           |              |  |
| M-L         | 0 / 0                     | -18.5                     | -18.5 | 0.21 (4)     | 10.00       |       |                           |              |  |
| L-K         | 0 / 698                   | -18.5                     | -18.5 | 0.29 (4)     | 10.00       |       |                           |              |  |
| K-J         | 0 / 977                   | -18.5                     | -18.5 | 0.40 (4)     | 10.00       |       |                           |              |  |
| J-I         | 0 / 977                   | -18.5                     | -18.5 | 0.40 (4)     | 10.00       |       |                           |              |  |
| I-H         | 0 / 0                     | -18.5                     | -18.5 | 0.29 (4)     | 10.00       |       |                           |              |  |
| H-G         | 0 / 0                     | -18.5                     | -18.5 | 0.29 (4)     | 10.00       |       |                           |              |  |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

[illegible]

LOADING IN FLAT SECTION BASED ON  
PIGGYBACK TRUSS WITH SLOPES OF 6.00/12  
AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS  
OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD  
LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.99")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.99")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.14")

CSI: TC=0.93/1.00 (C-E:1), BC=0.40/1.00 (I-K:4),  
WB=0.76/1.00 (E-I:1), SSI=0.32/1.00 (E-F:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| PLATE | GRIP(DRY)<br>(PSI) |     | SHEAR<br>(PLI) |     | SECTION<br>(PLI) |      |
|-------|--------------------|-----|----------------|-----|------------------|------|
|       | MAX                | MIN | MAX            | MIN | MAX              | MIN  |
| MT20  | 650                | 371 | 1747           | 788 | 1987             | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

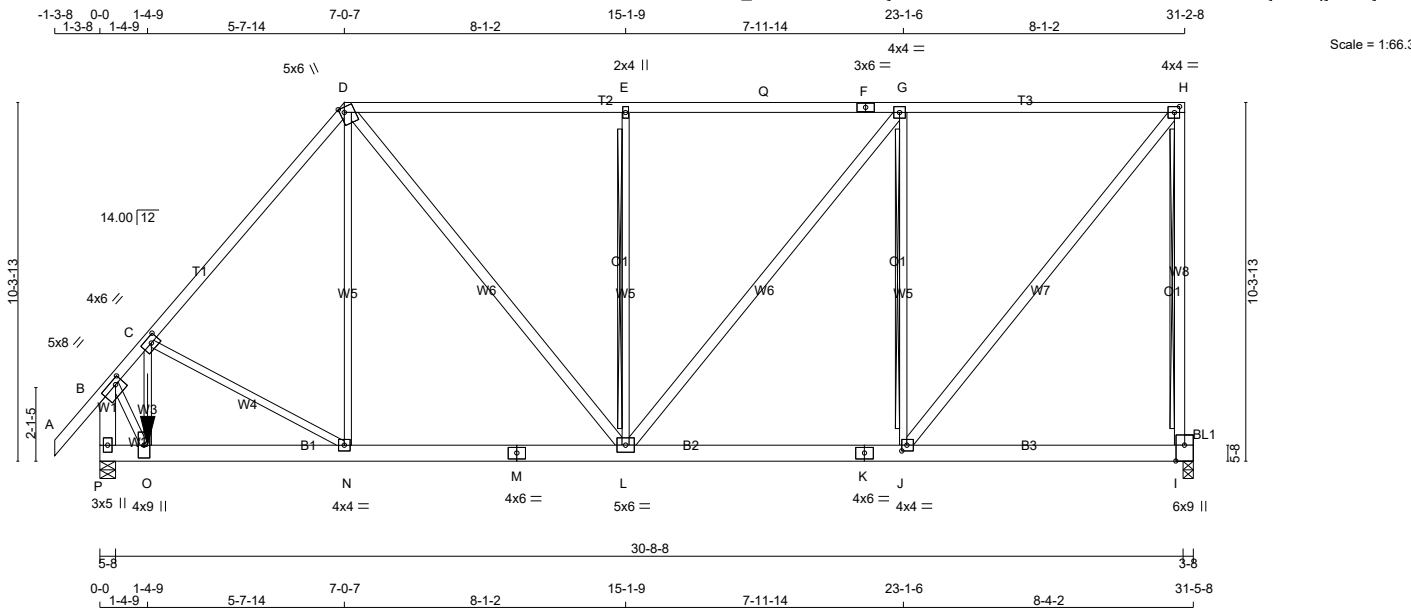
JSI GRIP= 0.90 (F) (INPUT = 0.90 )  
JSI METAL= 0.42 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H155       |          | 2   | TRUSS DESC. JT 45147 | E21104289 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:01 2021 Page 1

ID:hd511hZTz\_bdeQoS817GKByhVxV-ToOSzzEY6KGO0nDU34VkcMzoOBMNjL46oqySmSYTY3S



TOTAL WEIGHT = 2 X 188 = 376 lb

|                                                                                         |                      |             |        |
|-----------------------------------------------------------------------------------------|----------------------|-------------|--------|
| <b>LUMBER</b><br>N. L. G. A. RULES                                                      |                      |             |        |
| CHORDS                                                                                  | SIZE                 | LUMBER      | DESCR. |
| A - D                                                                                   | 2x4                  | DRY No.2    | SPF    |
| D - F                                                                                   | 2x4                  | DRY No.2    | SPF    |
| F - H                                                                                   | 2x4                  | DRY No.2    | SPF    |
| I - H                                                                                   | 2x4                  | DRY No.2    | SPF    |
| P - B                                                                                   | 2x6                  | DRY No.2    | SPF    |
| P - M                                                                                   | 2x6                  | DRY No.2    | SPF    |
| M - K                                                                                   | 2x6                  | DRY No.2    | SPF    |
| K - I                                                                                   | 2x6                  | DRY No.2    | SPF    |
| <b>BEARING BLOCKS</b>                                                                   |                      |             |        |
| BL1                                                                                     | 2x4                  | DRY No.2    | SPF    |
| <b>ALL WEBS EXCEPT</b>                                                                  |                      |             |        |
| D - L                                                                                   | 2x4                  | DRY No.2    | SPF    |
| L - G                                                                                   | 2x4                  | DRY No.2    | SPF    |
| J - H                                                                                   | 2x4                  | DRY No.2    | SPF    |
| DRY: SEASONED LUMBER.                                                                   |                      |             |        |
| DESIGN CONSISTS OF <u>2</u> TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS: |                      |             |        |
| CHORDS #ROWS                                                                            | SURFACE SPACING (IN) | LOAD(PLF)   |        |
| TOP CHORDS : (0.122"x3") SPIRAL NAILS                                                   |                      |             |        |
| A - D                                                                                   | 1 12                 | SIDE(62.4)  |        |
| D - F                                                                                   | 1 12                 | TOP         |        |
| F - H                                                                                   | 1 12                 | TOP         |        |
| H - I                                                                                   | 1 12                 | TOP         |        |
| P - B                                                                                   | 2 12                 | TOP         |        |
| BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS                                                |                      |             |        |
| P - M                                                                                   | 2 5                  | SIDE(526.7) |        |
| M - K                                                                                   | 2 12                 | TOP         |        |
| K - I                                                                                   | 2 12                 | TOP         |        |
| WEBS : (0.122"x3") SPIRAL NAILS                                                         |                      |             |        |
| C - O                                                                                   | 1 2                  | SIDE(712.6) |        |
| 2x3                                                                                     | 1 6                  |             |        |
| 2x4                                                                                     | 1 6                  |             |        |
| NAILS TO BE DRIVEN FROM ONE SIDE ONLY.                                                  |                      |             |        |
| GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.            |                      |             |        |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

|                                                                                                                                                                      |                |                  |                  |        |                     |             |               |       |       |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|------------------|--------|---------------------|-------------|---------------|-------|-------|--|--|
| <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b>                                                                 |                |                  |                  |        |                     |             |               |       |       |  |  |
| <b>BEARINGS</b>                                                                                                                                                      |                |                  |                  |        |                     |             |               |       |       |  |  |
|                                                                                                                                                                      | FACTORED       |                  | MAXIMUM FACTORED |        | INPUT               |             | REQRD         |       |       |  |  |
|                                                                                                                                                                      | GROSS REACTION |                  | GROSS REACTION   |        | BRG                 |             | BRG           |       |       |  |  |
| JT                                                                                                                                                                   | VERT           | HORZ             | DOWN             | HORZ   | UPLIFT              | IN-SX       | IN-SX         |       |       |  |  |
| I                                                                                                                                                                    | 1837           | 0                | 1837             | 0      | 0                   | 3-8         | 2-8           |       |       |  |  |
| P                                                                                                                                                                    | 6539           | 0                | 6539             | 0      | 0                   | 5-8         | 5-2           |       |       |  |  |
| <b>UNFACTORED REACTIONS</b>                                                                                                                                          |                |                  |                  |        |                     |             |               |       |       |  |  |
|                                                                                                                                                                      | 1ST LCASE      |                  | MAX./MIN.        |        | COMPONENT REACTIONS |             |               |       |       |  |  |
| JT                                                                                                                                                                   | COMBINED       | SNOW             | LIVE             | PERM.  | LIVE                | WIND        | DEAD          | SOIL  |       |  |  |
| I                                                                                                                                                                    | 1319           | 752 / 0          | 0 / 0            | 0 / 0  | 0 / 0               | 0 / 0       | 568 / 0       | 0 / 0 |       |  |  |
| P                                                                                                                                                                    | 4666           | 2827 / 0         | 0 / 0            | 0 / 0  | 0 / 0               | 0 / 0       | 1839 / 0      | 0 / 0 |       |  |  |
| BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, P                                                                                                           |                |                  |                  |        |                     |             |               |       |       |  |  |
| <b>BRACING</b>                                                                                                                                                       |                |                  |                  |        |                     |             |               |       |       |  |  |
| FOR SECTION D-H, MAX. PURLIN SPACING = 2.00 FT.                                                                                                                      |                |                  |                  |        |                     |             |               |       |       |  |  |
| FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.58 FT.                                                                                       |                |                  |                  |        |                     |             |               |       |       |  |  |
| MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.                                                                                       |                |                  |                  |        |                     |             |               |       |       |  |  |
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.                                                                                           |                |                  |                  |        |                     |             |               |       |       |  |  |
| 2x4 DRY SPF No.2 T-BRACE AT H-I, E-L, G-J                                                                                                                            |                |                  |                  |        |                     |             |               |       |       |  |  |
| FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH. |                |                  |                  |        |                     |             |               |       |       |  |  |
| END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW                                                   |                |                  |                  |        |                     |             |               |       |       |  |  |
| <b>LOADING</b>                                                                                                                                                       |                |                  |                  |        |                     |             |               |       |       |  |  |
| TOTAL LOAD CASES: (4)                                                                                                                                                |                |                  |                  |        |                     |             |               |       |       |  |  |
|                                                                                                                                                                      | CHORDS         |                  |                  |        |                     |             |               |       |       |  |  |
|                                                                                                                                                                      | MAX. FACTORED  | FACTORED         |                  |        |                     |             |               |       |       |  |  |
| MEMB.                                                                                                                                                                | FORCE (LBS)    | VERT. LOAD (PLF) | MAX. CSI (LC)    | UNBRAC | MEMB.               | FORCE (LBS) | MAX. CSI (LC) |       |       |  |  |
| FR-TO                                                                                                                                                                |                | FROM TO          |                  | LENGTH | FR-TO               |             |               |       |       |  |  |
| A-B                                                                                                                                                                  | 0 / 42         | -78.0 -78.0      | 0.06 (1)         | 10.00  | O-C                 | 0 / 1473    | 0.18 (1)      |       |       |  |  |
| B-C                                                                                                                                                                  | -3879 / 0      | -269.6 -269.6    | 0.22 (1)         | 4.58   | C-N                 | -1351 / 0   | 0.55 (1)      |       |       |  |  |
| C-D                                                                                                                                                                  | -2193 / 0      | -78.0 -78.0      | 0.25 (1)         | 5.78   | N-D                 | 0 / 879     | 0.11 (1)      |       |       |  |  |
| D-E                                                                                                                                                                  | -1657 / 0      | -85.5 -85.5      | 0.48 (1)         | 2.00   | D-L                 | 0 / 387     | 0.03 (1)      |       |       |  |  |
| E-Q                                                                                                                                                                  | -1657 / 0      | -85.5 -85.5      | 0.48 (1)         | 2.00   | L-E                 | -746 / 0    | 0.41 (1)      |       |       |  |  |
| Q-F                                                                                                                                                                  | -1657 / 0      | -85.5 -85.5      | 0.48 (1)         | 2.00   | L-G                 | 0 / 738     | 0.07 (1)      |       |       |  |  |
| F-G                                                                                                                                                                  | -1657 / 0      | -85.5 -85.5      | 0.48 (1)         | 2.00   | J-G                 | -1331 / 0   | 0.74 (1)      |       |       |  |  |
| G-H                                                                                                                                                                  | -1195 / 0      | -85.5 -85.5      | 0.46 (1)         | 2.00   | J-H                 | 0 / 1934    | 0.17 (1)      |       |       |  |  |
| I-H                                                                                                                                                                  | -1778 / 0      | 0.0 0.0          | 0.83 (1)         | 7.81   | B-O                 | 0 / 4027    | 0.50 (1)      |       |       |  |  |
| P-B                                                                                                                                                                  | -6288 / 0      | 0.0 0.0          | 0.26 (1)         | 5.91   |                     |             |               |       |       |  |  |
| P-O                                                                                                                                                                  | 0 / 0          | -64.0 -64.0      | 0.11 (1)         | 10.00  |                     |             |               |       |       |  |  |
| O-N                                                                                                                                                                  | 0 / 2578       | -18.5 -18.5      | 0.27 (1)         | 10.00  |                     |             |               |       |       |  |  |
| N-M                                                                                                                                                                  | 0 / 1412       | -18.5 -18.5      | 0.14 (1)         | 10.00  |                     |             |               |       |       |  |  |
| M-L                                                                                                                                                                  | 0 / 1412       | -18.5 -18.5      | 0.14 (1)         | 10.00  |                     |             |               |       |       |  |  |
| L-K                                                                                                                                                                  | 0 / 1195       | -18.5 -18.5      | 0.13 (4)         | 10.00  |                     |             |               |       |       |  |  |
| K-J                                                                                                                                                                  | 0 / 1195       | -18.5 -18.5      | 0.13 (4)         | 10.00  |                     |             |               |       |       |  |  |
| J-I                                                                                                                                                                  | -26 / 0        | -18.5 -18.5      | 0.07 (4)         | 6.25   |                     |             |               |       |       |  |  |
| <b>FACTORED CONCENTRATED LOADS (LBS)</b>                                                                                                                             |                |                  |                  |        |                     |             |               |       |       |  |  |
| JT                                                                                                                                                                   | LOC.           | LC1              | MAX-             | MAX+   | FACE                | DIR.        | TYPE          | HEEL  | CONN. |  |  |
| O                                                                                                                                                                    | 1-4-9          | -4751            | -4751            | ---    | FRONT               | VERT        | TOTAL         | ---   | C1    |  |  |
| <b>CONNECTION REQUIREMENTS</b>                                                                                                                                       |                |                  |                  |        |                     |             |               |       |       |  |  |
| 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.                                                                                                          |                |                  |                  |        |                     |             |               |       |       |  |  |

|                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DESIGN CRITERIA</b>                                                                                                                                                    |
| *** SPECIAL LOADS ANALYSIS ***                                                                                                                                            |
| GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.                                                                                                                              |
| LOADS WERE DERIVED FROM USER INPUT                                                                                                                                        |
| NO FURTHER MODIFICATIONS WERE MADE                                                                                                                                        |
| <b>SPECIFIED LOADS:</b>                                                                                                                                                   |
| TOP CH. LL = 21.0 PSF                                                                                                                                                     |
| DL = 6.0 PSF                                                                                                                                                              |
| BOT CH. LL = 0.0 PSF                                                                                                                                                      |
| DL = 7.4 PSF                                                                                                                                                              |
| TOTAL LOAD = 34.4 PSF                                                                                                                                                     |
| <b>SPACING = 24.0 IN./C</b>                                                                                                                                               |
| LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F. |
| GIRDER TYPE: CPrimeHip                                                                                                                                                    |
| SIDE SETBACK = 0-0                                                                                                                                                        |
| END SETBACK = 11-10-0                                                                                                                                                     |
| END WALL WIDTH = 0-0                                                                                                                                                      |
| CORNER FRAMING TYPE: CONVENTIONAL                                                                                                                                         |
| END JACK TYPE: CONVENTIONAL                                                                                                                                               |
| APPLIED TO FRONT SIDE                                                                                                                                                     |
| - ADDTL LOADS BASED ON 55 % OF GSL.                                                                                                                                       |
| LOADS APPLIED TO FIRST 1-4-9 OF SPAN MEASURED FROM THE LEFT.                                                                                                              |
| *** NON STANDARD GIRDER ***                                                                                                                                               |
| ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.                                                                                                                       |
| THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015                                                                                |
| THIS DESIGN COMPLIES WITH:                                                                                                                                                |
| - PART 9 OF BCBC 2018 , ABC 2019                                                                                                                                          |
| - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                                                                                                     |
| - CSA 086-14                                                                                                                                                              |
| - TPIC 2014                                                                                                                                                               |
| <b>DESIGN ASSUMPTIONS</b>                                                                                                                                                 |
| -OVERHANG NOT TO BE ALTERED OR CUT OFF.                                                                                                                                   |
| (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD                                                                        |
| ALLOWABLE DEFL.(LL)= L/360 (1.04")                                                                                                                                        |
| CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")                                                                                                                               |
| ALLOWABLE DEFL.(TL)= L/360 (1.04")                                                                                                                                        |
| CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")                                                                                                                               |
| CSI: TC=0.83/1.00 (H-I:1), BC=0.27/1.00 (N-O:1), WB=0.74/1.00 (G-J:1), SSI=0.18/1.00 (G-H:1)                                                                              |
| DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00                                                                                                                                    |
| COMP=1.00 SHEAR=1.00 TENS= 1.00                                                                                                                                           |
| COMPANION LIVE LOAD FACTOR = 1.00                                                                                                                                         |
| AUTOSOLVE RIGHT HEEL ONLY                                                                                                                                                 |
| TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .                                                                        |
| CONTINUED ON PAGE 2                                                                                                                                                       |

|          |            |          |     |           |              |
|----------|------------|----------|-----|-----------|--------------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO.     |
| 336322   | H155       |          | 2   | JT 45147  | E21104289(2) |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:01 2021 Page 2

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PLATES (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 5.0 | 8.0 | 1.75 | 2.50 |
| C  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.75 |
| D  | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 | 1.50 |
| E  | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| F  | TS-t    | MT20   | 3.0 | 6.0 |      |      |
| G  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| H  | TMVW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| I  | BMVK1+p | MT20   | 6.0 | 9.0 | Edge | 3.00 |
| J  | BMWW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| K  | BS-t    | MT20   | 4.0 | 6.0 |      |      |
| L  | BMWWW-t | MT20   | 5.0 | 6.0 |      |      |
| M  | BS-t    | MT20   | 4.0 | 6.0 |      |      |
| N  | BMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| O  | BMWW+t  | MT20   | 4.0 | 9.0 |      |      |
| P  | BMV1+p  | MT20   | 3.0 | 5.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

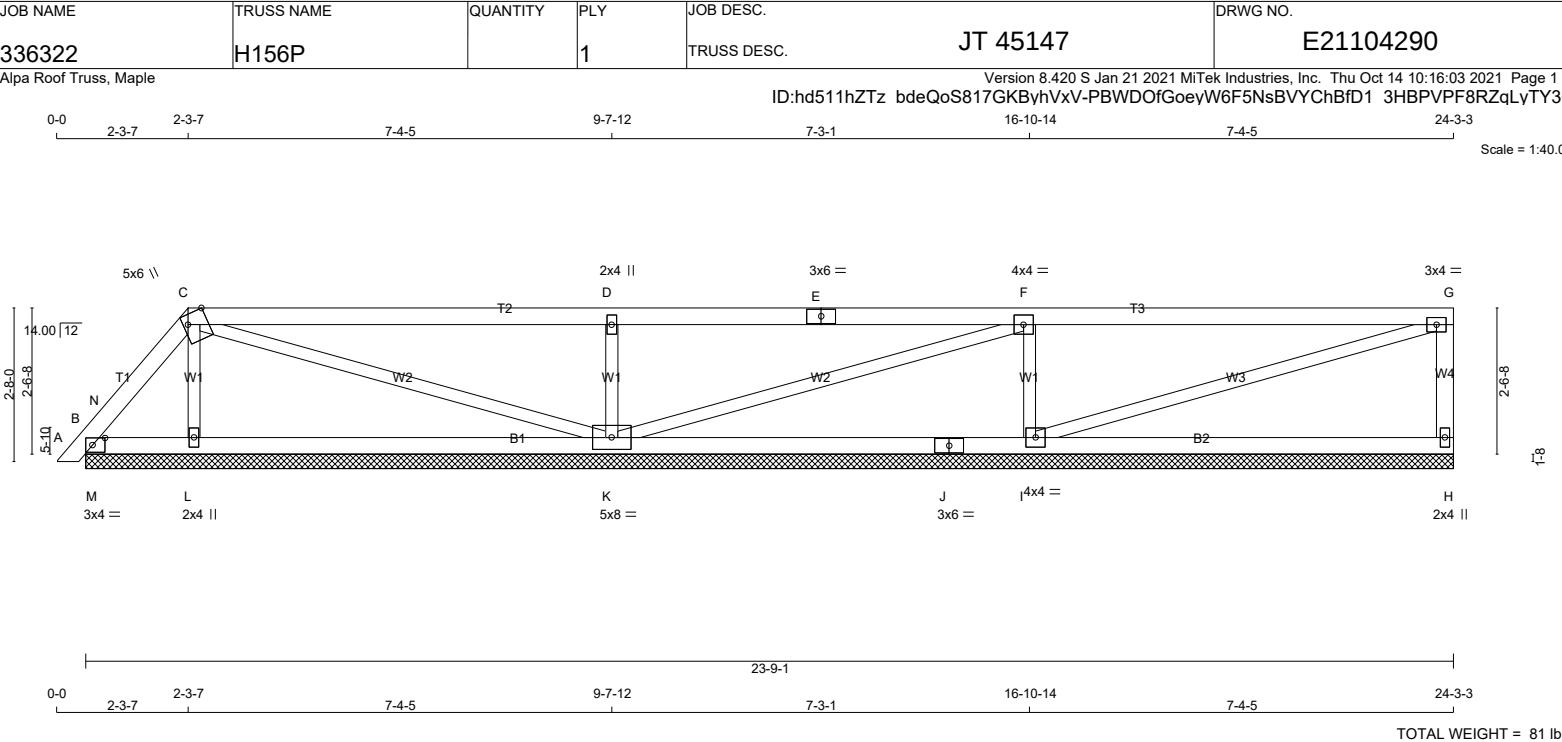
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (B) (INPUT = 0.90 )  
JSI METAL= 0.74 (O) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2





| LUMBER                |      |        |        | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |                  |        |                    | DESIGN CRITERIA  |    |          |          |
|-----------------------|------|--------|--------|-----------------------------------------------------------------------------------------------|------------------|--------|--------------------|------------------|----|----------|----------|
| N. L. G. A. RULES     |      |        |        | BEARINGS                                                                                      |                  |        |                    | SPECIFIED LOADS: |    |          |          |
| CHORDS                | SIZE | LUMBER | DESCR. | FACTORED                                                                                      | MAXIMUM FACTORED | INPUT  | REQRD              | TOP CH.          | LL | =        | 21.0 PSF |
| A - C                 | 2x4  | DRY    | No.2   | GROSS REACTION                                                                                | GROSS REACTION   | BRG    | BRG                | DL               | =  | 6.0 PSF  |          |
| C - E                 | 2x4  | DRY    | No.2   | VERT                                                                                          | HORZ             | UPLIFT | IN-SX              | BOT CH.          | LL | =        | 0.0 PSF  |
| E - G                 | 2x4  | DRY    | No.2   | JT                                                                                            |                  |        |                    | DL               | =  | 7.4 PSF  |          |
| H - G                 | 2x4  | DRY    | No.2   | H                                                                                             | 287              | 0      | 23-9-1 (8-9-1) 1-8 | TOTAL LOAD       | =  | 34.4 PSF |          |
| B - J                 | 2x4  | DRY    | No.2   | B                                                                                             | 131              | 0      | 23-9-1 (8-9-1) 1-8 |                  |    |          |          |
| J - H                 | 2x4  | DRY    | No.2   | L                                                                                             | 358              | 0      | 23-9-1 (8-9-1) 1-8 |                  |    |          |          |
|                       |      |        |        | K                                                                                             | 776              | 0      | 23-9-1 (8-9-1) 1-8 |                  |    |          |          |
|                       |      |        |        | I                                                                                             | 771              | 0      | 23-9-1 (8-9-1) 1-8 |                  |    |          |          |
| ALL WEBS              | 2x3  | DRY    | No.2   |                                                                                               |                  |        |                    |                  |    |          |          |
| DRY: SEASONED LUMBER. |      |        |        |                                                                                               |                  |        |                    |                  |    |          |          |

| PLATES (table is in inches) |          |        |     |     |           |
|-----------------------------|----------|--------|-----|-----|-----------|
| JT                          | TYPE     | PLATES | W   | LEN | Y X       |
| B                           | TMB1-l   | MT20   | 3.0 | 4.0 | 1.50 2.50 |
| C                           | TTWW+m   | MT20   | 5.0 | 6.0 | Edge 4.00 |
| D                           | TMW+w    | MT20   | 2.0 | 4.0 |           |
| E                           | TS-t     | MT20   | 3.0 | 6.0 |           |
| F                           | TMWW-t   | MT20   | 4.0 | 4.0 |           |
| G                           | TMVW-t   | MT20   | 3.0 | 4.0 |           |
| H                           | BMV1+p   | MT20   | 2.0 | 4.0 |           |
| I                           | BMWW1-t  | MT20   | 4.0 | 4.0 |           |
| J                           | BS-t     | MT20   | 3.0 | 6.0 |           |
| K                           | BMWWW1-t | MT20   | 5.0 | 8.0 |           |
| L                           | BMW1+w   | MT20   | 2.0 | 4.0 |           |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



| UNFACTORED REACTIONS                                                                                                                       |                           |                           |                        | BRACING   |                           |                        |       |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|------------------------|-----------|---------------------------|------------------------|-------|
| JT                                                                                                                                         | 1ST LCASE                 | SNOW                      | LIVE                   | PERM.LIVE | WIND                      | DEAD                   | SOIL  |
| H                                                                                                                                          | 205                       | 126 / 0                   | 0 / 0                  | 0 / 0     | 0 / 0                     | 79 / 0                 | 0 / 0 |
| B                                                                                                                                          | 88                        | 83 / 0                    | 0 / 0                  | 0 / 0     | 0 / 0                     | 5 / 0                  | 0 / 0 |
| L                                                                                                                                          | 261                       | 125 / 0                   | 0 / 0                  | 0 / 0     | 0 / 0                     | 136 / 0                | 0 / 0 |
| K                                                                                                                                          | 551                       | 347 / 0                   | 0 / 0                  | 0 / 0     | 0 / 0                     | 204 / 0                | 0 / 0 |
| I                                                                                                                                          | 550                       | 333 / 0                   | 0 / 0                  | 0 / 0     | 0 / 0                     | 217 / 0                | 0 / 0 |
| BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, I                                                                        |                           |                           |                        |           |                           |                        |       |
| TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED. |                           |                           |                        |           |                           |                        |       |
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.                                                                 |                           |                           |                        |           |                           |                        |       |
| LOADING                                                                                                                                    |                           |                           |                        |           |                           |                        |       |
| TOTAL LOAD CASES: (4)                                                                                                                      |                           |                           |                        |           |                           |                        |       |
| CHORDS                                                                                                                                     |                           |                           |                        | WEBS      |                           |                        |       |
| MEMB.                                                                                                                                      | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED CSI (LC) | MEMB.     | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |       |
| FR-TO                                                                                                                                      |                           | FROM TO                   |                        | FR-TO     |                           |                        |       |
| A-B                                                                                                                                        | 0 / 10                    | -78.0 -78.0               | 0.01 (1)               | L-C       | -220 / 0                  | 0.04 (1)               |       |
| B-N                                                                                                                                        | 0 / 60                    | -78.0 -78.0               | 0.04 (4)               | C-K       | -41 / 0                   | 0.05 (1)               |       |
| N-C                                                                                                                                        | -73 / 0                   | -78.0 -78.0               | 0.03 (1)               | K-D       | -627 / 0                  | 0.10 (1)               |       |
| C-D                                                                                                                                        | 0 / 9                     | -78.0 -78.0               | 0.57 (1)               | K-F       | -19 / 0                   | 0.02 (1)               |       |
| D-E                                                                                                                                        | 0 / 9                     | -78.0 -78.0               | 0.57 (1)               | I-F       | -621 / 0                  | 0.10 (1)               |       |
| E-F                                                                                                                                        | 0 / 9                     | -78.0 -78.0               | 0.57 (1)               | I-G       | 0 / 9                     | 0.00 (1)               |       |
| F-G                                                                                                                                        | -9 / 0                    | -78.0 -78.0               | 0.57 (1)               | M-N       | -186 / 0                  | 0.00 (1)               |       |
| H-G                                                                                                                                        | -233 / 0                  | 0.0 0.0                   | 0.03 (1)               |           |                           |                        |       |
| B-M                                                                                                                                        | 0 / 40                    | -18.5 -18.5               | 0.04 (1)               |           |                           |                        |       |
| M-L                                                                                                                                        | 0 / 40                    | -18.5 -18.5               | 0.16 (4)               |           |                           |                        |       |
| L-K                                                                                                                                        | 0 / 30                    | -18.5 -18.5               | 0.18 (4)               |           |                           |                        |       |
| K-J                                                                                                                                        | 0 / 9                     | -18.5 -18.5               | 0.24 (4)               |           |                           |                        |       |
| J-I                                                                                                                                        | 0 / 9                     | -18.5 -18.5               | 0.24 (4)               |           |                           |                        |       |
| I-H                                                                                                                                        | 0 / 0                     | -18.5 -18.5               | 0.24 (4)               |           |                           |                        |       |

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.57/1.00 (C-D:1) , BC=0.24/1.00 (I-K:4) , WB=0.10/1.00 (D-K:1) , SSI=0.27/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

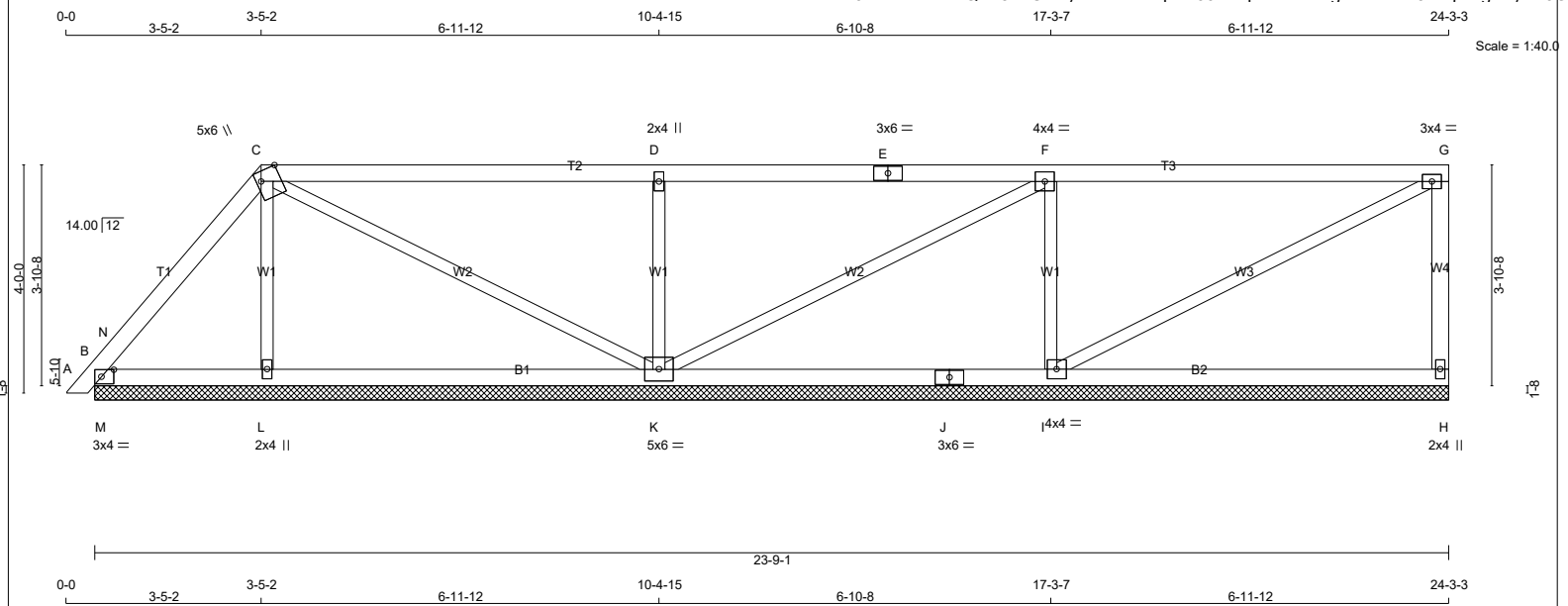
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (G) (INPUT = 0.90 )  
JSI METAL= 0.26 (E) (INPUT = 1.00 )



TOTAL WEIGHT = 87 lb

LUMBER

## N. L. G. A. RULES

| CHORDS | SIZE | LUMBER   | DESCR |
|--------|------|----------|-------|
| A - C  | 2x4  | DRY No.2 | SPF   |
| C - E  | 2x4  | DRY No.2 | SPF   |
| E - G  | 2x4  | DRY No.2 | SPF   |
| H - G  | 2x4  | DRY No.2 | SPF   |
| B - J  | 2x4  | DRY No.2 | SPF   |
| J - H  | 2x4  | DRY No.2 | SPF   |

ALL WEBS 2x3 DRY  
 DRY: SEASONED LUMBER.

**PLATES** (table is in inches)

| J | T         | PLATES | W   | LEN | Y         | X    |
|---|-----------|--------|-----|-----|-----------|------|
| B | TMBl-l    | MT20   | 3.0 | 4.0 | 1.50      | 2.50 |
| C | TTWW+m    | MT20   | 5.0 | 6.0 | Edge 4.00 |      |
| D | TMW+w     | MT20   | 2.0 | 4.0 |           |      |
| E | TS-t      | MT20   | 3.0 | 6.0 |           |      |
| F | TMWV-t    | MT20   | 4.0 | 4.0 |           |      |
| G | TMV-t     | MT20   | 3.0 | 4.0 |           |      |
| H | BMV1+p    | MT20   | 2.0 | 4.0 |           |      |
| I | BMWV1-t   | MT20   | 4.0 | 4.0 |           |      |
| J | BS-t      | MT20   | 3.0 | 6.0 |           |      |
| K | BMWVWV1-t | MT20   | 5.0 | 6.0 |           |      |
| L | BMW1+w    | MT20   | 2.0 | 4.0 |           |      |

Edge - INDICATES REFERENCE CORNER OF PLATE  
TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

## BEARINGS

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQ'D<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| JT | 279                        | 0    | 279                                | 0    | 0      | 23-9-1       | 8-9-1        |
| B  | 222                        | 0    | 222                                | 0    | 0      | 23-9-1       | 8-9-1        |
| L  | 334                        | 0    | 334                                | 0    | 0      | 23-9-1       | 8-9-1        |
| K  | 779                        | 0    | 779                                | 0    | 0      | 23-9-1       | 8-9-1        |
| I  | 708                        | 0    | 708                                | 0    | 0      | 23-9-1       | 8-9-1        |

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

### UNFACTORED REACTIONS

| JT | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|-----------|-------------------------------|-------|-----------|-------|---------|-------|
|    | COMBINED  | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H  | 199       | 123 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 76 / 0  | 0 / 0 |
| B  | 155       | 116 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 39 / 0  | 0 / 0 |
| L  | 243       | 120 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 123 / 0 | 0 / 0 |
| K  | 553       | 352 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 201 / 0 | 0 / 0 |
| I  | 506       | 303 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 202 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, I

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

### LOADING

TOTAL LOAD CASES: (4)

| C H O R D S |                           |                           |               | W E B S          |       |                           |               |          |
|-------------|---------------------------|---------------------------|---------------|------------------|-------|---------------------------|---------------|----------|
| MEMB.       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC) | MAX. UNBRAC (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |          |
| FR-TO       |                           | FROM TO                   |               | LENGTH           | FR-TO |                           |               |          |
| A-B         | 0 / 10                    | -78.0                     | -78.0         | 0.01 (1)         | 10.00 | L-C                       | -202 / 0      | 0.05 (1) |
| B-N         | 0 / 78                    | -78.0                     | -78.0         | 0.07 (1)         | 10.00 | C-K                       | -86 / 0       | 0.11 (1) |
| N-C         | -102 / 0                  | -78.0                     | -78.0         | 0.08 (1)         | 6.25  | K-D                       | -594 / 0      | 0.14 (1) |
| C-D         | 0 / 24                    | -78.0                     | -78.0         | 0.51 (1)         | 10.00 | I-F                       | -47 / 0       | 0.06 (1) |
| D-E         | 0 / 24                    | -78.0                     | -78.0         | 0.51 (1)         | 10.00 | I-F                       | -572 / 0      | 0.13 (1) |
| E-F         | 0 / 24                    | -78.0                     | -78.0         | 0.51 (1)         | 10.00 | I-G                       | 0 / 20        | 0.00 (1) |
| F-G         | -18 / 0                   | -78.0                     | -78.0         | 0.51 (1)         | 6.25  | M-N                       | -322 / 0      | 0.00 (1) |
| H-G         | -228 / 0                  | 0.0                       | 0.0           | 0.05 (1)         | 7.81  |                           |               |          |
|             |                           |                           |               |                  |       |                           |               |          |
| B-M         | 0 / 59                    | -18.5                     | -18.5         | 0.08 (1)         | 10.00 |                           |               |          |
| M-L         | 0 / 59                    | -18.5                     | -18.5         | 0.14 (4)         | 10.00 |                           |               |          |
| L-K         | 0 / 53                    | -18.5                     | -18.5         | 0.17 (4)         | 10.00 |                           |               |          |
| K-J         | 0 / 18                    | -18.5                     | -18.5         | 0.22 (4)         | 10.00 |                           |               |          |
| J-I         | 0 / 18                    | -18.5                     | -18.5         | 0.22 (4)         | 10.00 |                           |               |          |
| I-H         | 0 / 0                     | -18.5                     | -18.5         | 0.22 (4)         | 10.00 |                           |               |          |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



## DESIGN CRITERIA

SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.51/1.00 (D-F:1), BC=0.22/1.00 (I-K:4),  
WB=0.14/1.00 (D-K:1), SSI=0.25/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

## NAIL VALUES

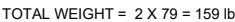
| PLATE | GRIP(DRY)<br>(PSI) |     | SHEAR<br>(PLI) |     | SECTION<br>(PLI) |      |
|-------|--------------------|-----|----------------|-----|------------------|------|
|       | MAX                | MIN | MAX            | MIN | MAX              | MIN  |
| MT20  | 650                | 371 | 1747           | 788 | 1987             | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (G) (INPUT = 0.90 )  
JSI METAL= 0.20 (E) (INPUT = 1.00 )

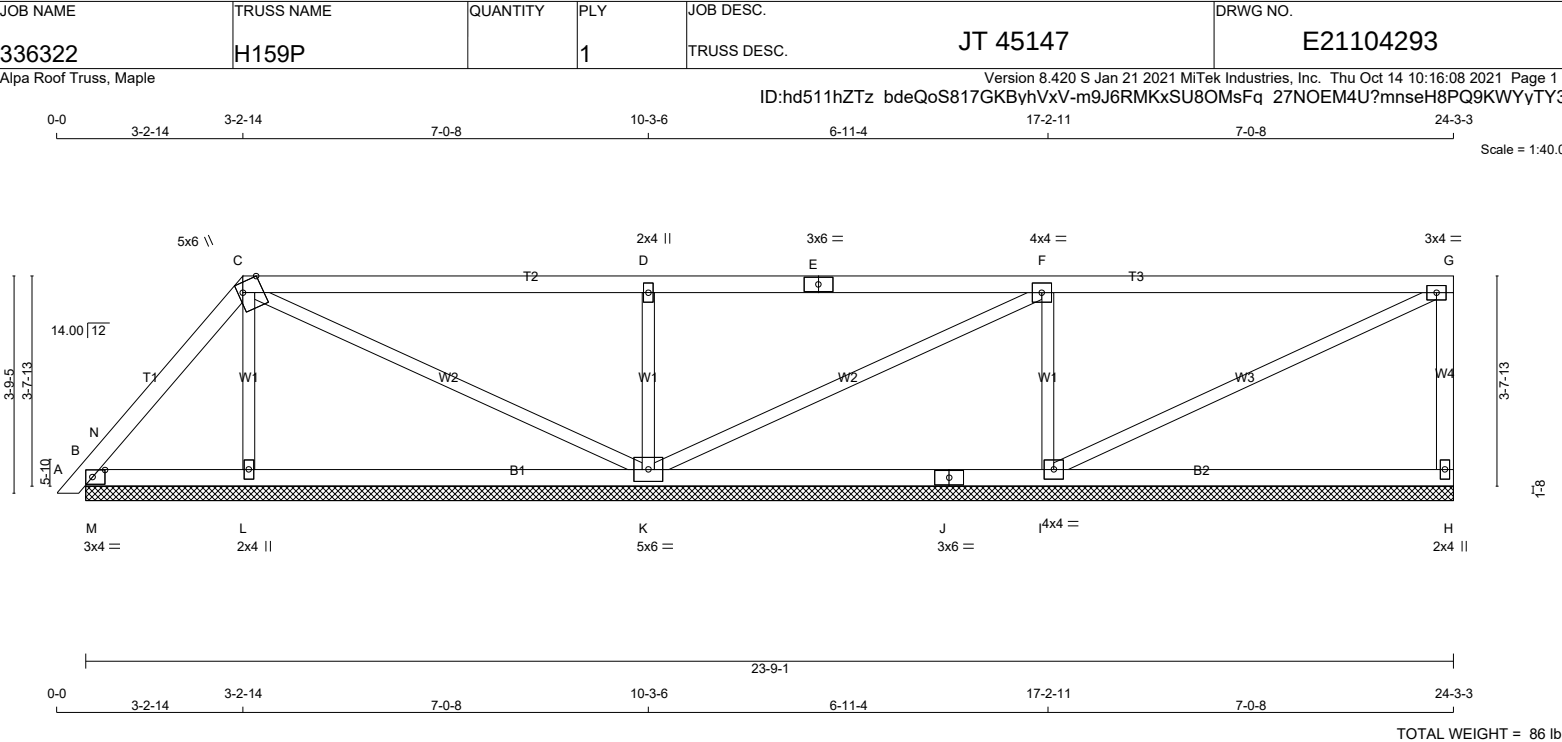
Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:06 2021 Page 1



| J | T | TYPE     | PLATES | W   | LEN | Y         | X    |
|---|---|----------|--------|-----|-----|-----------|------|
| B | T | TMb1-t   | MT20   | 3.0 | 4.0 | 1.50      | 2.50 |
| B | C | TTWW+m   | MT20   | 5.0 | 6.0 | Edge 4.00 |      |
| D | T | TMW+w    | MT20   | 2.0 | 4.0 |           |      |
| E | T | TS-t     | MT20   | 3.0 | 6.0 |           |      |
| F | T | TMWW-t   | MT20   | 4.0 | 4.0 |           |      |
| G | T | TMV-t    | MT20   | 3.0 | 4.0 |           |      |
| H | I | BMV1+p   | MT20   | 2.0 | 4.0 |           |      |
| I | J | BMWW1-t  | MT20   | 4.0 | 4.0 |           |      |
| J | L | BS-t     | MT20   | 3.0 | 6.0 |           |      |
| K | L | BMWWW1-t | MT20   | 5.0 | 8.0 |           |      |
| L | K | BMW1+w   | MT20   | 2.0 | 4.0 |           |      |

| CHORDS |                           |                           |       | WEBS         |             |       |                           |              |
|--------|---------------------------|---------------------------|-------|--------------|-------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX CSI (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO    |              | LENGTH      | FR-TO |                           |              |
| A-B    | 0 / 10                    | -78.0                     | -78.0 | 0.00 (1)     | 10.00       | L-C   | -218 / 0                  | 0.02 (1)     |
| B-N    | 0 / 60                    | -78.0                     | -78.0 | 0.02 (4)     | 10.00       | C-K   | -32 / 0                   | 0.02 (1)     |
| N-C    | -68 / 0                   | -78.0                     | -78.0 | 0.01 (4)     | 6.25        | K-D   | -632 / 0                  | 0.05 (1)     |
| C-D    | 0 / 6                     | -78.0                     | -78.0 | 0.29 (1)     | 10.00       | K-F   | -13 / 0                   | 0.01 (1)     |
| D-E    | 0 / 6                     | -78.0                     | -78.0 | 0.29 (1)     | 10.00       | I-F   | -628 / 0                  | 0.05 (1)     |
| E-F    | 0 / 6                     | -78.0                     | -78.0 | 0.29 (1)     | 10.00       | I-G   | 0 / 7                     | 0.00 (1)     |
| F-G    | -7 / 0                    | -78.0                     | -78.0 | 0.29 (1)     | 10.00       | M-N   | -158 / 0                  | 0.00 (1)     |
| H-G    | -234 / 0                  | 0.0                       | 0.0   | 0.01 (1)     | 7.81        |       |                           |              |
| B-M    | 0 / 37                    | -18.5                     | -18.5 | 0.02 (1)     | 10.00       |       |                           |              |
| M-L    | 0 / 37                    | -18.5                     | -18.5 | 0.08 (4)     | 10.00       |       |                           |              |
| L-K    | 0 / 25                    | -18.5                     | -18.5 | 0.09 (4)     | 10.00       |       |                           |              |
| K-J    | 0 / 7                     | -18.5                     | -18.5 | 0.12 (4)     | 10.00       |       |                           |              |
| J-I    | 0 / 7                     | -18.5                     | -18.5 | 0.12 (4)     | 10.00       |       |                           |              |
| I-H    | 0 / 0                     | -18.5                     | -18.5 | 0.12 (4)     | 10.00       |       |                           |              |

JSI GRIP= 0.85 (G) (INPUT = 0.90 )  
JSI METAL= 0.13 (E) (INPUT = 1.00 )



| LUMBER                |      |        |        | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |                                 |           |           | DESIGN CRITERIA                                                                            |    |  |     |
|-----------------------|------|--------|--------|-----------------------------------------------------------------------------------------------|---------------------------------|-----------|-----------|--------------------------------------------------------------------------------------------|----|--|-----|
| N. L. G. A. RULES     |      |        |        | BEARINGS                                                                                      |                                 |           |           | SPECIFIED LOADS:                                                                           |    |  |     |
| CHORDS                | SIZE | LUMBER | DESCR. | FACTORED GROSS REACTION                                                                       | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG | TOP CH.                                                                                    | LL |  | PSF |
| A - C                 | 2x4  | DRY    | No.2   | VERT                                                                                          | HORZ                            | DOWN      | HORZ      | DL                                                                                         |    |  | PSF |
| C - E                 | 2x4  | DRY    | No.2   | 280                                                                                           | 0                               | 280       | 0         | BOT CH.                                                                                    | LL |  | PSF |
| E - G                 | 2x4  | DRY    | No.2   | 208                                                                                           | 0                               | 208       | 0         | DL                                                                                         |    |  | PSF |
| H - G                 | 2x4  | DRY    | No.2   | 338                                                                                           | 0                               | 338       | 0         | TOTAL LOAD                                                                                 |    |  | PSF |
| B - J                 | 2x4  | DRY    | No.2   | 777                                                                                           | 0                               | 777       | 0         | SPACING = 24.0 IN. C/C                                                                     |    |  |     |
| J - H                 | 2x4  | DRY    | No.2   | 720                                                                                           | 0                               | 720       | 0         | LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM                                |    |  |     |
| ALL WEBS              | 2x3  | DRY    | No.2   | VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH                                       |                                 |           |           | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015 |    |  |     |
| DRY: SEASONED LUMBER. |      |        |        | UNFACTORED REACTIONS                                                                          |                                 |           |           | THIS DESIGN COMPLIES WITH:                                                                 |    |  |     |

| PLATES (table is in inches) |          |        |     |     |      |      |
|-----------------------------|----------|--------|-----|-----|------|------|
| JT                          | TYPE     | PLATES | W   | LEN | Y    | X    |
| B                           | TMB1-l   | MT20   | 3.0 | 4.0 | 1.50 | 2.50 |
| C                           | TTWW+m   | MT20   | 5.0 | 6.0 | Edge | 4.00 |
| D                           | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| E                           | TS-t     | MT20   | 3.0 | 6.0 |      |      |
| F                           | TMWW-t   | MT20   | 4.0 | 4.0 |      |      |
| G                           | TMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| H                           | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| I                           | BMWW1-t  | MT20   | 4.0 | 4.0 |      |      |
| J                           | BS-t     | MT20   | 3.0 | 6.0 |      |      |
| K                           | BMWWW1-t | MT20   | 5.0 | 6.0 |      |      |
| L                           | BMW1+w   | MT20   | 2.0 | 4.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



| CHORDS |                           |                           |                        | WEBS  |                           |                        |  |
|--------|---------------------------|---------------------------|------------------------|-------|---------------------------|------------------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED CS1 (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CS1 (LC) |  |
| FR-TO  |                           | FROM                      | TO                     | FR-TO |                           |                        |  |
| A-B    | 0 / 10                    | -78.0                     | -78.0 0.01 (1)         | L-C   | -207 / 0                  | 0.04 (1)               |  |
| B-N    | 0 / 65                    | -78.0                     | -78.0 0.06 (1)         | C-K   | -78 / 0                   | 0.09 (1)               |  |
| N-C    | -97 / 0                   | -78.0                     | -78.0 0.06 (1)         | K-D   | -599 / 0                  | 0.13 (1)               |  |
| C-D    | 0 / 22                    | -78.0                     | -78.0 0.52 (1)         | K-F   | -42 / 0                   | 0.05 (1)               |  |
| D-E    | 0 / 22                    | -78.0                     | -78.0 0.52 (1)         | I-F   | -581 / 0                  | 0.13 (1)               |  |
| E-F    | 0 / 22                    | -78.0                     | -78.0 0.52 (1)         | I-G   | 0 / 18                    | 0.00 (1)               |  |
| F-G    | -16 / 0                   | -78.0                     | -78.0 0.52 (1)         | M-N   | -293 / 0                  | 0.00 (1)               |  |
| H-G    | -228 / 0                  | 0.0                       | 0.0 0.05 (1)           |       |                           |                        |  |
| B-M    | 0 / 56                    | -18.5                     | -18.5 0.07 (1)         |       |                           |                        |  |
| M-L    | 0 / 56                    | -18.5                     | -18.5 0.14 (4)         |       |                           |                        |  |
| L-K    | 0 / 49                    | -18.5                     | -18.5 0.17 (4)         |       |                           |                        |  |
| K-J    | 0 / 16                    | -18.5                     | -18.5 0.22 (4)         |       |                           |                        |  |
| J-I    | 0 / 16                    | -18.5                     | -18.5 0.22 (4)         |       |                           |                        |  |
| I-H    | 0 / 0                     | -18.5                     | -18.5 0.22 (4)         |       |                           |                        |  |

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.  
 ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.  
 BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, B, L, K, I  
 TOTAL LOAD CASES: (4)  
 CSI: TC=0.52/1.00 (C-D:1) , BC=0.22/1.00 (I-K:4) , WB=0.13/1.00 (D-K:1) , SSI=0.26/1.00 (F-G:1)  
 DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10  
 COMPANION LIVE LOAD FACTOR = 1.00  
 TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .  
 NAIL VALUES  
 PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 650 371 1747 788 1987 1873  
 PLATE PLACEMENT TOL. = 0.250 inches  
 PLATE ROTATION TOL. = 5.0 Deg.  
 JSI GRIP= 0.79 (G) (INPUT = 0.90 )  
 JSI METAL= 0.21 (E) (INPUT = 1.00 )

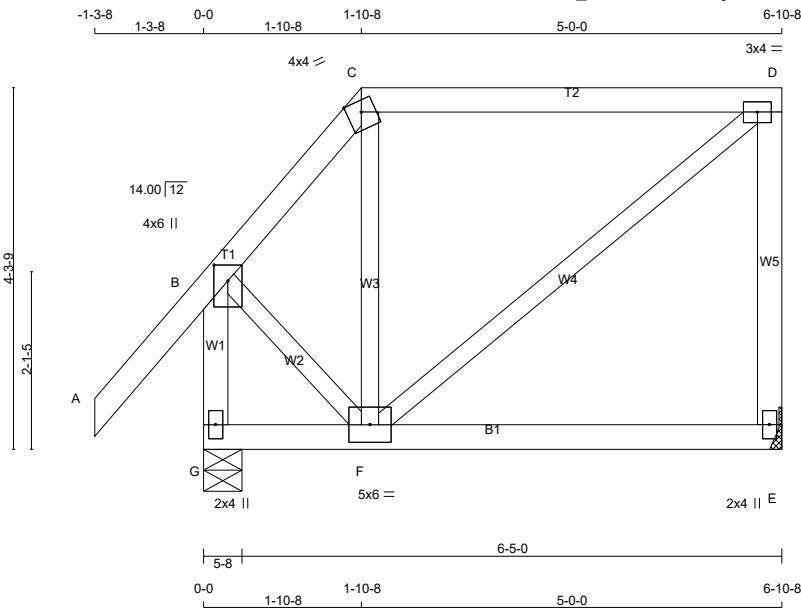


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H161       |          | 1   | TRUSS DESC. JT 45147 | E21104295 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:11 2021 Page 1

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TOTAL WEIGHT = 35 lb [M]

|                       |      |          |        |  |
|-----------------------|------|----------|--------|--|
| <b>LUMBER</b>         |      |          |        |  |
| N. L. G. A. RULES     |      |          |        |  |
| CHORDS                | SIZE | LUMBER   | DESCR. |  |
| A - C                 | 2x4  | DRY No.2 | SPF    |  |
| A - D                 | 2x4  | DRY No.2 | SPF    |  |
| E - D                 | 2x4  | DRY No.2 | SPF    |  |
| G - B                 | 2x4  | DRY No.2 | SPF    |  |
| G - E                 | 2x4  | DRY No.2 | SPF    |  |
| ALL WEBS EXCEPT       | 2x3  | DRY No.2 | SPF    |  |
| DRY: SEASONED LUMBER. |      |          |        |  |

|                                                                   |         |        |     |     |           |
|-------------------------------------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b>                                |         |        |     |     |           |
| JT                                                                | TYPE    | PLATES | W   | LEN | Y X       |
| B                                                                 | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| C                                                                 | TTW-m   | MT20   | 4.0 | 4.0 | Edge      |
| D                                                                 | TMVW-t  | MT20   | 3.0 | 4.0 |           |
| E                                                                 | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| F                                                                 | BMWWW-t | MT20   | 5.0 | 6.0 |           |
| G                                                                 | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD. |         |        |     |     |           |

| DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER            |                         |      |                                 |      |           |            |       |
|----------------------------------------------------------------------------------------------------------|-------------------------|------|---------------------------------|------|-----------|------------|-------|
| BEARINGS                                                                                                 |                         |      |                                 |      |           |            |       |
|                                                                                                          | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQRD BRG  |       |
| JT                                                                                                       | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX      | IN-SX |
| E                                                                                                        | 320                     | 0    | 320                             | 0    | 0         | MECHANICAL |       |
| G                                                                                                        | 452                     | 0    | 452                             | 0    | 0         | 5-8        | 1-8   |
| A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8. |                         |      |                                 |      |           |            |       |

|                             |                    |                               |       |           |       |         |       |
|-----------------------------|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
| <b>UNFACTORED REACTIONS</b> |                    |                               |       |           |       |         |       |
|                             | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
| JT                          |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E                           | 229                | 138 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 90 / 0  | 0 / 0 |
| G                           | 320                | 209 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 111 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

|                                                                            |                           |                           |       |              |             |                           |              |          |  |
|----------------------------------------------------------------------------|---------------------------|---------------------------|-------|--------------|-------------|---------------------------|--------------|----------|--|
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED. |                           |                           |       |              |             |                           |              |          |  |
| <b>LOADING</b>                                                             |                           |                           |       |              |             |                           |              |          |  |
| TOTAL LOAD CASES: (4)                                                      |                           |                           |       |              |             |                           |              |          |  |
| <b>CHORDS</b>                                                              |                           |                           |       |              | <b>WEBS</b> |                           |              |          |  |
| MEMB.                                                                      | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX CSI (LC) | MEMB.       | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |          |  |
| FR-TO                                                                      |                           | FROM                      | TO    |              | FR-TO       |                           |              |          |  |
| A- B                                                                       | 0 / 42                    | -78.0                     | -78.0 | 0.11 (1)     | 10.00       | F- C                      | -96 / 13     | 0.03 (1) |  |
| B- C                                                                       | -204 / 0                  | -78.0                     | -78.0 | 0.11 (1)     | 6.25        | F- D                      | 0 / 140      | 0.03 (1) |  |
| C- D                                                                       | -109 / 0                  | -78.0                     | -78.0 | 0.33 (1)     | 6.25        | B- F                      | 0 / 148      | 0.03 (1) |  |
| E- D                                                                       | -283 / 0                  | 0.0                       | 0.0   | 0.08 (1)     | 7.81        |                           |              |          |  |
| G- B                                                                       | -453 / 0                  | 0.0                       | 0.0   | 0.05 (1)     | 7.81        |                           |              |          |  |
| G- F                                                                       | 0 / 0                     | -18.5                     | -18.5 | 0.09 (4)     | 10.00       |                           |              |          |  |
| F- E                                                                       | 0 / 0                     | -18.5                     | -18.5 | 0.09 (4)     | 10.00       |                           |              |          |  |

|                               |    |   |          |
|-------------------------------|----|---|----------|
| <b>DESIGN CRITERIA</b>        |    |   |          |
| SPECIFIED LOADS:              |    |   |          |
| TOP CH.                       | LL | = | 21.0 PSF |
|                               | DL | = | 6.0 PSF  |
| BOT CH.                       | LL | = | 0.0 PSF  |
|                               | DL | = | 7.4 PSF  |
| TOTAL LOAD = 34.4 PSF         |    |   |          |
| <b>SPACING = 24.0 IN. C/C</b> |    |   |          |

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

**DESIGN ASSUMPTIONS**  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.23")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.23")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.33/1.00 (C-D:1) , BC=0.09/1.00 (F-G:4) , WB=0.03/1.00 (B-F:1) , SSI=0.15/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

**NAIL VALUES**  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.27 (D) (INPUT = 0.90 )  
JSI METAL= 0.11 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

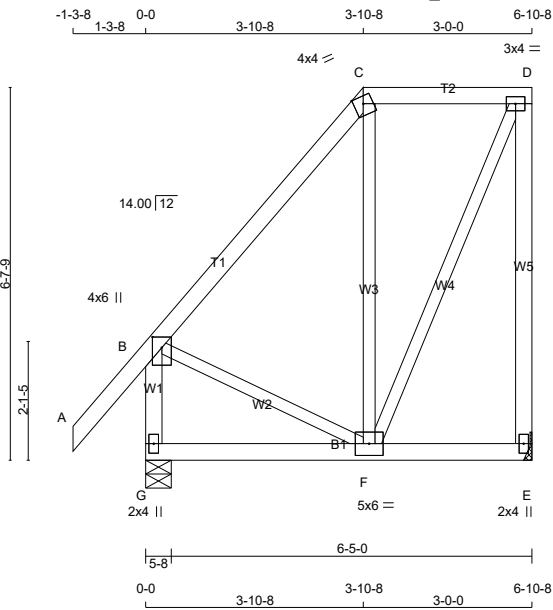


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H162       |          | 1   | TRUSS DESC. JT 45147 | E21104296 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:12 2021 Page 1

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Scale = 1:41.0

TOTAL WEIGHT = 43 lb

[M][F]

| LUMBER                |      |          |        |  |
|-----------------------|------|----------|--------|--|
| N. L. G. A. RULES     |      |          |        |  |
| CHORDS                | SIZE | LUMBER   | DESCR. |  |
| A - C                 | 2x4  | DRY No.2 | SPF    |  |
| C - D                 | 2x4  | DRY No.2 | SPF    |  |
| E - D                 | 2x4  | DRY No.2 | SPF    |  |
| G - B                 | 2x4  | DRY No.2 | SPF    |  |
| G - E                 | 2x4  | DRY No.2 | SPF    |  |
| ALL WEBS              | 2x3  | DRY No.2 | SPF    |  |
| EXCEPT                |      |          |        |  |
| DRY: SEASONED LUMBER. |      |          |        |  |

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| C                           | TTW-m   | MT20   | 4.0 | 4.0 | Edge |      |
| D                           | TMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| E                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F                           | BMVWW-t | MT20   | 5.0 | 6.0 |      |      |
| G                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG UPLIFT | REQD BRG IN-SX |       |
|----|-------------------------|------|---------------------------------|------|------------------|----------------|-------|
|    | VERT                    | HORZ | DOWN                            | HORZ |                  | IN-SX          | IN-SX |
| E  | 332                     | 0    | 332                             | 0    | 0                | MECHANICAL     |       |
| G  | 441                     | 0    | 441                             | 0    | 0                | 5-8            | 1-8   |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
|    |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E  | 236                | 144 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 92 / 0  | 0 / 0 |
| G  | 312                | 203 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 109 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |         |          | WEBS               |       |                           |              |  |
|--------|---------------------------|---------------------------|---------|----------|--------------------|-------|---------------------------|--------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX | CS1 (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CS1 (LC) |  |
| FR-TO  |                           | FROM                      | TO      |          |                    | FR-TO |                           |              |  |
| A-B    | 0 / 42                    | -78.0                     | -78.0   | 0.11 (1) | 10.00              | F-C   | -160 / 0                  | 0.12 (1)     |  |
| B-C    | -143 / 0                  | -78.0                     | -78.0   | 0.15 (1) | 6.25               | F-D   | 0 / 217                   | 0.05 (1)     |  |
| C-D    | -90 / 0                   | -78.0                     | -78.0   | 0.09 (1) | 6.25               | B-F   | 0 / 101                   | 0.02 (1)     |  |
| E-D    | -313 / 0                  | 0.0                       | 0.0     | 0.29 (1) | 7.81               |       |                           |              |  |
| G-B    | -410 / 0                  | 0.0                       | 0.0     | 0.05 (1) | 7.81               |       |                           |              |  |
| G-F    | 0 / 0                     | -18.5                     | -18.5   | 0.06 (4) | 10.00              |       |                           |              |  |
| F-E    | 0 / 0                     | -18.5                     | -18.5   | 0.06 (4) | 10.00              |       |                           |              |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.23")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.23")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")

CSI: TC=0.29/1.00 (D-E:1) , BC=0.06/1.00 (F-G:4) , WB=0.12/1.00 (C-F:1) , SSI=0.09/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.47 (D) (INPUT = 0.90 )  
JSI METAL= 0.11 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

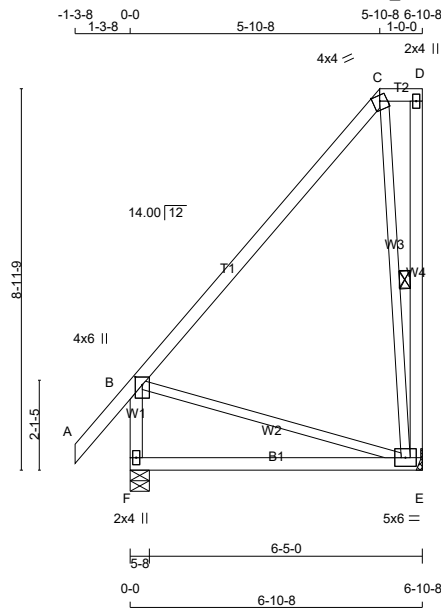


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H163       |          | 1   | TRUSS DESC. JT 45147 | E21104297 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:16:13 2021 Page 1

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TOTAL WEIGHT = 45 lb

[M][F]

| LUMBER                |      |     |        |        |
|-----------------------|------|-----|--------|--------|
| N. L. G. A. RULES     |      |     |        |        |
| CHORDS                | SIZE |     | LUMBER | DESCR. |
| A - C                 | 2x4  | DRY | No.2   | SPF    |
| C - D                 | 2x4  | DRY | No.2   | SPF    |
| E - D                 | 2x4  | DRY | No.2   | SPF    |
| F - B                 | 2x4  | DRY | No.2   | SPF    |
| F - E                 | 2x4  | DRY | No.2   | SPF    |
| ALL WEBS              | 2x3  | DRY | No.2   | SPF    |
| EXCEPT                |      |     |        |        |
| DRY: SEASONED LUMBER. |      |     |        |        |

| PLATES (table is in inches) |          |        |     |     |      |      |
|-----------------------------|----------|--------|-----|-----|------|------|
| JT                          | TYPE     | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW+p   | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| C                           | TTW-m    | MT20   | 4.0 | 4.0 | Edge |      |
| D                           | TMV+p    | MT20   | 2.0 | 4.0 |      |      |
| E                           | BMVWW1-t | MT20   | 5.0 | 6.0 |      |      |
| F                           | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|    |   | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT  |       | REQRD |       |
|----|---|-------------------------|------|---------------------------------|------|--------|-------|-------|-------|
|    |   | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT | IN-SX | BRG   | IN-SX |
| JT | E | 332                     | 0    | 332                             | 0    | 0      | 5-8   | 1-8   |       |
| F  | F | 441                     | 0    | 441                             | 0    | 0      | 5-8   | 1-8   |       |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

**UNFACTORED REACTIONS**

|    |  | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|--|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
| JT |  |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E  |  | 236                | 144 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 92 / 0  | 0 / 0 |
| F  |  | 312                | 203 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 109 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-E, C-E.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |  |                           |                           | WEBS                           |              |                           |                                |
|--------|--|---------------------------|---------------------------|--------------------------------|--------------|---------------------------|--------------------------------|
| MEMB.  |  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED VERT. LOAD (PLF) | MEMB.        | MAX. FACTORED FORCE (LBS) | MAX. FACTORED VERT. LOAD (PLF) |
| FR-TO  |  |                           | FROM TO                   | CSI (LC)                       | LENGTH FR-TO |                           | CSI (LC)                       |
| A-B    |  | 0 / 42                    | -78.0                     | -78.0 0.11 (1)                 | 10.00        | C-E                       | -238 / 0                       |
| B-C    |  | -42 / 0                   | -78.0                     | -78.0 0.34 (1)                 | 6.25         | B-E                       | 0 / 28                         |
| C-D    |  | 0 / 0                     | -78.0                     | -78.0 0.01 (1)                 | 10.00        |                           |                                |
| E-D    |  | -39 / 0                   | 0.0                       | 0.0 0.01 (1)                   | 6.25         |                           |                                |
| F-B    |  | -377 / 0                  | 0.0                       | 0.0 0.04 (1)                   | 7.81         |                           |                                |
| F-E    |  | 0 / 0                     | -18.5                     | -18.5 0.26 (4)                 | 10.00        |                           |                                |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN./C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(TL)= L/360 (0.23")  
CALCULATED VERT. DEFL.(TL)= L/ 819 (0.10")

CSI: TC=0.34/1.00 (B-C:1) , BC=0.26/1.00 (E-F:4) ,  
WB=0.12/1.00 (C-E:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |                 |             |               |
|-------------|-----------------|-------------|---------------|
| PLATE       | GRIP(DRY) (PSI) | SHEAR (PLI) | SECTION (PLI) |
|             | MAX MIN         | MAX MIN     | MAX MIN       |
| MT20        | 650             | 371         | 1747          |
|             | 788             | 1987        | 1873          |

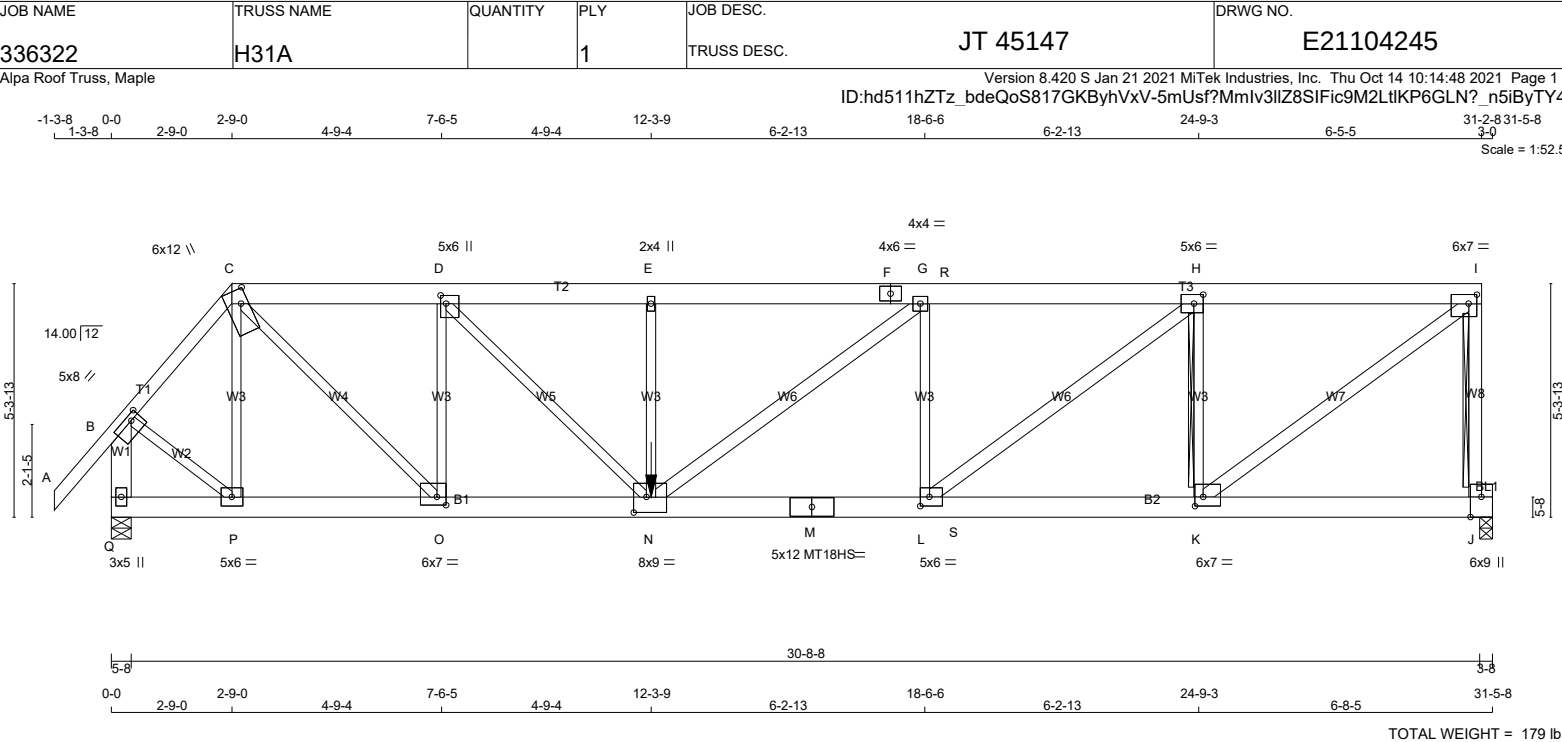
PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.21 (B) (INPUT = 0.90 )  
JSI METAL= 0.13 (C) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2





**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | LUMBER         | DESCR. |
|--------|------|----------------|--------|
| A - C  | 2x4  | DRY No.2       | SPF    |
| C - F  | 2x6  | DRY No.2       | SPF    |
| F - I  | 2x6  | DRY No.2       | SPF    |
| J - L  | 2x4  | DRY No.2       | SPF    |
| Q - B  | 2x6  | DRY No.2       | SPF    |
| Q - M  | 2x6  | DRY 1650F 1.5E | SPF    |
| M - J  | 2x6  | DRY 1650F 1.5E | SPF    |

BEARING BLOCKS

|     |     |     |      |     |
|-----|-----|-----|------|-----|
| BL1 | 2x4 | DRY | No.2 | SPF |
|-----|-----|-----|------|-----|

ALL WEBS EXCEPT

|       |     |     |      |     |
|-------|-----|-----|------|-----|
| N - G | 2x4 | DRY | No.2 | SPF |
| L - H | 2x4 | DRY | No.2 | SPF |
| K - I | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN  | Y    | X    |
|----|---------|--------|-----|------|------|------|
| B  | TMVW-t  | MT20   | 5.0 | 8.0  | 1.50 | 2.50 |
| C  | TTWW+m  | MT20   | 6.0 | 12.0 | 4.00 | 2.00 |
| D  | TMWW+t  | MT20   | 5.0 | 6.0  | 2.25 | 1.50 |
| E  | TMW+w   | MT20   | 2.0 | 4.0  |      |      |
| F  | TS-t    | MT20   | 4.0 | 6.0  |      |      |
| G  | TMWW-t  | MT20   | 4.0 | 4.0  |      |      |
| H  | TMWW-t  | MT20   | 5.0 | 6.0  | 2.50 | 2.50 |
| I  | TMVW-t  | MT20   | 6.0 | 7.0  | 2.50 | 2.25 |
| J  | BMVK1+t | MT20   | 6.0 | 9.0  | Edge | 3.00 |
| K  | BMWW-t  | MT20   | 6.0 | 7.0  | 2.50 | 2.25 |
| L  | BMWW-t  | MT20   | 5.0 | 6.0  | 2.50 | 2.50 |
| M  | BS-t    | MT18HS | 5.0 | 12.0 |      |      |
| N  | BMWWW-t | MT20   | 8.0 | 9.0  | 4.25 | 3.50 |
| O  | BMWW-t  | MT20   | 6.0 | 7.0  | 2.25 | 2.50 |
| P  | BMWW-t  | MT20   | 5.0 | 6.0  |      |      |
| Q  | BMV1+p  | MT20   | 3.0 | 5.0  |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

**BEARINGS**

|    | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG |
|----|-------------------------|---------------------------------|-----------|-----------|
| JT | VERT                    | HORZ                            | DOWN      | HORZ      |
| J  | 3464                    | 0                               | 3464      | 0         |
| Q  | 3179                    | 0                               | 3179      | 0         |

**UNFACTORED REACTIONS**

|    | 1ST LCASE | MAX./MIN. | COMPONENT REACTIONS |           |       |         |       |  |
|----|-----------|-----------|---------------------|-----------|-------|---------|-------|--|
| JT | COMBINED  | SNOW      | LIVE                | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| J  | 2469      | 1511 / 0  | 0 / 0               | 0 / 0     | 0 / 0 | 958 / 0 | 0 / 0 |  |
| Q  | 2264      | 1395 / 0  | 0 / 0               | 0 / 0     | 0 / 0 | 869 / 0 | 0 / 0 |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) J, Q  
BEARING SIZE FACTOR = 1.15 AT JNT(S) J ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.84 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT I-J, H-K

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**  
TOTAL LOAD CASES: (4)

| CHORDS |             |                           |                           | WEBS  |             |                           |          |
|--------|-------------|---------------------------|---------------------------|-------|-------------|---------------------------|----------|
| MEMB.  | FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNBRACED LENGTH (LC) | MEMB. | FORCE (LBS) | MAX. UNBRACED LENGTH (LC) |          |
| FR-TO  |             | FROM TO                   |                           | FR-TO |             |                           |          |
| A-B    | 0 / 42      | -78.0 -78.0               | 0.12 (1)                  | 10.00 | P-C         | -842 / 0                  | 0.32 (1) |
| B-C    | -2619 / 0   | -78.0 -78.0               | 0.22 (1)                  | 4.06  | C-O         | 0 / 3593                  | 0.89 (1) |
| C-D    | -4205 / 0   | -78.0 -78.0               | 0.25 (1)                  | 4.02  | O-D         | -2556 / 0                 | 0.97 (1) |
| D-E    | -6308 / 0   | -78.0 -78.0               | 0.39 (1)                  | 3.25  | D-N         | 0 / 3002                  | 0.74 (1) |
| E-F    | -6308 / 0   | -78.0 -78.0               | 0.55 (1)                  | 3.10  | N-E         | -376 / 0                  | 0.14 (1) |
| F-G    | -6308 / 0   | -78.0 -78.0               | 0.55 (1)                  | 3.10  | N-G         | 0 / 492                   | 0.09 (1) |
| G-R    | -5920 / 0   | -78.0 -78.0               | 0.77 (1)                  | 2.84  | L-G         | -975 / 0                  | 0.37 (1) |
| R-H    | -5920 / 0   | -153.5 -153.5             | 0.77 (1)                  | 2.84  | L-H         | 0 / 2663                  | 0.47 (1) |
| H-I    | -3820 / 0   | -153.5 -153.5             | 0.60 (1)                  | 3.73  | K-H         | -2755 / 0                 | 0.89 (1) |
| J-I    | -3358 / 0   | 0.0 0.0                   | 0.83 (1)                  | 6.12  | K-I         | 0 / 4911                  | 0.87 (1) |
| Q-B    | -3194 / 0   | 0.0 0.0                   | 0.26 (1)                  | 5.87  | B-P         | 0 / 1972                  | 0.49 (1) |

|     |          |               |          |       |
|-----|----------|---------------|----------|-------|
| Q-P | 0 / 0    | -18.5 -18.5   | 0.06 (1) | 10.00 |
| P-O | 0 / 1687 | -18.5 -18.5   | 0.20 (1) | 10.00 |
| O-N | 0 / 4205 | -18.5 -18.5   | 0.42 (1) | 10.00 |
| N-M | 0 / 5920 | -136.1 -136.1 | 0.71 (1) | 10.00 |
| M-L | 0 / 5920 | -136.1 -136.1 | 0.71 (1) | 10.00 |
| L-S | 0 / 3820 | -136.1 -136.1 | 0.45 (1) | 10.00 |
| S-K | 0 / 3820 | -36.4 -36.4   | 0.45 (1) | 10.00 |
| K-J | -101 / 0 | -36.4 -36.4   | 0.11 (4) | 6.25  |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC.   | LC1   | MAX-  | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|--------|-------|-------|------|-------|------|-------|------|-------|
| N  | 12-3-9 | -1578 | -1578 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

**CONNECTION REQUIREMENTS**

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

**DESIGN CRITERIA**

\*\*\* SPECIAL LOADS ANALYSIS \*\*\*  
GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.  
LOADS WERE DERIVED FROM USER INPUT  
NO FURTHER MODIFICATIONS WERE MADE

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN./C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CStdGirder  
START DISTANCE = 12-3-9  
START SPAN CARRIED = 6-10-8  
END DISTANCE = 19-3-0  
END SPAN CARRIED = 6-10-8  
END WALL WIDTH = 0-0  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADD'TL LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip  
LEFT SETBACK = 2-9-0  
RIGHT SETBACK = 0-0  
END SETBACK = 5-10-8  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADD'TL LOADS BASED ON 55 % OF GSL.  
LOADS APPLIED TO FIRST 12-5-0 OF SPAN MEASURED FROM THE RIGHT.

\*\*\* NON STANDARD GIRDER \*\*\*  
ADD'TL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

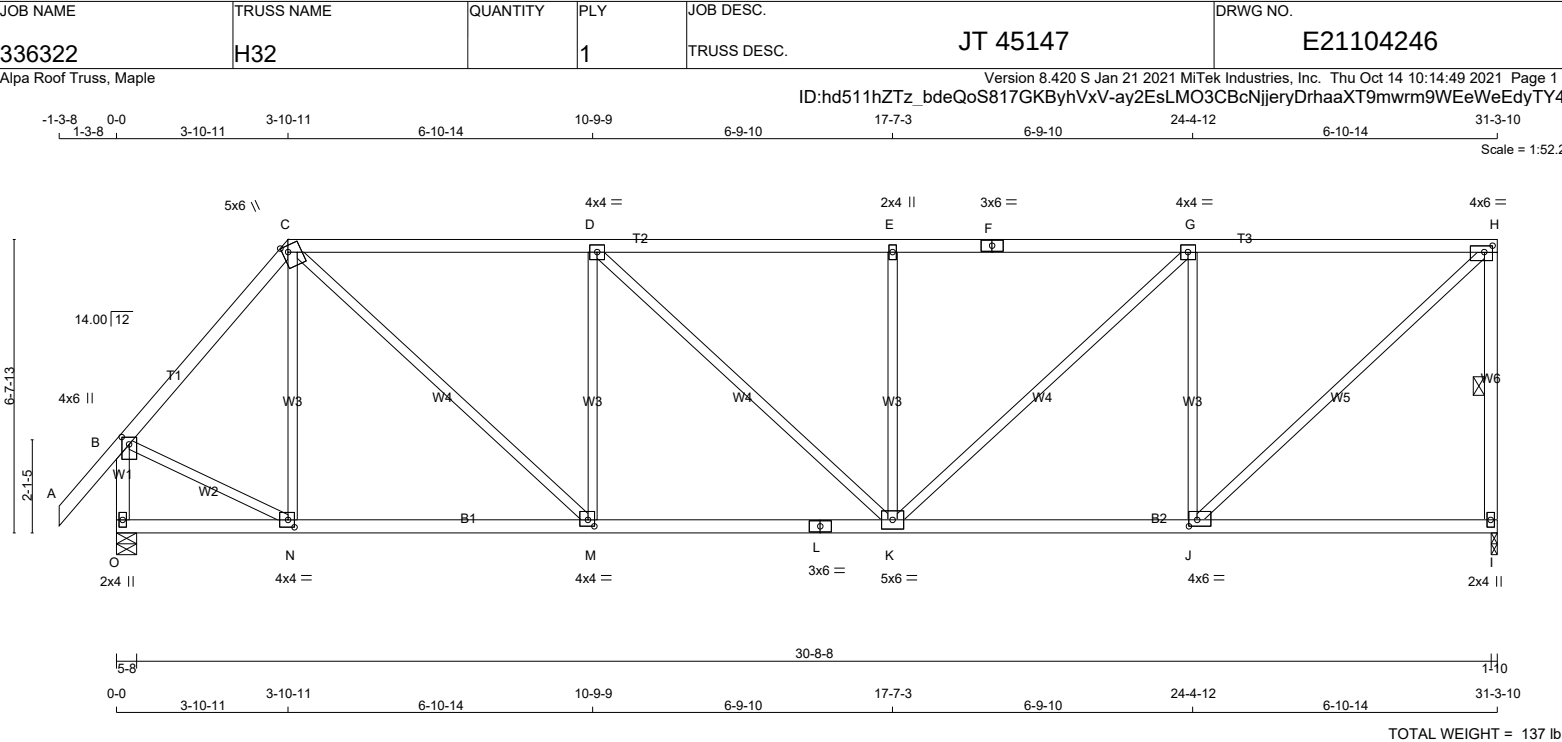
(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.25")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 769 (0.48")

CSI: TC=0.83/1.00 (I-J:1) , BC=0.71/1.00 (L-N:1) , WB=0.97/1.00 (D-O:1) , SSI=0.39/1.00 (H-I:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00

COMPANION LIVE LOAD FACTOR = 1.00



| LUMBER                |      |        |        |
|-----------------------|------|--------|--------|
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - C                 | 2x4  | DRY    | No.2   |
| C - F                 | 2x4  | DRY    | No.2   |
| F - H                 | 2x4  | DRY    | No.2   |
| I - H                 | 2x4  | DRY    | No.2   |
| O - B                 | 2x4  | DRY    | No.2   |
| O - L                 | 2x4  | DRY    | No.2   |
| L - I                 | 2x4  | DRY    | No.2   |
| ALL WEBS EXCEPT       | 2x3  | DRY    | No.2   |
| SPF                   |      |        |        |
| DRY: SEASONED LUMBER. |      |        |        |

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.00 2.00 |
| C                           | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 1.50 |
| D                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| E                           | TMW+w   | MT20   | 2.0 | 4.0 |           |
| F                           | TS-t    | MT20   | 3.0 | 6.0 |           |
| G                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| H                           | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 2.25 |
| I                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| J                           | BMWW-t  | MT20   | 4.0 | 6.0 | 1.75 2.25 |
| K                           | BMWWW-t | MT20   | 5.0 | 6.0 |           |
| L                           | BS-t    | MT20   | 3.0 | 6.0 |           |
| M                           | BMWW-t  | MT20   | 4.0 | 4.0 | 1.75 1.75 |
| N                           | BMWW-t  | MT20   | 4.0 | 4.0 | 2.00 1.75 |
| O                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

LATERAL BRACE(S) SHOWN SHALL BE  
 2X4 SPF#2



### DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

| BEARINGS |      | FACTORED GROSS REACTION |  | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |       | REQRD BRG |  |
|----------|------|-------------------------|--|---------------------------------|------|-----------|-------|-----------|--|
| JT       | VERT | HORZ                    |  | DOWN                            | HORZ | UPLIFT    | IN-SX | IN-SX     |  |
| I        | 1510 | 0                       |  | 1510                            | 0    | 0         | 1-10  | 1-10      |  |
| O        | 1619 | 0                       |  | 1619                            | 0    | 0         | 5-8   | 1-12      |  |

| UNFACTORED REACTIONS |          | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |         |       |  |  |
|----------------------|----------|-----------|-------|-------------------------------|-------|---------|-------|--|--|
| JT                   | COMBINED | SNOW      | LIVE  | PERM.LIVE                     | WIND  | DEAD    | SOIL  |  |  |
| I                    | 1076     | 657 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 419 / 0 | 0 / 0 |  |  |
| O                    | 1152     | 716 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 436 / 0 | 0 / 0 |  |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I, O

**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.07 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF H-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

### LOADING

| CHORDS |                           |                           |                   | WEBS  |                           |                    |          |
|--------|---------------------------|---------------------------|-------------------|-------|---------------------------|--------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRAC LENGTH | FR-TO    |
| FR-TO  |                           | FROM                      | TO                | FR-TO |                           |                    |          |
| A-B    | 0 / 42                    | -78.0                     | -78.0 0.11 (1)    | 10.00 | N-C                       | -247 / 0           | 0.18 (1) |
| B-C    | -1280 / 0                 | -78.0                     | -78.0 0.25 (1)    | 5.43  | C-M                       | 0 / 1255           | 0.28 (1) |
| C-D    | -1750 / 0                 | -78.0                     | -78.0 0.70 (1)    | 4.21  | M-D                       | -718 / 0           | 0.53 (1) |
| D-E    | -1876 / 0                 | -78.0                     | -78.0 0.71 (1)    | 4.08  | D-K                       | 0 / 172            | 0.04 (1) |
| E-F    | -1876 / 0                 | -78.0                     | -78.0 0.71 (1)    | 4.07  | K-E                       | -489 / 0           | 0.36 (1) |
| F-G    | -1876 / 0                 | -78.0                     | -78.0 0.71 (1)    | 4.07  | K-G                       | 0 / 718            | 0.16 (1) |
| G-H    | -1352 / 0                 | -78.0                     | -78.0 0.64 (1)    | 4.71  | J-G                       | -1101 / 0          | 0.81 (1) |
| H-I    | -1458 / 0                 | 0.0                       | 0.0 0.30 (1)      | 5.42  | J-H                       | 0 / 1838           | 0.41 (1) |
| O-B    | -1597 / 0                 | 0.0                       | 0.0 0.19 (1)      | 6.54  | B-N                       | 0 / 904            | 0.20 (1) |
| O-N    | 0 / 0                     | -18.5                     | -18.5 0.13 (4)    | 10.00 |                           |                    |          |
| N-M    | 0 / 825                   | -18.5                     | -18.5 0.25 (4)    | 10.00 |                           |                    |          |
| M-L    | 0 / 1751                  | -18.5                     | -18.5 0.38 (1)    | 10.00 |                           |                    |          |
| L-K    | 0 / 1751                  | -18.5                     | -18.5 0.38 (1)    | 10.00 |                           |                    |          |
| K-J    | 0 / 1352                  | -18.5                     | -18.5 0.34 (4)    | 10.00 |                           |                    |          |
| J-I    | 0 / 0                     | -18.5                     | -18.5 0.21 (4)    | 10.00 |                           |                    |          |

### DESIGN CRITERIA

| SPECIFIED LOADS:      |    |   |          |
|-----------------------|----|---|----------|
| TOP CH.               | LL | = | 21.0 PSF |
|                       | DL | = | 6.0 PSF  |
| BOT CH.               | LL | = | 0.0 PSF  |
|                       | DL | = | 7.4 PSF  |
| TOTAL LOAD = 34.4 PSF |    |   |          |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
 - PART 9 OF BCBC 2018 , ABC 2019  
 - PART 9 OF OBC 2012 (2019 AMENDMENT)  
 - CSA 086-14  
 - TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
 CALCULATED VERT. DEFL.(LL)= L/ 999 (0.09")  
 ALLOWABLE DEFL.(TL)= L/360 (1.04")  
 CALCULATED VERT. DEFL.(TL)= L/ 999 (0.19")

CSI: TC=0.71/1.00 (E-G:1) , BC=0.38/1.00 (K-M:1) , WB=0.81/1.00 (G-J:1) , SSI=0.25/1.00 (G-H:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |           |       |                    |
|-------------|-----------|-------|--------------------|
| PLATE       | GRIP(DRY) | SHEAR | SECTION            |
| (PSI)       | (PLI)     | (PLI) | (PLI)              |
| MAX         | MIN       | MAX   | MIN                |
| MT20        | 650       | 371   | 1747 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

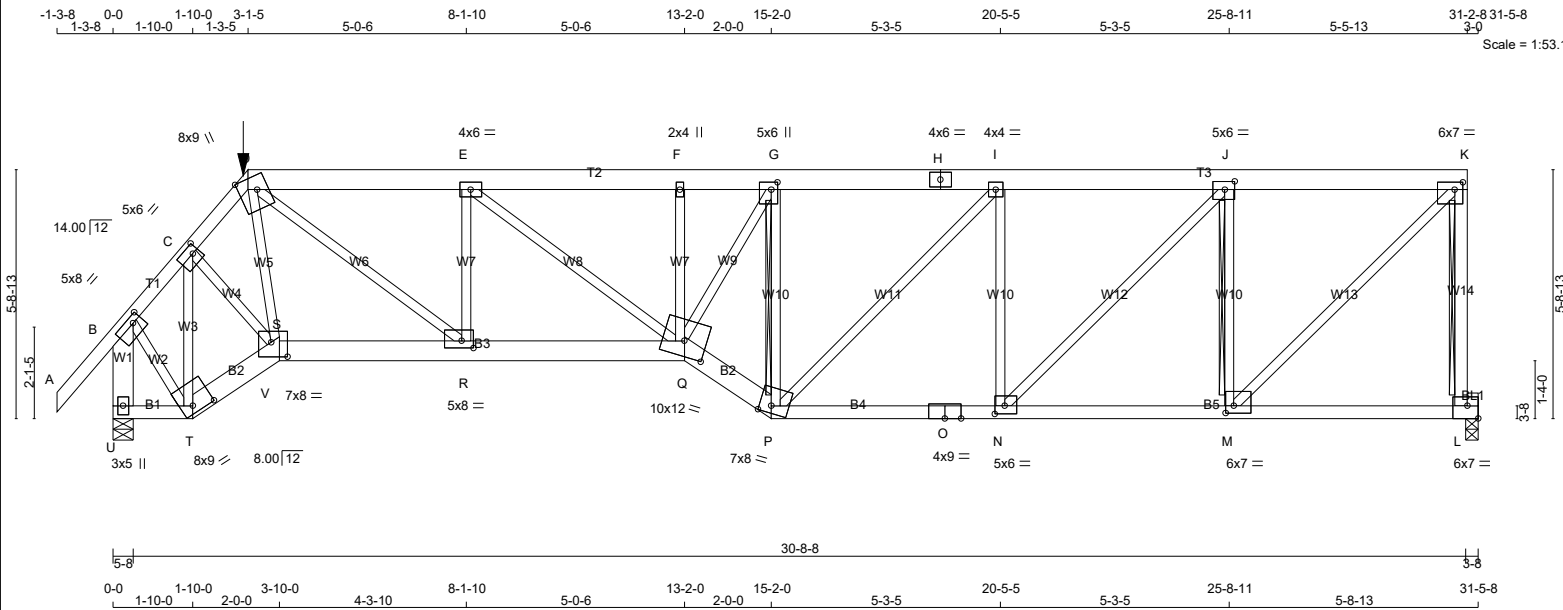
JSI GRIP= 0.90 (H) (INPUT = 0.90 )  
JSI METAL= 0.54 (L) (INPUT = 1.00 )

The diagram illustrates a truss bridge structure with the following components:

- Members:** Labeled T1, T2, T3 (top chords), W1, W2, W3, W4, W5, W6 (web members), and B1, B2 (bottom chords).
- Joints:** Labeled A, B, C, D, E, F, G, H, I, J, K, L, M, N, O.
- Dimensions:**
  - Top chord segments: 1-3-8, 5-0-7, 5-0-7, 6-7-7, 11-7-14, 6-6-3, 18-2-0, 6-6-3, 24-8-3, 6-7-7, 31-3-10.
  - Bottom chord segments: 5-8, 30-8-8, 11-10.
  - Vertical dimensions: 14.00' (from A to O), 11' (from I to H).
- Supports:**
  - Pin support at joint O.
  - Roller support at joint I.
- Member Specifications:**
  - 5x6 (top chord T1, T2, T3)
  - 4x6 (web members W1, W2, W3, W4, W5, W6)
  - 2x4 (bottom chord B1, B2)
  - 4x4 (vertical members W3, W4, W5, W6)
  - 3x6 (diagonal members W1, W2, W3, W4, W5, W6)



JSI GRIP= 0.90 (B) (INPUT = 0.90 )  
JSI METAL= 0.51 (B) (INPUT = 1.00 )



TOTAL WEIGHT = 173 lb

| LUMBER            |      |     |        |        |
|-------------------|------|-----|--------|--------|
| N. L. G. A. RULES |      |     |        |        |
| CHORDS            | SIZE |     | LUMBER | DESCR. |
| A - D             | 2x4  | DRY | No.2   | SPF    |
| D - H             | 2x6  | DRY | No.2   | SPF    |
| H - K             | 2x6  | DRY | No.2   | SPF    |
| L - K             | 2x4  | DRY | No.2   | SPF    |
| U - B             | 2x6  | DRY | No.2   | SPF    |
| U - T             | 2x4  | DRY | No.2   | SPF    |
| T - S             | 2x6  | DRY | No.2   | SPF    |
| S - Q             | 2x6  | DRY | No.2   | SPF    |
| Q - P             | 2x6  | DRY | No.2   | SPF    |
| P - O             | 2x4  | DRY | No.2   | SPF    |
| O - L             | 2x4  | DRY | No.2   | SPF    |

|                |     |     |      |     |
|----------------|-----|-----|------|-----|
| BEARING BLOCKS |     |     |      |     |
| BL1            | 2x4 | DRY | No.2 | SPF |

|                    |     |     |      |     |
|--------------------|-----|-----|------|-----|
| ALL WEBS<br>EXCEPT | 2x3 | DRY | No.2 | SPF |
|--------------------|-----|-----|------|-----|

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |          |        |      |      |      |      |
|-----------------------------|----------|--------|------|------|------|------|
| JT                          | TYPE     | PLATES | W    | LEN  | Y    | X    |
| B                           | TMVW-t   | MT20   | 5.0  | 8.0  | 1.75 | 2.50 |
| C                           | TMVW-t   | MT20   | 5.0  | 6.0  | 2.25 | 1.75 |
| D                           | TTWW+m   | MT20   | 8.0  | 9.0  | Edge | 5.00 |
| E                           | TMVW-t   | MT20   | 4.0  | 6.0  |      |      |
| F                           | TMVW-w   | MT20   | 2.0  | 4.0  |      |      |
| G                           | TMVW+t   | MT20   | 5.0  | 6.0  | 2.00 | 1.75 |
| H                           | TS-t     | MT20   | 4.0  | 6.0  |      |      |
| I                           | TMVW-t   | MT20   | 4.0  | 4.0  |      |      |
| J                           | TMVW-t   | MT20   | 5.0  | 6.0  | 2.25 | 2.75 |
| K                           | TMVW-t   | MT20   | 6.0  | 7.0  | 2.00 | 2.25 |
| L                           | BMVK-1   | MT20   | 6.0  | 7.0  | 3.50 | Edge |
| M                           | BMVW-t   | MT20   | 6.0  | 7.0  | 2.00 | 2.25 |
| N                           | BMVW-t   | MT20   | 5.0  | 6.0  | 2.25 | 2.75 |
| O                           | BS-t     | MT20   | 4.0  | 9.0  |      |      |
| P                           | BBVW-m   | MT20   | 7.0  | 8.0  | 2.00 | 3.25 |
| Q                           | BBVW-w-m | MT20   | 10.0 | 12.0 | 4.25 | 6.00 |
| R                           | BMVW-t   | MT20   | 5.0  | 8.0  | 2.00 | 2.25 |
| S                           | BBVW-l   | MT20   | 7.0  | 8.0  | 4.00 | 4.50 |
| T                           | BBVW-h   | MT20   | 8.0  | 9.0  | 2.00 | 5.75 |
| U                           | BMV1+p   | MT20   | 3.0  | 5.0  |      |      |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| JT | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|-------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX       |
| L  | 3219                       | 0    | 3219                               | 0    | 0      | 3-8          | 3-8         |
| U  | 3341                       | 0    | 3341                               | 0    | 0      | 5-8          | 5-6         |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| L         | 2294     | 1403 / 0                      | 0 / 0 | 0 / 0     | 0 / 0 | 891 / 0 | 0 / 0 |
| U         | 2382     | 1457 / 0                      | 0 / 0 | 0 / 0     | 0 / 0 | 925 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, U  
BEARING SIZE FACTOR = 1.15 AT JNT(S) L ( BASED ON SUPPORT DEPTH = 1-8 )

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.17 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

2x3 DRY SPF No.2 T-BRACE AT K-L  
2x4 DRY SPF No.2 T-BRACE AT G-P, J-M

FASTEN T AND I-BRACES TO NARROW EDGE OF WEB WITH ONE ROW PER PLY OF 3" COMMON WIRE NAILS @ 6" O.C. WITH 3" MINIMUM END DISTANCE. BRACE MUST COVER 90% OF WEB LENGTH.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

### LOADING

TOTAL LOAD CASES: (4)

| C H O R D S   |             |                  |                   | W E B S       |       |             |               |
|---------------|-------------|------------------|-------------------|---------------|-------|-------------|---------------|
| MAX. FACTORED |             | FACTORED         |                   | MAX. FACTORED |       |             |               |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MAX. UNBRAC   | MEMB. | FORCE (LBS) | MAX. CSI (LC) |
| FR-TO         |             | FROM TO          |                   | LENGTH        | FR-TO |             |               |
| A-B           | 0 / 42      | -78.0            | -78.0 0.12 (1)    | 10.00         | T-C   | -2136 / 0   | 0.57 (1)      |
| B-C           | -2312 / 0   | -78.0            | -78.0 0.19 (1)    | 4.30          | C-S   | 0 / 1429    | 0.35 (1)      |
| C-D           | -3624 / 0   | -78.0            | -78.0 0.22 (1)    | 3.49          | D-S   | 0 / 284     | 0.07 (1)      |
| D-E           | -5028 / 0   | -78.0            | -78.0 0.32 (1)    | 3.67          | D-R   | 0 / 3308    | 0.82 (1)      |
| E-F           | -6177 / 0   | -78.0            | -78.0 0.48 (1)    | 3.17          | R-E   | -1383 / 0   | 0.37 (1)      |
| F-G           | -6176 / 0   | -78.0            | -78.0 0.42 (1)    | 3.22          | E-Q   | 0 / 1457    | 0.36 (1)      |
| G-H           | -4748 / 0   | -165.7           | -165.7 0.43 (1)   | 3.62          | Q-F   | -411 / 1    | 0.01 (1)      |
| H-I           | -4748 / 0   | -165.7           | -165.7 0.43 (1)   | 3.62          | Q-G   | 0 / 3162    | 0.78 (1)      |
| I-J           | -4247 / 0   | -165.7           | -165.7 0.47 (1)   | 3.74          | P-G   | -3450 / 0   | 0.85 (1)      |
| J-K           | -2738 / 0   | -165.7           | -165.7 0.39 (1)   | 4.61          | P-I   | 0 / 711     | 0.18 (1)      |
| L-K           | -3135 / 0   | 0.0              | 0.0 0.97 (1)      | 6.35          | N-I   | -1375 / 0   | 0.66 (1)      |
| U-B           | -3305 / 0   | 0.0              | 0.0 0.28 (1)      | 5.79          | N-J   | 0 / 2150    | 0.53 (1)      |
|               |             |                  |                   |               | M-J   | -2520 / 0   | 0.62 (1)      |
| U-T           | 0 / 0       | -39.3            | -39.3 0.04 (4)    | 10.00         | M-K   | 0 / 3947    | 0.98 (1)      |
| T-V           | 0 / 1711    | -147.8           | -147.8 0.27 (1)   | 10.00         | B-T   | 0 / 1995    | 0.49 (1)      |
| V-S           | 0 / 1711    | -127.0           | -127.0 0.27 (1)   | 10.00         |       |             |               |
| S-R           | 0 / 2425    | -127.0           | -127.0 0.49 (1)   | 10.00         |       |             |               |
| R-Q           | 0 / 5028    | -127.0           | -127.0 0.87 (1)   | 10.00         |       |             |               |
| Q-P           | 0 / 5680    | -127.0           | -127.0 0.78 (1)   | 10.00         |       |             |               |
| P-O           | 0 / 4247    | -39.3            | -39.3 0.86 (1)    | 10.00         |       |             |               |
| O-N           | 0 / 4247    | -39.3            | -39.3 0.86 (1)    | 10.00         |       |             |               |
| N-M           | 0 / 2738    | -39.3            | -39.3 0.64 (1)    | 10.00         |       |             |               |
| M-L           | -85 / 0     | -39.3            | -39.3 0.28 (4)    | 6.25          |       |             |               |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC.  | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|-------|------|------|------|-------|------|-------|------|-------|
| D  | 3-1-5 | -202 | -202 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

## CONNECTION REQUIREMENTS

1) **C1:** A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

## DESIGN CRITERIA

SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHlp  
LEFT SETBACK = 3-1-5  
RIGHT SETBACK = 0-0  
END SETBACK = 6-6-0  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADDTL LOADS BASED ON 55 % OF GSL.  
LOADS APPLIED TO FIRST 3-1-5 OF SPAN  
MEASURED FROM THE LEFT.

GIRDER TYPE: CStdGirder  
START DISTANCE = 1-10-0  
START SPAN CARRIED = 6-6-0  
END DISTANCE = 15-2-0  
END SPAN CARRIED = 6-6-0  
END WALL WIDTH = 0-0  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADD'L LOADS BASED ON 55 % OF GSL.

GIRDER TYPE: CPrimeHip  
LEFT SETBACK = 3-1-5  
RIGHT SETBACK = 0-0  
END SETBACK = 6-6-0  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADD'T'L LOADS BASED ON 55 % OF GSL.  
LOADS APPLIED TO FIRST 16-3-8 OF SPAN  
MEASURED FROM THE RIGHT.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

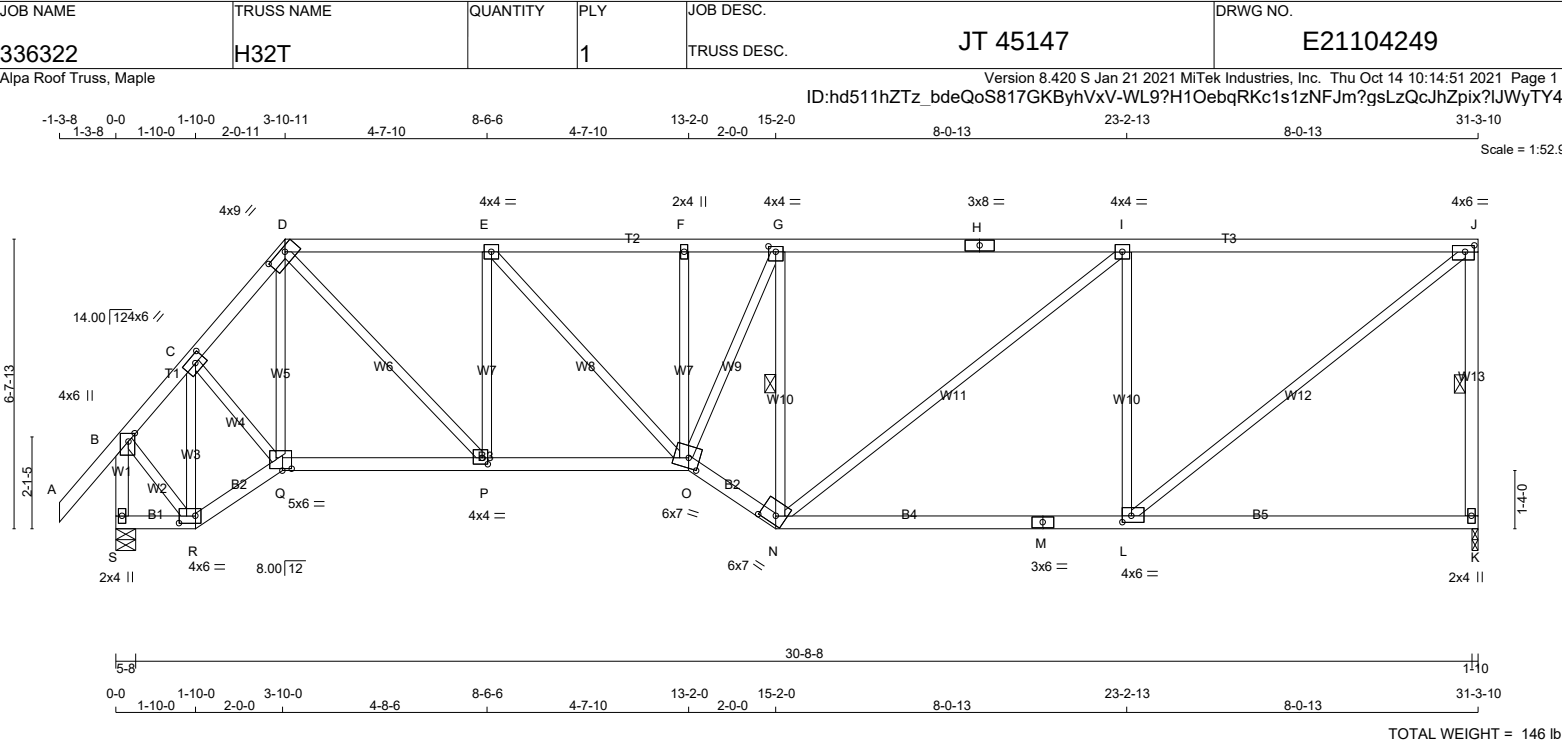
DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.26")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 729 (0.51")

CSI: TC=0.97/1.00 (K-L:1) , BC=0.87/1.00 (Q-R:1) ,  
WB=0.98/1.00 (K-M:1) . SSI=0.35/1.00 (J-K:1)

CONTINUED ON PAGE 2



|                   |      |        |                                                                                               |          |                  |                  |        |       |
|-------------------|------|--------|-----------------------------------------------------------------------------------------------|----------|------------------|------------------|--------|-------|
| LUMBER            |      |        | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |          |                  | DESIGN CRITERIA  |        |       |
| N. L. G. A. RULES |      |        | BEARINGS                                                                                      |          |                  | SPECIFIED LOADS: |        |       |
| CHORDS            | SIZE | LUMBER | DESCR.                                                                                        | FACTORED | MAXIMUM FACTORED | INPUT            | REQRD  |       |
| A - D             | 2x4  | DRY    | No.2                                                                                          | SPF      | GROSS REACTION   | BRG              | BRG    |       |
| D - H             | 2x4  | DRY    | 1650F 1.5E                                                                                    | SPF      | DOWN             | HORZ             | UPLIFT | IN-SX |
| H - J             | 2x4  | DRY    | 1650F 1.5E                                                                                    | SPF      | 1507             | 0                | 0      | 1-10  |
| K - J             | 2x4  | DRY    | No.2                                                                                          | SPF      | 1622             | 0                | 0      | 5-8   |
| S - B             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        | 1-12  |
| S - R             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| R - Q             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| Q - O             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| O - N             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| N - M             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| M - K             | 2x4  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| ALL WEBS          | 2x3  | DRY    | No.2                                                                                          | SPF      |                  |                  |        |       |
| EXCEPT            |      |        |                                                                                               |          |                  |                  |        |       |

DRY: SEASONED LUMBER.

|                             |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| PLATES (table is in inches) |         |        |     |     |      |      |
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 1.75 |
| C                           | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.75 |
| D                           | TTWW-h  | MT20   | 4.0 | 9.0 | 1.25 | 5.50 |
| E                           | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| F                           | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| G                           | TMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 2.00 |
| H                           | TS-t    | MT20   | 3.0 | 8.0 |      |      |
| I                           | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| J                           | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.50 |
| K                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| L                           | BMWW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.50 |
| M                           | BS-t    | MT20   | 3.0 | 6.0 |      |      |
| N                           | BBWW-h  | MT20   | 6.0 | 7.0 | 2.25 | 4.25 |
| O                           | BBWWW-m | MT20   | 6.0 | 7.0 | 2.75 | 3.00 |
| P                           | BMWW-t  | MT20   | 4.0 | 4.0 | 1.75 | 1.50 |
| Q                           | BBWW-l  | MT20   | 5.0 | 6.0 | 0.50 | 2.50 |
| R                           | BBWW-l  | MT20   | 4.0 | 6.0 | 2.00 | 4.50 |
| S                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



|                                                                                                                    |                           |                           |       |          |                      |       |                           |          |          |
|--------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|-------|----------|----------------------|-------|---------------------------|----------|----------|
| 1 LATERAL BRACE(S) AT 1/2 LENGTH OF J-K, G-N.                                                                      |                           |                           |       |          |                      |       |                           |          |          |
| END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW |                           |                           |       |          |                      |       |                           |          |          |
| LOADING                                                                                                            |                           |                           |       |          |                      |       |                           |          |          |
| TOTAL LOAD CASES: (4)                                                                                              |                           |                           |       |          |                      |       |                           |          |          |
| CHORDS                                                                                                             |                           |                           |       |          |                      |       |                           |          |          |
| MEMB.                                                                                                              | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX      | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX      | CSi (LC) |
| FR-TO                                                                                                              |                           | FROM TO                   |       |          |                      | FR-TO |                           |          |          |
| A-B                                                                                                                | 0 / 42                    | -78.0                     | -78.0 | 0.11 (1) | 10.00                | R-C   | -1003 / 0                 | 0.25 (1) |          |
| B-C                                                                                                                | -1042 / 0                 | -78.0                     | -78.0 | 0.12 (1) | 6.02                 | C-Q   | 0 / 596                   | 0.13 (1) |          |
| C-D                                                                                                                | -1585 / 0                 | -78.0                     | -78.0 | 0.09 (1) | 5.17                 | Q-D   | 0 / 50                    | 0.02 (4) |          |
| D-E                                                                                                                | -1898 / 0                 | -78.0                     | -78.0 | 0.25 (1) | 5.19                 | D-P   | 0 / 1288                  | 0.29 (1) |          |
| E-F                                                                                                                | -2295 / 0                 | -78.0                     | -78.0 | 0.26 (1) | 4.82                 | P-E   | -848 / 0                  | 0.36 (1) |          |
| F-G                                                                                                                | -2293 / 0                 | -78.0                     | -78.0 | 0.34 (1) | 4.68                 | E-O   | 0 / 584                   | 0.13 (1) |          |
| G-H                                                                                                                | -1901 / 0                 | -78.0                     | -78.0 | 0.82 (1) | 4.37                 | O-F   | -109 / 0                  | 0.05 (1) |          |
| H-I                                                                                                                | -1901 / 0                 | -78.0                     | -78.0 | 0.82 (1) | 4.37                 | O-G   | 0 / 1074                  | 0.24 (1) |          |
| I-J                                                                                                                | -1527 / 0                 | -78.0                     | -78.0 | 0.77 (1) | 4.79                 | N-G   | -1467 / 0                 | 0.42 (1) |          |
| K-J                                                                                                                | -1450 / 0                 | 0.0                       | 0.0   | 0.29 (1) | 5.43                 | N-I   | 0 / 476                   | 0.11 (1) |          |
| S-B                                                                                                                | -1605 / 0                 | 0.0                       | 0.0   | 0.19 (1) | 6.52                 | L-I   | -1023 / 0                 | 0.75 (1) |          |
|                                                                                                                    |                           |                           |       |          |                      | L-J   | 0 / 1944                  | 0.44 (1) |          |
| S-R                                                                                                                | 0 / 0                     | -18.5                     | -18.5 | 0.02 (4) | 10.00                | B-R   | 0 / 903                   | 0.20 (1) |          |
| R-Q                                                                                                                | 0 / 757                   | -18.5                     | -18.5 | 0.13 (1) | 10.00                |       |                           |          |          |
| Q-P                                                                                                                | 0 / 1021                  | -18.5                     | -18.5 | 0.22 (1) | 10.00                |       |                           |          |          |
| P-O                                                                                                                | 0 / 1898                  | -18.5                     | -18.5 | 0.36 (1) | 10.00                |       |                           |          |          |
| O-N                                                                                                                | 0 / 2256                  | -18.5                     | -18.5 | 0.38 (1) | 10.00                |       |                           |          |          |
| N-M                                                                                                                | 0 / 1527                  | -18.5                     | -18.5 | 0.49 (4) | 10.00                |       |                           |          |          |
| M-L                                                                                                                | 0 / 1527                  | -18.5                     | -18.5 | 0.49 (4) | 10.00                |       |                           |          |          |
| L-K                                                                                                                | 0 / 0                     | -18.5                     | -18.5 | 0.34 (4) | 10.00                |       |                           |          |          |

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")

CALCULATED VERT. DEFL.(LL) = L/ 999 (0.12")

ALLOWABLE DEFL.(TL)= L/360 (1.04")

CALCULATED VERT. DEFL.(TL) = L/ 999 (0.27")

CSI: TC=0.82/1.00 (G-I:1) , BC=0.49/1.00 (L-N:4) , WB=0.75/1.00 (I-L:1) , SSI=0.30/1.00 (I-J:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10

COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

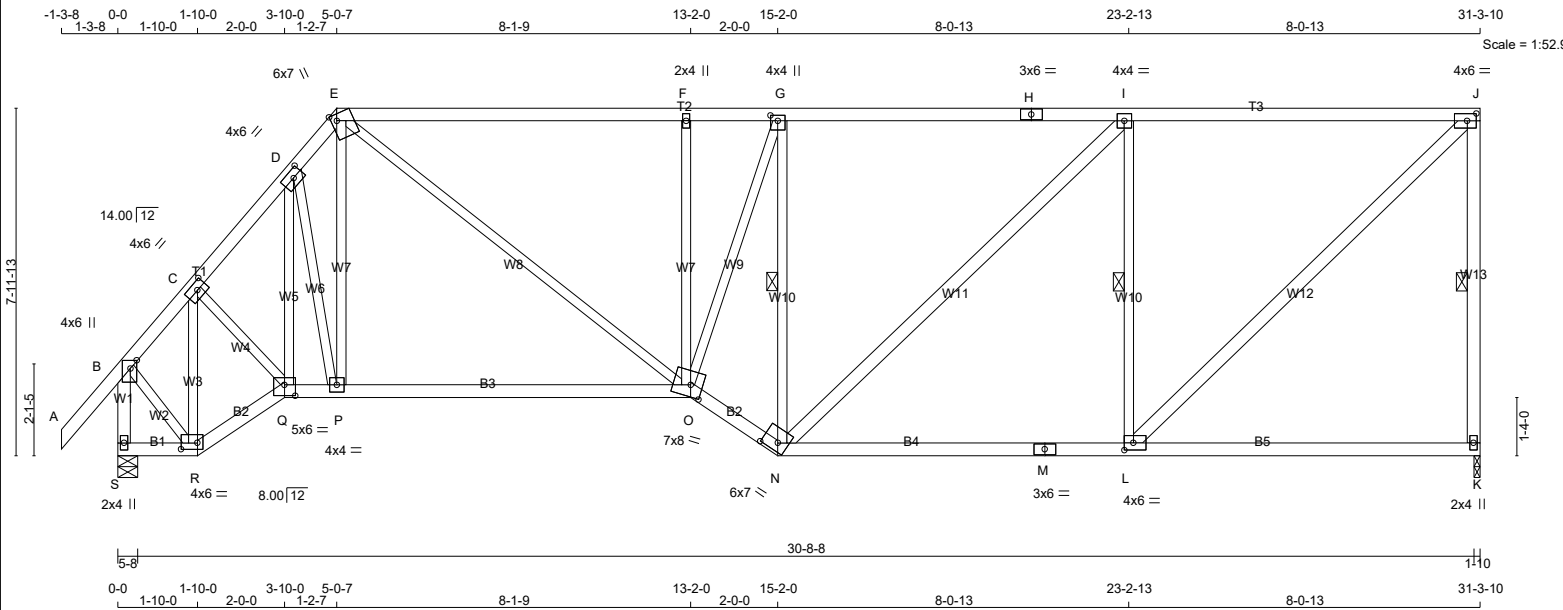
|       |           |          |           |
|-------|-----------|----------|-----------|
| PLATE | GRIP(DRY) | SHEAR    | SECTION   |
|       | (PSI)     | (PLI)    | (PLI)     |
|       | MAX MIN   | MAX MIN  | MAX MIN   |
| MT20  | 650 371   | 1747 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (R) (INPUT = 0.90 )

JSI METAL= 0.44 (N) (INPUT = 1.00 )



TOTAL WEIGHT = 163 lb

| LUMBER            |      |                |       |
|-------------------|------|----------------|-------|
| N. L. G. A. RULES |      |                |       |
| CHORDS            | SIZE | LUMBER         | DESCR |
| A - E             | 2x4  | DRY No.2       | SPF   |
| E - H             | 2x4  | DRY 1650F 1.5E | SPF   |
| H - J             | 2x4  | DRY 1650F 1.5E | SPF   |
| K - J             | 2x4  | DRY No.2       | SPF   |
| S - B             | 2x4  | DRY No.2       | SPF   |
| S - R             | 2x4  | DRY No.2       | SPF   |
| R - Q             | 2x4  | DRY No.2       | SPF   |
| Q - O             | 2x4  | DRY No.2       | SPF   |
| O - N             | 2x4  | DRY No.2       | SPF   |
| N - M             | 2x4  | DRY No.2       | SPF   |
| M - K             | 2x4  | DRY No.2       | SPF   |
| ALL WEBS EXCEPT   | 2x3  | DRY No.2       | SPF   |
| N - I             | 2x4  | DRY No.2       | SPF   |
| L - J             | 2x4  | DRY No.2       | SPF   |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |        |        |     |     |           |
|-----------------------------|--------|--------|-----|-----|-----------|
| JT                          | TYPE   | PLATES | W   | LEN | Y X       |
| B                           | TMVW+p | MT20   | 4.0 | 6.0 | 2.25 1.75 |
| C                           | TMVW-t | MT20   | 4.0 | 6.0 | 2.00 2.75 |
| D                           | TMVW-t | MT20   | 4.0 | 6.0 | 2.00 2.75 |
| E                           | TTWV+m | MT20   | 6.0 | 7.0 | Edge 1.50 |
| F                           | TMVW+w | MT20   | 2.0 | 4.0 |           |
| G                           | TMVW+t | MT20   | 4.0 | 4.0 | 1.50 2.00 |
| H                           | TS-t   | MT20   | 3.0 | 6.0 |           |
| I                           | TMVW-t | MT20   | 4.0 | 4.0 |           |
| J                           | TMVW-t | MT20   | 4.0 | 6.0 | 2.00 2.50 |
| K                           | BMV1+p | MT20   | 2.0 | 4.0 |           |
| L                           | BMVW-t | MT20   | 4.0 | 6.0 | 2.00 2.50 |
| M                           | BS-t   | MT20   | 3.0 | 6.0 |           |
| N                           | BBVW-h | MT20   | 6.0 | 7.0 | 2.25 3.25 |
| O                           | BBVW-m | MT20   | 7.0 | 8.0 | 3.25 4.25 |
| P                           | BMVW-t | MT20   | 4.0 | 4.0 |           |
| Q                           | BBVW-l | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| R                           | BBVW-l | MT20   | 4.0 | 6.0 | 1.75 4.50 |
| S                           | BMV1-p | MT20   | 2.0 | 4.0 |           |

Edge - INDICATES REFERENCE CORNER OF PLATE  
TOUCHES EDGE OF CHORD.

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**  
**BEARINGS**

|    | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
| JT | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| K  | 1507                       | 0    | 1507                               | 0    | 0      | 1-10         | 1-10         |
| S  | 1622                       | 0    | 1622                               | 0    | 0      | 5-8          | 1-12         |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| K         | 1075     | 656 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 419 / 0 | 0 / 0 |
| S         | 1154     | 717 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 437 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) K, S

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.68 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF J-K, G-N, I-L.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

## LOADING

**TOTAL LOAD CASES: (4)**

| C H O R D S   |             |                  |                  | W E B S       |       |             |              |          |
|---------------|-------------|------------------|------------------|---------------|-------|-------------|--------------|----------|
| MAX. FACTORED |             | FACTORED         |                  | MAX. FACTORED |       |             |              |          |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC   | MEMB. | FORCE (LBS) | MAX CSI (LC) |          |
| FR-TO         |             | FROM TO          |                  | LENGTH        | FR-TO |             |              |          |
| A-B           | 0 / 42      | -78.0            | -78.0            | 0.11 (1)      | 10.00 | R-C         | -1005 / 0    | 0.26 (1) |
| B-C           | -1042 / 0   | -78.0            | -78.0            | 0.12 (1)      | 6.02  | C-Q         | 0 / 605      | 0.14 (1) |
| C-D           | -1579 / 0   | -78.0            | -78.0            | 0.09 (1)      | 5.18  | Q-D         | -92 / 0      | 0.04 (1) |
| D-E           | -1606 / 0   | -78.0            | -78.0            | 0.04 (1)      | 5.19  | D-P         | -84 / 29     | 0.04 (1) |
| E-F           | -1885 / 0   | -78.0            | -78.0            | 0.68 (1)      | 4.68  | P-E         | 0 / 271      | 0.07 (4) |
| F-G           | -1876 / 0   | -78.0            | -78.0            | 0.54 (1)      | 4.68  | E-O         | 0 / 1093     | 0.25 (1) |
| G-H           | -1565 / 0   | -78.0            | -78.0            | 0.79 (1)      | 4.69  | O-F         | -547 / 0     | 0.40 (1) |
| H-I           | -1565 / 0   | -78.0            | -78.0            | 0.79 (1)      | 4.69  | O-G         | 0 / 1041     | 0.23 (1) |
| I-J           | -1264 / 0   | -78.0            | -78.0            | 0.76 (1)      | 5.13  | N-G         | -1241 / 0    | 0.50 (1) |
| K-J           | -1450 / 0   | 0.0              | 0.0              | 0.42 (1)      | 5.40  | N-I         | 0 / 415      | 0.07 (1) |
| S-B           | -1605 / 0   | 0.0              | 0.0              | 0.19 (1)      | 6.52  | L-I         | -1024 / 0    | 0.41 (1) |
|               |             |                  |                  |               |       | L-J         | 0 / 1747     | 0.28 (1) |
|               |             |                  |                  |               |       | B-R         | 0 / 904      | 0.20 (1) |
| S-R           | 0 / 0       | -18.5            | -18.5            | 0.02 (4)      | 10.00 |             |              |          |
| R-Q           | 0 / 758     | -18.5            | -18.5            | 0.13 (1)      | 10.00 |             |              |          |
| Q-P           | 0 / 1032    | -18.5            | -18.5            | 0.40 (4)      | 10.00 |             |              |          |
| P-O           | 0 / 1021    | -18.5            | -18.5            | 0.40 (4)      | 10.00 |             |              |          |
| O-N           | 0 / 1861    | -18.5            | -18.5            | 0.31 (1)      | 10.00 |             |              |          |
| N-M           | 0 / 1264    | -18.5            | -18.5            | 0.47 (4)      | 10.00 |             |              |          |
| M-L           | 0 / 1264    | -18.5            | -18.5            | 0.47 (4)      | 10.00 |             |              |          |
| L-K           | 0 / 0       | -18.5            | -18.5            | 0.35 (4)      | 10.00 |             |              |          |

## DESIGN CRITERIA

SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")

CSI: TC=0.79/1.00 (G-I:1) , BC=0.47/1.00 (L-N:4) ,  
WB=0.50/1.00 (G-N:1) , SSI=0.30/1.00 (I-J:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |           |     |       |     |           |
|-------------|-----------|-----|-------|-----|-----------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION   |
|             | (PSI)     |     | (PLI) |     | (PLI)     |
|             | MAX       | MIN | MAX   | MIN | MAX MIN   |
| MT20        | 650       | 371 | 1747  | 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

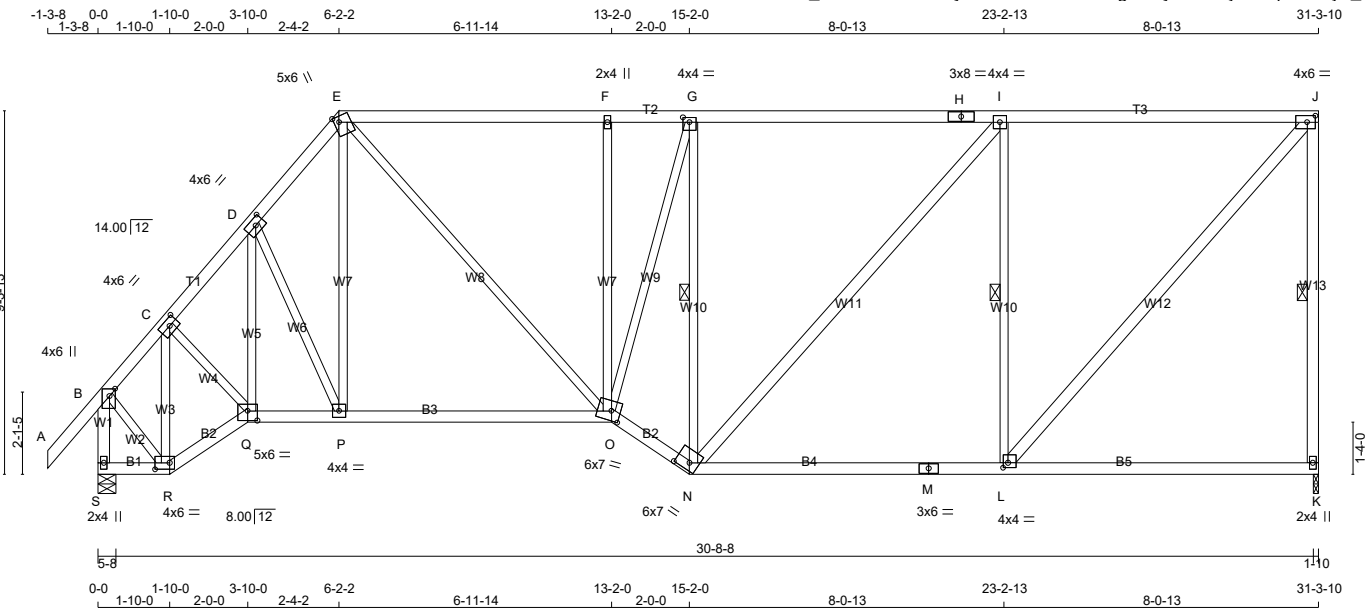
JSI GRIP= 0.90 (E) (INPUT = 0.90 )  
JSI METAL= 0.40 (R) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H34T       |          | 1   | TRUSS DESC. JT 45147 | E21104251 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:14:57 2021 Page 1

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TOTAL WEIGHT = 173 lb

|                   |      |          |        |
|-------------------|------|----------|--------|
| <b>LUMBER</b>     |      |          |        |
| N. L. G. A. RULES |      |          |        |
| CHORDS            | SIZE | LUMBER   | DESCR. |
| A - E             | 2x4  | DRY No.2 | SPF    |
| A - H             | 2x4  | DRY No.2 | SPF    |
| H - J             | 2x4  | DRY No.2 | SPF    |
| K - J             | 2x4  | DRY No.2 | SPF    |
| S - B             | 2x4  | DRY No.2 | SPF    |
| S - R             | 2x4  | DRY No.2 | SPF    |
| R - Q             | 2x4  | DRY No.2 | SPF    |
| Q - O             | 2x4  | DRY No.2 | SPF    |
| O - N             | 2x4  | DRY No.2 | SPF    |
| N - M             | 2x4  | DRY No.2 | SPF    |
| M - K             | 2x4  | DRY No.2 | SPF    |
| ALL WEBS          | 2x3  | DRY No.2 | SPF    |
| EXCEPT            |      |          |        |
| N - I             | 2x4  | DRY No.2 | SPF    |
| L - J             | 2x4  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| B                                  | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 1.75 |
| C                                  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 2.75 |
| D                                  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 2.75 |
| E                                  | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 1.50 |
| F                                  | TMW+w   | MT20   | 2.0 | 4.0 |           |
| G                                  | TMWW-t  | MT20   | 4.0 | 4.0 | 1.50 2.00 |
| H                                  | TS-t    | MT20   | 3.0 | 8.0 |           |
| I                                  | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| J                                  | TMVW-t  | MT20   | 4.0 | 6.0 | 2.00 2.50 |
| K                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| L                                  | BMWW-t  | MT20   | 4.0 | 4.0 | 1.50 1.50 |
| M                                  | BS-t    | MT20   | 3.0 | 6.0 |           |
| N                                  | BBWW-h  | MT20   | 6.0 | 7.0 | 2.25 4.25 |
| O                                  | BBWWW-m | MT20   | 6.0 | 7.0 | 3.00 2.75 |
| P                                  | BMWW-t  | MT20   | 4.0 | 4.0 |           |
| Q                                  | BBWW-t  | MT20   | 5.0 | 6.0 | 3.00 3.00 |
| R                                  | BBWW-t  | MT20   | 4.0 | 6.0 | 2.00 4.50 |
| S                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|                 |      |                         |  |                                 |      |        |       |       |  |
|-----------------|------|-------------------------|--|---------------------------------|------|--------|-------|-------|--|
| <b>BEARINGS</b> |      | FACTORED GROSS REACTION |  | MAXIMUM FACTORED GROSS REACTION |      | INPUT  |       | REQRD |  |
| JT              | VERT | HORZ                    |  | DOWN                            | HORZ | UPLIFT | IN-SX | IN-SX |  |
| K               | 1507 | 0                       |  | 1507                            | 0    | 0      | 1-10  | 1-10  |  |
| S               | 1622 | 0                       |  | 1622                            | 0    | 0      | 5-8   | 1-12  |  |

|                             |          |           |       |                               |       |         |       |  |  |
|-----------------------------|----------|-----------|-------|-------------------------------|-------|---------|-------|--|--|
| <b>UNFACTORED REACTIONS</b> |          | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |         |       |  |  |
| JT                          | COMBINED | SNOW      | LIVE  | PERM.LIVE                     | WIND  | DEAD    | SOIL  |  |  |
| K                           | 1075     | 656 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 419 / 0 | 0 / 0 |  |  |
| S                           | 1154     | 717 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 437 / 0 | 0 / 0 |  |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) K, S

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.97 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF J-K, G-N, I-L.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

|                |             |                       |         |          |                    |       |             |               |  |
|----------------|-------------|-----------------------|---------|----------|--------------------|-------|-------------|---------------|--|
| <b>LOADING</b> |             | TOTAL LOAD CASES: (4) |         |          |                    |       |             |               |  |
| <b>CHORDS</b>  |             | MAX. FACTORED         |         | FACTORED |                    | WEBS  |             | MAX. FACTORED |  |
| MEMB.          | FORCE (LBS) | VERT. LOAD (PLF)      | LC1 MAX | CS1 (LC) | MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX CS1 (LC)  |  |
| FR-TO          |             | FROM TO               |         |          |                    | FR-TO |             |               |  |
| A-B            | 0 / 42      | -78.0                 | -78.0   | 0.11 (1) | 10.00              | R-C   | -1000 / 0   | 0.25 (1)      |  |
| B-C            | -1043 / 0   | -78.0                 | -78.0   | 0.12 (1) | 6.02               | C-Q   | 0 / 620     | 0.14 (1)      |  |
| C-D            | -1578 / 0   | -78.0                 | -78.0   | 0.08 (1) | 5.19               | Q-D   | -35 / 0     | 0.01 (1)      |  |
| D-E            | -1529 / 0   | -78.0                 | -78.0   | 0.08 (1) | 5.26               | D-P   | -135 / 0    | 0.07 (1)      |  |
| E-F            | -1538 / 0   | -78.0                 | -78.0   | 0.56 (1) | 4.64               | P-E   | 0 / 247     | 0.06 (4)      |  |
| F-G            | -1533 / 0   | -78.0                 | -78.0   | 0.45 (1) | 4.69               | E-O   | 0 / 824     | 0.19 (1)      |  |
| G-H            | -1336 / 0   | -78.0                 | -78.0   | 0.96 (1) | 3.97               | O-F   | -419 / 0    | 0.51 (1)      |  |
| H-I            | -1336 / 0   | -78.0                 | -78.0   | 0.96 (1) | 3.97               | O-G   | 0 / 793     | 0.18 (1)      |  |
| I-J            | -1077 / 0   | -78.0                 | -78.0   | 0.92 (1) | 4.38               | N-G   | -1093 / 0   | 0.62 (1)      |  |
| K-J            | -1450 / 0   | 0.0                   | 0.0     | 0.59 (1) | 5.43               | N-I   | 0 / 387     | 0.06 (1)      |  |
| S-B            | -1605 / 0   | 0.0                   | 0.0     | 0.19 (1) | 6.52               | L-I   | -1023 / 0   | 0.58 (1)      |  |
| S-R            | 0 / 0       | -18.5                 | -18.5   | 0.02 (4) | 10.00              | L-J   | 0 / 1617    | 0.26 (1)      |  |
| R-Q            | 0 / 754     | -18.5                 | -18.5   | 0.13 (1) | 10.00              | B-R   | 0 / 900     | 0.20 (1)      |  |
| Q-P            | 0 / 1036    | -18.5                 | -18.5   | 0.30 (4) | 10.00              |       |             |               |  |
| P-O            | 0 / 982     | -18.5                 | -18.5   | 0.29 (4) | 10.00              |       |             |               |  |
| O-N            | 0 / 1590    | -18.5                 | -18.5   | 0.27 (1) | 10.00              |       |             |               |  |
| N-M            | 0 / 1078    | -18.5                 | -18.5   | 0.45 (4) | 10.00              |       |             |               |  |
| M-L            | 0 / 1078    | -18.5                 | -18.5   | 0.45 (4) | 10.00              |       |             |               |  |
| L-K            | 0 / 0       | -18.5                 | -18.5   | 0.35 (4) | 10.00              |       |             |               |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.09")

CSI: TC=0.96/1.00 (G-I:1) , BC=0.45/1.00 (L-N:4) , WB=0.62/1.00 (G-N:1) , SSI=0.30/1.00 (I-J:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

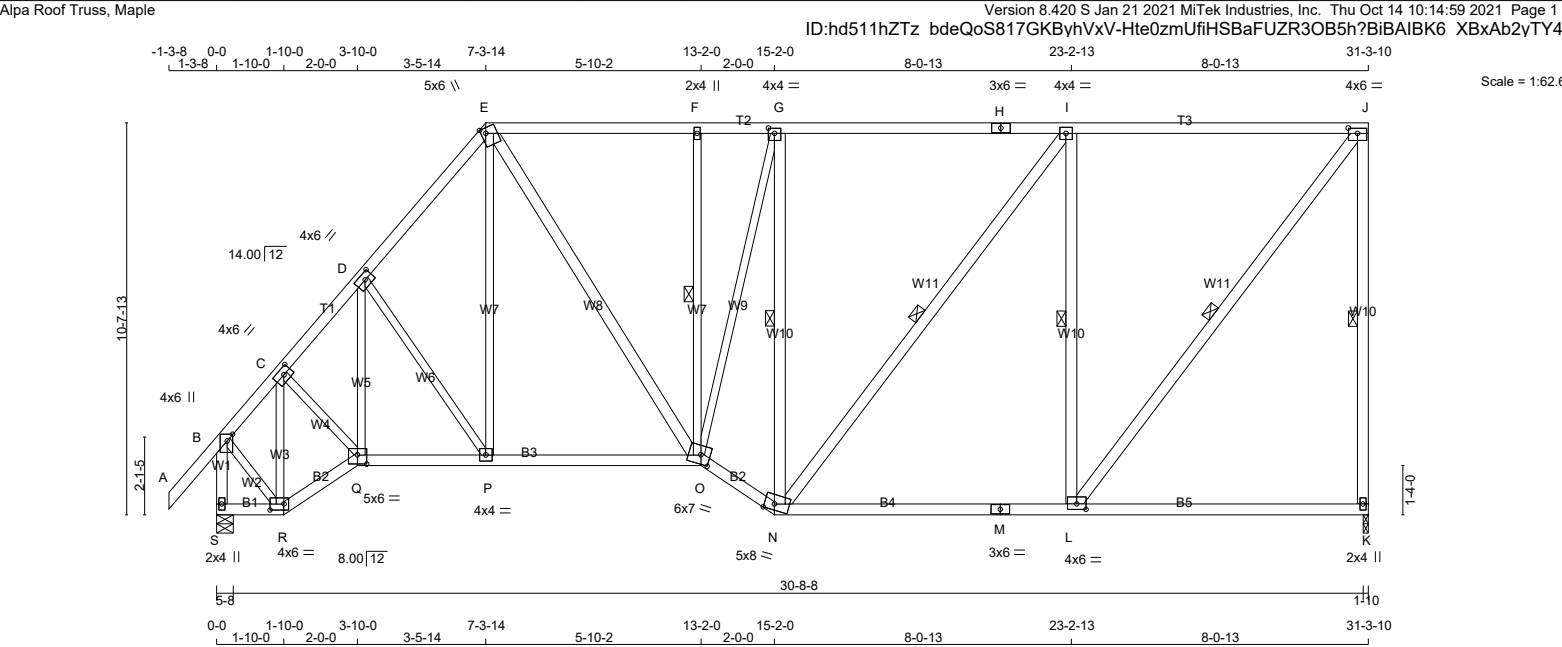
|                    |           |          |           |  |  |
|--------------------|-----------|----------|-----------|--|--|
| <b>NAIL VALUES</b> |           |          |           |  |  |
| PLATE              | GRIP(DRY) | SHEAR    | SECTION   |  |  |
|                    | (PSI)     | (PLI)    | (PLI)     |  |  |
|                    | MAX MIN   | MAX MIN  | MAX MIN   |  |  |
| MT20               | 650 371   | 1747 788 | 1987 1873 |  |  |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (O) (INPUT = 0.90 )  
JSI METAL= 0.40 (R) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H35T       |          | 1   | TRUSS DESC. JT 45147 | E21104252 |



| LUMBER          |      |        |        | N. L. G. A. RULES |      |        |        |
|-----------------|------|--------|--------|-------------------|------|--------|--------|
| CHORDS          | SIZE | LUMBER | DESCR. | CHORDS            | SIZE | LUMBER | DESCR. |
| A - E           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| E - H           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| H - J           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| K - J           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| S - B           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| S - R           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| R - Q           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| Q - O           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| O - N           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| N - M           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| M - K           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| ALL WEBS EXCEPT | 2x3  | DRY    | No.2   | SPF               |      |        |        |
| E - O           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| N - G           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| N - I           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| L - I           | 2x4  | DRY    | No.2   | SPF               |      |        |        |
| L - J           | 2x4  | DRY    | No.2   | SPF               |      |        |        |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |        |     |     |      |      |
|-----------------------------|--------|-----|-----|------|------|
| JT TYPE                     | PLATES | W   | LEN | Y    | X    |
| B TMVW+p                    | MT20   | 4.0 | 6.0 | 2.25 | 1.75 |
| C TMWW-t                    | MT20   | 4.0 | 6.0 | 2.00 | 2.75 |
| D TMWW-t                    | MT20   | 4.0 | 6.0 | 2.00 | 2.75 |
| E TTWW+m                    | MT20   | 5.0 | 6.0 | 1.75 | 1.50 |
| F TMW+w                     | MT20   | 2.0 | 4.0 |      |      |
| G TMWW-t                    | MT20   | 4.0 | 4.0 | 1.75 | 2.00 |
| H TS-t                      | MT20   | 3.0 | 6.0 |      |      |
| I TMWW-t                    | MT20   | 4.0 | 4.0 |      |      |
| J TMVW-t                    | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| K BMV1+p                    | MT20   | 2.0 | 4.0 |      |      |
| L BMWW-t                    | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| M BS-t                      | MT20   | 3.0 | 6.0 |      |      |
| N BBWW-m                    | MT20   | 5.0 | 8.0 | 2.00 | 3.25 |
| O BBWW-m                    | MT20   | 6.0 | 7.0 | 3.00 | 3.00 |
| P BMWW-t                    | MT20   | 4.0 | 4.0 |      |      |
| Q BBWW-l                    | MT20   | 5.0 | 6.0 | 3.00 | 3.00 |
| R BBWW-l                    | MT20   | 4.0 | 6.0 | 2.00 | 4.50 |
| S BMV1+p                    | MT20   | 2.0 | 4.0 |      |      |

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| BEARINGS |      | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |        | INPUT |       | REQRD |       |
|----------|------|-------------------------|------|---------------------------------|--------|-------|-------|-------|-------|
| JT       | VERT | HORZ                    | DOWN | HORZ                            | UPLIFT | IN-SX | IN-SX | BRG   | IN-SX |
| K        | 1507 | 0                       | 1507 | 0                               | 0      | 1-10  | 1-10  |       |       |
| S        | 1622 | 0                       | 1622 | 0                               | 0      | 5-8   | 1-12  |       |       |

| UNFACTORED REACTIONS |          | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |
|----------------------|----------|-----------|-------|-------------------------------|-------|
| JT                   | COMBINED | SNOW      | LIVE  | PERM.LIVE                     | WIND  |
| K                    | 1075     | 656 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 |
| S                    | 1154     | 717 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) K, S

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.26 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF J-K, F-O, G-N, I-N, I-L, J-L.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**  
TOTAL LOAD CASES: (4)

| CHORDS |             | FACTORED         |                  | WEBS               |       | FACTORED    |              |
|--------|-------------|------------------|------------------|--------------------|-------|-------------|--------------|
| MEMB.  | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |             | FROM TO          |                  |                    | FR-TO |             |              |
| A-B    | 0 / 42      | -78.0 -78.0      | 0.11 (1)         | 10.00              | R-C   | -995 / 0    | 0.25 (1)     |
| B-C    | -1043 / 0   | -78.0 -78.0      | 0.12 (1)         | 6.02               | C-Q   | 0 / 637     | 0.14 (1)     |
| C-D    | -1572 / 0   | -78.0 -78.0      | 0.14 (1)         | 5.13               | Q-D   | -23 / 24    | 0.01 (1)     |
| D-E    | -1470 / 0   | -78.0 -78.0      | 0.15 (1)         | 5.27               | D-P   | -183 / 0    | 0.12 (1)     |
| E-F    | -1297 / 0   | -78.0 -78.0      | 0.38 (1)         | 5.21               | P-E   | 0 / 255     | 0.06 (4)     |
| F-G    | -1293 / 0   | -78.0 -78.0      | 0.37 (1)         | 5.18               | E-O   | 0 / 649     | 0.10 (1)     |
| G-H    | -1166 / 0   | -78.0 -78.0      | 0.92 (1)         | 4.26               | O-F   | -306 / 0    | 0.17 (1)     |
| H-I    | -1166 / 0   | -78.0 -78.0      | 0.92 (1)         | 4.26               | O-G   | 0 / 611     | 0.14 (1)     |
| I-J    | -938 / 0    | -78.0 -78.0      | 0.88 (1)         | 4.69               | N-G   | -982 / 0    | 0.56 (1)     |
| K-J    | -1451 / 0   | 0.0 0.0          | 0.83 (1)         | 5.43               | N-I   | 0 / 369     | 0.06 (1)     |
| S-B    | -1605 / 0   | 0.0 0.0          | 0.19 (1)         | 6.52               | L-I   | -1022 / 0   | 0.58 (1)     |
|        |             |                  |                  |                    | L-J   | 0 / 1527    | 0.25 (1)     |
| S-R    | 0 / 0       | -18.5 -18.5      | 0.02 (4)         | 10.00              | B-R   | 0 / 895     | 0.20 (1)     |
| R-Q    | 0 / 751     | -18.5 -18.5      | 0.13 (1)         | 10.00              |       |             |              |
| Q-P    | 0 / 1044    | -18.5 -18.5      | 0.24 (1)         | 10.00              |       |             |              |
| P-O    | 0 / 943     | -18.5 -18.5      | 0.23 (1)         | 10.00              |       |             |              |
| O-N    | 0 / 1384    | -18.5 -18.5      | 0.24 (1)         | 10.00              |       |             |              |
| N-M    | 0 / 938     | -18.5 -18.5      | 0.44 (4)         | 10.00              |       |             |              |
| M-L    | 0 / 938     | -18.5 -18.5      | 0.44 (4)         | 10.00              |       |             |              |
| L-K    | 0 / 0       | -18.5 -18.5      | 0.35 (4)         | 10.00              |       |             |              |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.18")

CSI: TC=0.92/1.00 (G-I:1) , BC=0.44/1.00 (L-N:4) , WB=0.58/1.00 (I-L:1) , SSI=0.30/1.00 (I-J:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

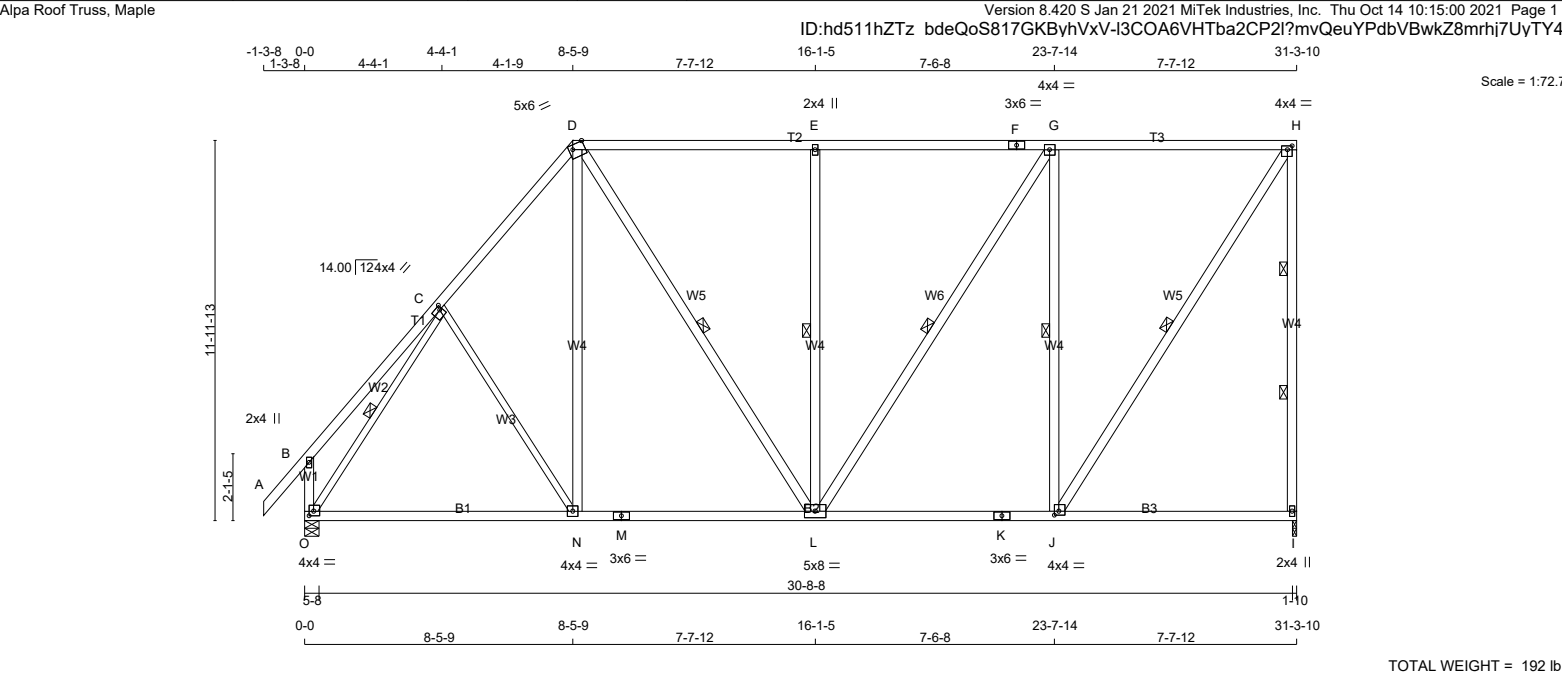
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (R) (INPUT = 0.90 )  
JSI METAL= 0.40 (R) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336322   | H36        |          | 1   | TRUSS DESC. JT 45147 | E21104253 |

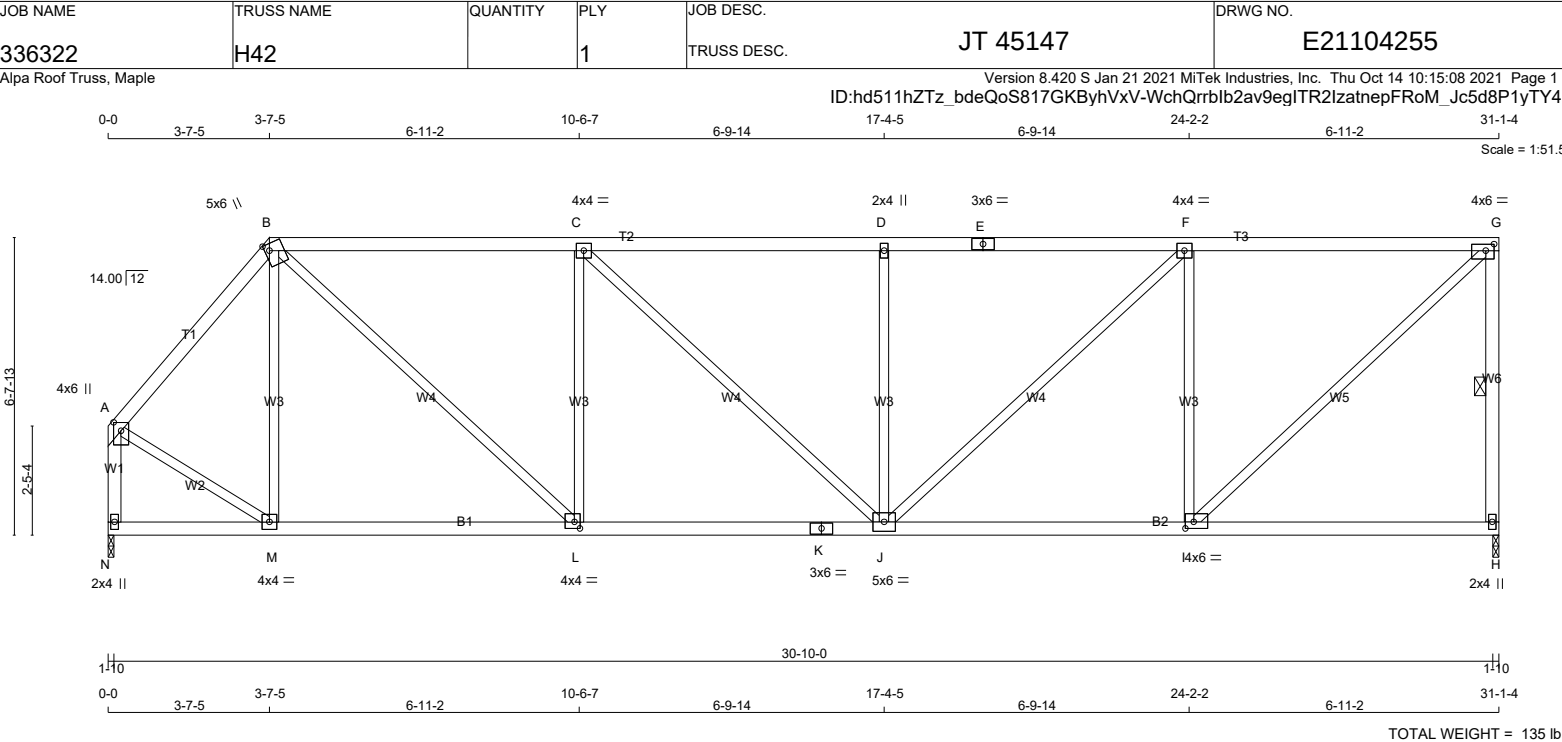


Scale = 1:51.9



1) **C1:** A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

JSI GRIP= 0.90 (G) (INPUT = 0.90 )  
JSI METAL= 0.99 (L) (INPUT = 1.00 )



| LUMBER                |      |        |        |
|-----------------------|------|--------|--------|
| N. L. G. A. RULES     |      |        |        |
| CHORDS                | SIZE | LUMBER | DESCR. |
| A - B                 | 2x4  | DRY    | No.2   |
| B - E                 | 2x4  | DRY    | No.2   |
| E - G                 | 2x4  | DRY    | No.2   |
| H - G                 | 2x4  | DRY    | No.2   |
| N - A                 | 2x4  | DRY    | No.2   |
| N - K                 | 2x4  | DRY    | No.2   |
| K - H                 | 2x4  | DRY    | No.2   |
| ALL WEBS EXCEPT       | 2x3  | DRY    | No.2   |
| SPF                   |      |        |        |
| DRY: SEASONED LUMBER. |      |        |        |

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| A                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| B                           | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 1.25 |
| C                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| D                           | TMW+w   | MT20   | 2.0 | 4.0 |           |
| E                           | TS-t    | MT20   | 3.0 | 6.0 |           |
| F                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| G                           | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 2.25 |
| H                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| I                           | BMWW-t  | MT20   | 4.0 | 6.0 | 1.75 2.25 |
| J                           | BMWWW-t | MT20   | 5.0 | 6.0 |           |
| K                           | BS-t    | MT20   | 3.0 | 6.0 |           |
| L                           | BMWW-t  | MT20   | 4.0 | 4.0 | 1.75 1.50 |
| M                           | BMWW-t  | MT20   | 4.0 | 4.0 |           |
| N                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

| FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT |        | REQRD     |       |
|-------------------------|------|---------------------------------|------|-------|--------|-----------|-------|
| JT                      | VERT | HORZ                            | DOWN | HORZ  | UPLIFT | BRG IN-SX | IN-SX |
| H                       | 1500 | 0                               | 1500 | 0     | 0      | 1-10      | 1-10  |
| N                       | 1500 | 0                               | 1500 | 0     | 0      | 1-10      | 1-10  |

| UNFACTORED REACTIONS |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----------------------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT                   | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H                    | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |
| N                    | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N

BRACING  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.08 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF G-H.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

LOADING  
TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |               | WEBS  |                           |               |          |
|--------|---------------------------|---------------------------|---------------|-------|---------------------------|---------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |          |
| FR-TO  |                           | FROM TO                   |               | FR-TO |                           |               |          |
| A- B   | -1195 / 0                 | -78.0 -78.0               | 0.21 (1)      | 5.62  | M- B                      | -318 / 0      | 0.23 (1) |
| B- C   | -1715 / 0                 | -78.0 -78.0               | 0.70 (1)      | 4.24  | B- L                      | 0 / 1283      | 0.29 (1) |
| C- D   | -1857 / 0                 | -78.0 -78.0               | 0.71 (1)      | 4.09  | L- C                      | -735 / 0      | 0.54 (1) |
| D- E   | -1857 / 0                 | -78.0 -78.0               | 0.71 (1)      | 4.08  | C- J                      | 0 / 194       | 0.04 (1) |
| E- F   | -1857 / 0                 | -78.0 -78.0               | 0.71 (1)      | 4.08  | J- D                      | -490 / 0      | 0.36 (1) |
| F- G   | -1345 / 0                 | -78.0 -78.0               | 0.65 (1)      | 4.71  | J- F                      | 0 / 701       | 0.16 (1) |
| H- G   | -1449 / 0                 | 0.0 0.0                   | 0.29 (1)      | 5.43  | I- F                      | -1091 / 0     | 0.80 (1) |
| N- A   | -1482 / 0                 | 0.0 0.0                   | 0.19 (1)      | 6.73  | I- G                      | 0 / 1826      | 0.41 (1) |
|        |                           |                           |               |       | A- M                      | 0 / 885       | 0.20 (1) |
| N- M   | 0 / 0                     | -18.5 -18.5               | 0.13 (4)      | 10.00 |                           |               |          |
| M- L   | 0 / 768                   | -18.5 -18.5               | 0.25 (4)      | 10.00 |                           |               |          |
| L- K   | 0 / 1716                  | -18.5 -18.5               | 0.37 (1)      | 10.00 |                           |               |          |
| K- J   | 0 / 1716                  | -18.5 -18.5               | 0.37 (1)      | 10.00 |                           |               |          |
| J- I   | 0 / 1345                  | -18.5 -18.5               | 0.34 (4)      | 10.00 |                           |               |          |
| I- H   | 0 / 0                     | -18.5 -18.5               | 0.21 (4)      | 10.00 |                           |               |          |

DESIGN CRITERIA

| SPECIFIED LOADS:      |    |   |          |
|-----------------------|----|---|----------|
| TOP CH.               | LL | = | 21.0 PSF |
|                       | DL | = | 6.0 PSF  |
| BOT CH.               | LL | = | 0.0 PSF  |
|                       | DL | = | 7.4 PSF  |
| TOTAL LOAD = 34.4 PSF |    |   |          |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.09")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.19")

CSI: TC=0.71/1.00 (D-F:1) , BC=0.37/1.00 (J-L:1) , WB=0.80/1.00 (F-I:1) , SSI=0.25/1.00 (F-G:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |                 |             |               |
|-------------|-----------------|-------------|---------------|
| PLATE       | GRIP(DRY) (PSI) | SHEAR (PLI) | SECTION (PLI) |
|             | MAX             | MIN         | MAX           |
| MT20        | 650             | 371         | 1747          |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (G) (INPUT = 0.90 )  
JSI METAL= 0.51 (K) (INPUT = 1.00 )

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 10:15:11 2021 Page 1  
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| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| A                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| B                           | TTWW+m  | MT20   | 5.0 | 6.0 | 1.75 | 1.50 |
| C                           | TMWV-t  | MT20   | 4.0 | 4.0 |      |      |
| D                           | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| E                           | TS-t    | MT20   | 3.0 | 6.0 |      |      |
| F                           | TMWV-t  | MT20   | 4.0 | 4.0 |      |      |
| G                           | TMVW-t  | MT20   | 4.0 | 6.0 | 1.50 | 3.00 |
| H                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| I                           | BMWV-t  | MT20   | 4.0 | 6.0 | 1.50 | 3.00 |
| J                           | BMWVW-t | MT20   | 5.0 | 6.0 |      |      |
| K                           | BS-t    | MT20   | 3.0 | 6.0 |      |      |
| L                           | BMWV-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| M                           | BMWV-t  | MT20   | 4.0 | 4.0 |      |      |
| N                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

|    | FACTORED       |      | MAXIMUM FACTORED |      |        | INPUT | REQD  |
|----|----------------|------|------------------|------|--------|-------|-------|
|    | GROSS REACTION |      | GROSS REACTION   |      |        | BRG   | BRG   |
|    | VERT           | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |
| JT | 1500           | 0    | 1500             | 0    | 0      | 1-10  | 1-10  |
| H  | 1500           | 0    | 1500             | 0    | 0      | 1-10  | 1-10  |
| N  | 1500           | 0    | 1500             | 0    | 0      | 1-10  | 1-10  |

| 1ST CASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT       | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H        | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |
| N        | 1070     | 653 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 417 / 0 | 0 / 0 |

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.57 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF G-H, F-I.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                  | WEBS               |       |                           |              |
|--------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 (LC) |
| FR-TO  |                           | FROM                      | TO               |                    | FR-TO |                           |              |
| A-B    | -1236 / 0                 | -78.0                     | -78.0 0.38 (1)   | 5.35               | M-B   | -224 / 0                  | 0.27 (1)     |
| B-C    | -1463 / 0                 | -78.0                     | -78.0 0.60 (1)   | 4.64               | B-L   | 0 / 1014                  | 0.23 (1)     |
| C-D    | -1517 / 0                 | -78.0                     | -78.0 0.61 (1)   | 4.57               | L-C   | -643 / 0                  | 0.78 (1)     |
| D-E    | -1517 / 0                 | -78.0                     | -78.0 0.60 (1)   | 4.57               | C-J   | 0 / 84                    | 0.02 (1)     |
| E-F    | -1517 / 0                 | -78.0                     | -78.0 0.60 (1)   | 4.57               | J-D   | -470 / 0                  | 0.57 (1)     |
| F-G    | -1075 / 0                 | -78.0                     | -78.0 0.56 (1)   | 5.27               | J-F   | 0 / 682                   | 0.15 (1)     |
| H-G    | -1451 / 0                 | 0.0                       | 0.0 0.42 (1)     | 5.43               | I-F   | -1107 / 0                 | 0.44 (1)     |
| N-A    | -1468 / 0                 | 0.0                       | 0.0 0.19 (1)     | 6.76               | I-G   | 0 / 1646                  | 0.37 (1)     |
|        |                           |                           |                  |                    | A-M   | 0 / 871                   | 0.20 (1)     |
| N-M    | 0 / 0                     | -18.5                     | -18.5 0.14 (4)   | 10.00              |       |                           |              |
| M-L    | 0 / 798                   | -18.5                     | -18.5 0.24 (4)   | 10.00              |       |                           |              |
| L-K    | 0 / 1463                  | -18.5                     | -18.5 0.32 (1)   | 10.00              |       |                           |              |
| K-J    | 0 / 1463                  | -18.5                     | -18.5 0.32 (1)   | 10.00              |       |                           |              |
| J-I    | 0 / 1075                  | -18.5                     | -18.5 0.30 (4)   | 10.00              |       |                           |              |
| I-H    | 0 / 0                     | -18.5                     | -18.5 0.20 (4)   | 10.00              |       |                           |              |



SPECIFIED LOADS:

|            |     |    |   |      |          |
|------------|-----|----|---|------|----------|
| TOP        | CH. | LL | = | 21.0 | PSF      |
|            |     | DL | = | 6.0  | PSF      |
| BOT        | CH. | LL | = | 0.0  | PSF      |
|            |     | DL | = | 7.4  | PSF      |
| TOTAL LOAD |     |    |   | =    | 34.4 PSF |

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9, NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)=  $L/360$  (1.04")  
 CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.07")  
 ALLOWABLE DEFL.(TL)=  $L/360$  (1.04")  
 CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.15")

CSI: TC=0.61/1.00 (C-D:1) , BC=0.32/1.00 (J-L:1) ,  
WB=0.78/1.00 (C-L:1) , SSI=0.24/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

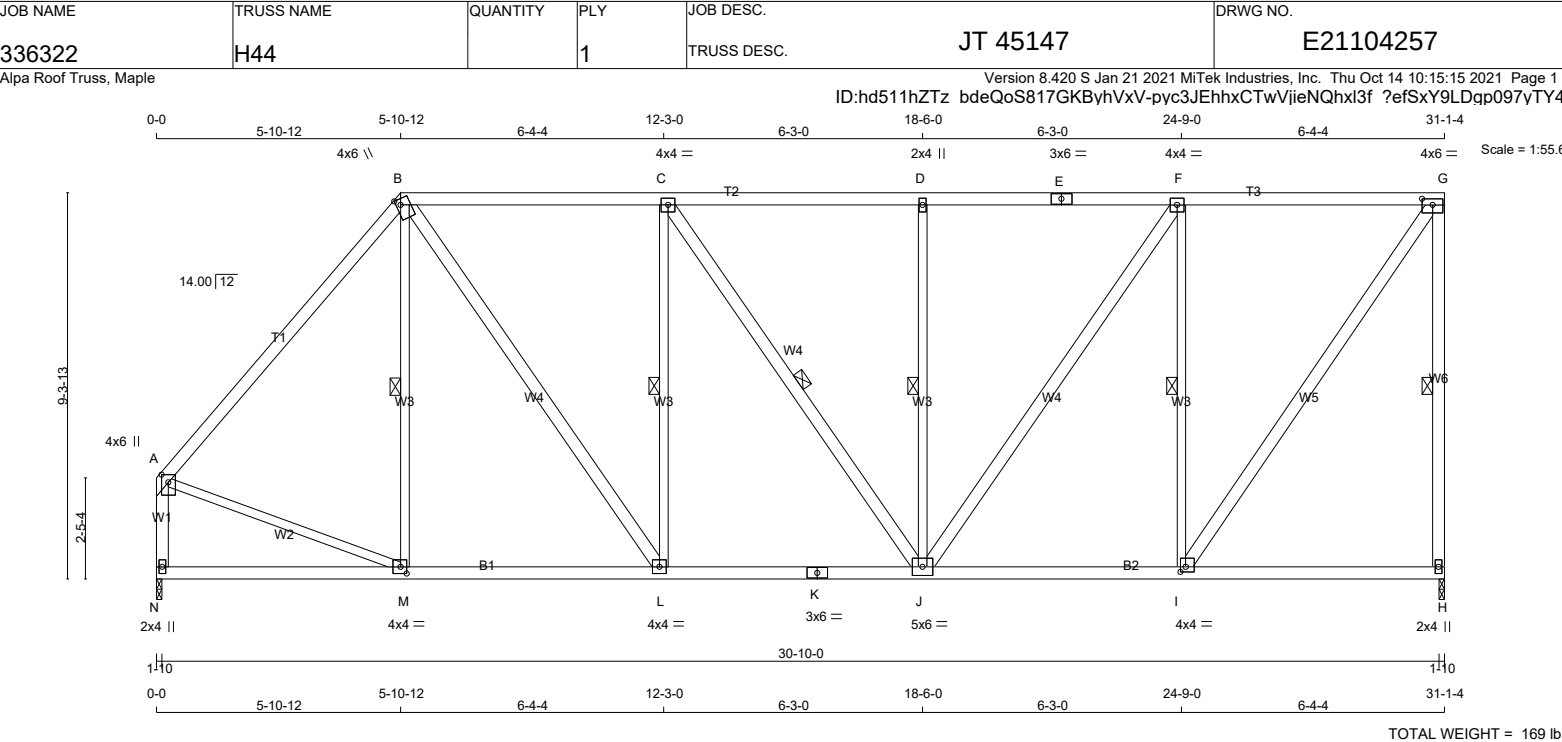
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

| NAIL VALUES |           |     |       |     |         |      |
|-------------|-----------|-----|-------|-----|---------|------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION |      |
|             | (PSI)     |     | (PLI) |     | (PLI)   |      |
|             | MAX       | MIN | MAX   | MIN | MAX     | MIN  |
| MT20        | 650       | 371 | 1747  | 788 | 1987    | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (M) (INPUT = 0.90 )  
JSI METAL= 0.49 (K) (INPUT = 1.00 )



| LUMBER                |      |        |        |     |
|-----------------------|------|--------|--------|-----|
| N. L. G. A. RULES     |      |        |        |     |
| CHORDS                | SIZE | LUMBER | DESCR. |     |
| A - B                 | 2x4  | DRY    | No.2   | SPF |
| B - E                 | 2x4  | DRY    | No.2   | SPF |
| E - G                 | 2x4  | DRY    | No.2   | SPF |
| H - G                 | 2x4  | DRY    | No.2   | SPF |
| N - A                 | 2x4  | DRY    | No.2   | SPF |
| N - K                 | 2x4  | DRY    | No.2   | SPF |
| K - H                 | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS EXCEPT       | 2x3  | DRY    | No.2   | SPF |
| B - L                 | 2x4  | DRY    | No.2   | SPF |
| C - J                 | 2x4  | DRY    | No.2   | SPF |
| J - F                 | 2x4  | DRY    | No.2   | SPF |
| I - G                 | 2x4  | DRY    | No.2   | SPF |
| DRY: SEASONED LUMBER. |      |        |        |     |

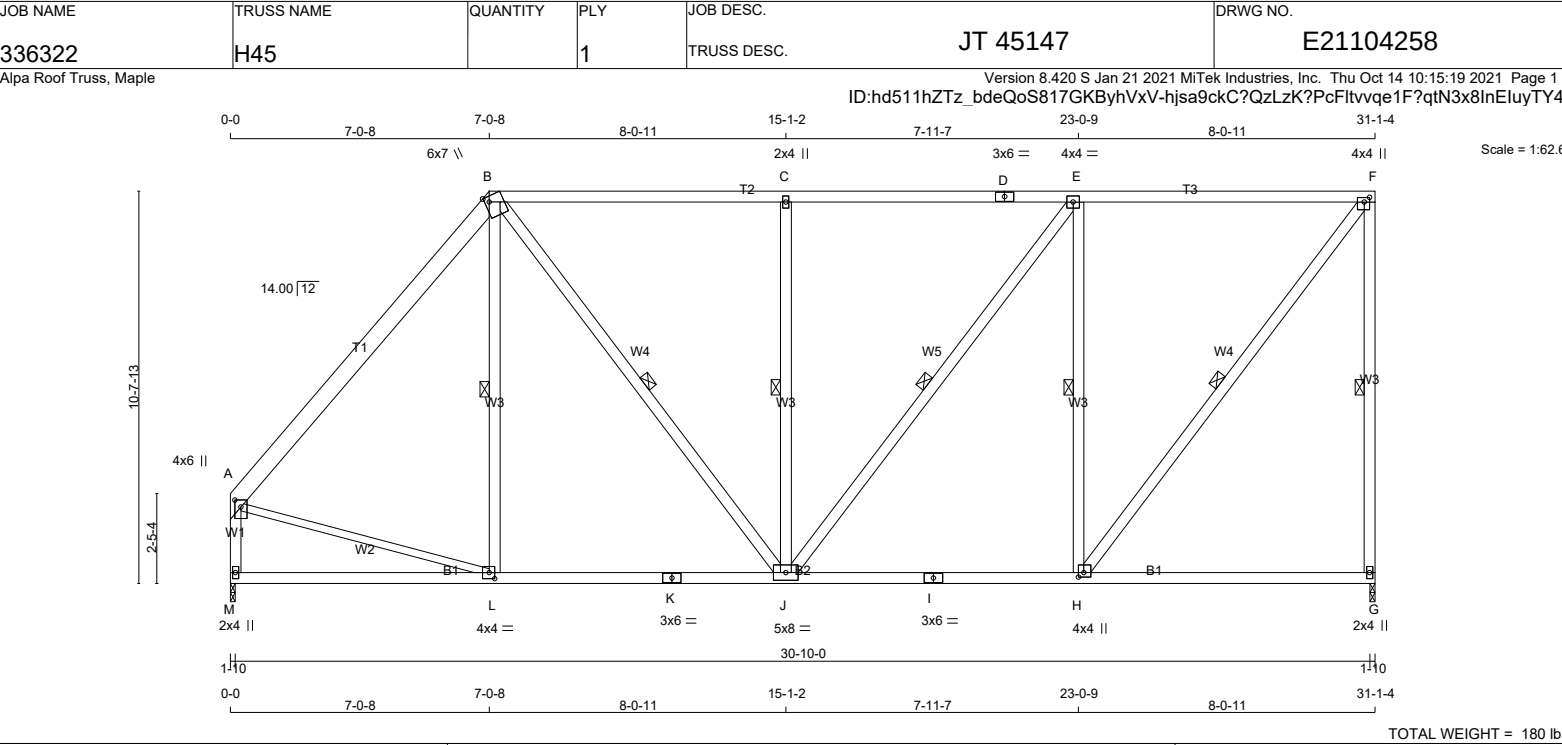
| PLATES (table is in inches) |        |        |     |     |           |
|-----------------------------|--------|--------|-----|-----|-----------|
| JT                          | TYPE   | PLATES | W   | LEN | Y X       |
| A                           | TMVW+p | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| B                           | TTWW+m | MT20   | 4.0 | 6.0 | 1.75 1.25 |
| C                           | TMWW-t | MT20   | 4.0 | 4.0 |           |
| D                           | TMW+w  | MT20   | 2.0 | 4.0 |           |
| E                           | TS-t   | MT20   | 3.0 | 6.0 |           |
| F                           | TMWW-t | MT20   | 4.0 | 4.0 |           |
| G                           | TMVW-t | MT20   | 4.0 | 6.0 | 1.75 3.00 |
| H                           | BMV1+p | MT20   | 2.0 | 4.0 |           |
| I                           | BMWW-t | MT20   | 4.0 | 4.0 | 1.50 1.50 |
| J                           | BMWW-t | MT20   | 5.0 | 6.0 |           |
| K                           | BS-t   | MT20   | 3.0 | 6.0 |           |
| L                           | BMWW-t | MT20   | 4.0 | 4.0 |           |
| M                           | BMWW-t | MT20   | 4.0 | 4.0 | 2.00 1.75 |
| N                           | BMV1+p | MT20   | 2.0 | 4.0 |           |

LATERAL BRACE(S) SHOWN SHALL BE  
 2X4 SPF#2



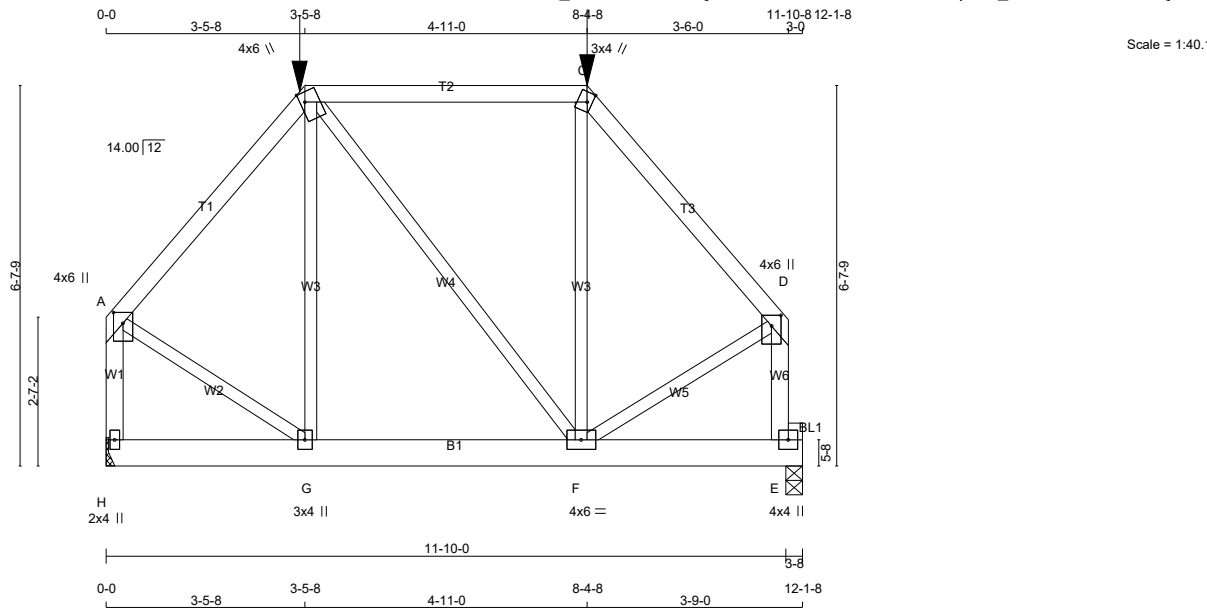
| DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER                      |                    |                               |             |                                 |                |                    |         |                           |              |
|--------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|-------------|---------------------------------|----------------|--------------------|---------|---------------------------|--------------|
| BEARINGS                                                                                                           |                    |                               |             |                                 |                |                    |         |                           |              |
|                                                                                                                    |                    | FACTORED GROSS REACTION       |             | MAXIMUM FACTORED GROSS REACTION |                | INPUT BRG IN-SX    |         | REQRD BRG IN-SX           |              |
| JT                                                                                                                 | VERT               | HORZ                          |             | DOWN                            | HORZ           | UPLIFT             | IN-SX   | IN-SX                     |              |
| H                                                                                                                  | 1500               | 0                             |             | 1500                            | 0              | 0                  | 1-10    | 1-10                      |              |
| N                                                                                                                  | 1500               | 0                             |             | 1500                            | 0              | 0                  | 1-10    | 1-10                      |              |
| UNFACTORED REACTIONS                                                                                               |                    |                               |             |                                 |                |                    |         |                           |              |
| JT                                                                                                                 | 1ST LCASE COMBINED | MAX./MIN. SNOW LIVE PERM.LIVE |             |                                 | WIND DEAD SOIL |                    |         |                           |              |
| H                                                                                                                  | 1070               | 653 / 0                       | 0 / 0       | 0 / 0                           | 0 / 0          | 0 / 0              | 417 / 0 | 0 / 0                     | 0 / 0        |
| N                                                                                                                  | 1070               | 653 / 0                       | 0 / 0       | 0 / 0                           | 0 / 0          | 0 / 0              | 417 / 0 | 0 / 0                     | 0 / 0        |
| BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) H, N                                                         |                    |                               |             |                                 |                |                    |         |                           |              |
| BRACING                                                                                                            |                    |                               |             |                                 |                |                    |         |                           |              |
| TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.00 FT.                                                         |                    |                               |             |                                 |                |                    |         |                           |              |
| MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.                                    |                    |                               |             |                                 |                |                    |         |                           |              |
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.                                         |                    |                               |             |                                 |                |                    |         |                           |              |
| 1 LATERAL BRACE(S) AT 1 / 2 LENGTH OF G-H, B-M, C-L, C-J, D-J, F-I.                                                |                    |                               |             |                                 |                |                    |         |                           |              |
| END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW |                    |                               |             |                                 |                |                    |         |                           |              |
| LOADING                                                                                                            |                    |                               |             |                                 |                |                    |         |                           |              |
| TOTAL LOAD CASES: (4)                                                                                              |                    |                               |             |                                 |                |                    |         |                           |              |
|                                                                                                                    |                    | CHORDS                        |             |                                 | WEBS           |                    |         |                           |              |
|                                                                                                                    |                    | MAX. FACTORED MEMB.           | FORCE (LBS) | FACTORED VERT. LOAD (PLF)       | LC1 MAX        | MAX. UNBRAC LENGTH | MEMB.   | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO                                                                                                              |                    |                               |             | FROM TO                         |                |                    | FR-TO   |                           |              |
| A- B                                                                                                               |                    | -1246 / 0                     |             | -78.0                           | -78.0          | 0.64 (1)           | 5.02    | M- B                      | -151 / 32    |
| B- C                                                                                                               |                    | -1277 / 0                     |             | -78.0                           | -78.0          | 0.53 (1)           | 5.00    | B- L                      | 0 / 815      |
| C- D                                                                                                               |                    | -1274 / 0                     |             | -78.0                           | -78.0          | 0.53 (1)           | 5.00    | L- C                      | -551 / 0     |
| D- E                                                                                                               |                    | -1274 / 0                     |             | -78.0                           | -78.0          | 0.53 (1)           | 5.00    | C- J                      | -5 / 2       |
| E- F                                                                                                               |                    | -1274 / 0                     |             | -78.0                           | -78.0          | 0.53 (1)           | 5.00    | J- D                      | -449 / 0     |
| F- G                                                                                                               |                    | -885 / 0                      |             | -78.0                           | -78.0          | 0.49 (1)           | 5.78    | J- F                      | 0 / 683      |
| H- G                                                                                                               |                    | -1453 / 0                     |             | 0.0                             | 0.0            | 0.59 (1)           | 5.43    | I- F                      | -1124 / 0    |
| N- A                                                                                                               |                    | -1456 / 0                     |             | 0.0                             | 0.0            | 0.19 (1)           | 6.77    | I- G                      | 0 / 1538     |
|                                                                                                                    |                    |                               |             |                                 |                |                    |         | A- M                      | 0 / 855      |
| N- M                                                                                                               |                    | 0 / 0                         |             | -18.5                           | -18.5          | 0.17 (4)           | 10.00   |                           |              |
| M- L                                                                                                               |                    | 0 / 806                       |             | -18.5                           | -18.5          | 0.24 (4)           | 10.00   |                           |              |
| L- K                                                                                                               |                    | 0 / 1277                      |             | -18.5                           | -18.5          | 0.28 (1)           | 10.00   |                           |              |
| K- J                                                                                                               |                    | 0 / 1277                      |             | -18.5                           | -18.5          | 0.28 (1)           | 10.00   |                           |              |
| J- I                                                                                                               |                    | 0 / 885                       |             | -18.5                           | -18.5          | 0.27 (4)           | 10.00   |                           |              |
| I- H                                                                                                               |                    | 0 / 0                         |             | -18.5                           | -18.5          | 0.18 (4)           | 10.00   |                           |              |

| DESIGN CRITERIA                                                                                    |         |          |           |
|----------------------------------------------------------------------------------------------------|---------|----------|-----------|
| SPECIFIED LOADS:                                                                                   |         |          |           |
| TOP CH.                                                                                            | LL =    | 21.0     | PSF       |
|                                                                                                    | DL =    | 6.0      | PSF       |
| BOT CH.                                                                                            | LL =    | 0.0      | PSF       |
|                                                                                                    | DL =    | 7.4      | PSF       |
| TOTAL LOAD = 34.4 PSF                                                                              |         |          |           |
| SPACING = 24.0 IN. C/C                                                                             |         |          |           |
| LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM                                        |         |          |           |
| THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015         |         |          |           |
| THIS DESIGN COMPLIES WITH:                                                                         |         |          |           |
| - PART 9 OF BCBC 2018 , ABC 2019                                                                   |         |          |           |
| - PART 9 OF OBC 2012 (2019 AMENDMENT)                                                              |         |          |           |
| - CSA 086-14                                                                                       |         |          |           |
| - TPIC 2014                                                                                        |         |          |           |
| (55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD |         |          |           |
| ALLOWABLE DEFL.(LL)= L/360 (1.04")                                                                 |         |          |           |
| CALCULATED VERT. DEFL.(LL) = L/ 999 (0.06")                                                        |         |          |           |
| ALLOWABLE DEFL.(TL)= L/360 (1.04")                                                                 |         |          |           |
| CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")                                                        |         |          |           |
| CSI: TC=0.64/1.00 (A-B:1) , BC=0.28/1.00 (J-L:1) , WB=0.64/1.00 (F-I:1) , SSI=0.23/1.00 (B-C:1)    |         |          |           |
| DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10                             |         |          |           |
| COMPANION LIVE LOAD FACTOR = 1.00                                                                  |         |          |           |
| TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |         |          |           |
| NAIL VALUES                                                                                        |         |          |           |
| PLATE GRIP(DRY)                                                                                    | SHEAR   | SECTION  |           |
| (PSI)                                                                                              | (PLI)   | (PLI)    |           |
| MAX MIN                                                                                            | MAX MIN | MAX MIN  |           |
| MT20                                                                                               | 650 371 | 1747 788 | 1987 1873 |
| PLATE PLACEMENT TOL. = 0.250 inches                                                                |         |          |           |
| PLATE ROTATION TOL. = 5.0 Deg.                                                                     |         |          |           |
| JSI GRIP= 0.84 (B) (INPUT = 0.90 )                                                                 |         |          |           |
| JSI METAL= 0.47 (A) (INPUT = 1.00 )                                                                |         |          |           |



Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:21 2021 Page 1  
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TOTAL WEIGHT = 3 X 67 = 201 lb

| N. L. G. A. RULES |      |     |        |        |
|-------------------|------|-----|--------|--------|
| CHORDS            | SIZE |     | LUMBER | DESCR. |
| A - B             | 2x4  | DRY | No.2   | SPF    |
| B - C             | 2x4  | DRY | No.2   | SPF    |
| C - D             | 2x4  | DRY | No.2   | SPF    |
| H - A             | 2x4  | DRY | No.2   | SPF    |
| E - D             | 2x4  | DRY | No.2   | SPF    |
| H - E             | 2x6  | DRY | No.2   | SPF    |

|                    |     |     |      |     |
|--------------------|-----|-----|------|-----|
| BEARING BLOCKS     |     |     |      |     |
| BL1                | 2x4 | DRY | No.2 | SPF |
| ALL WEBS<br>EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

| JT | PLATES   | W    | LEN | Y   | X    |      |
|----|----------|------|-----|-----|------|------|
| A  | TMVW+p   | MT20 | 4.0 | 6.0 | 2.25 | 2.00 |
| B  | TTWW+m   | MT20 | 4.0 | 6.0 | 2.00 | 1.00 |
| C  | TTW+m    | MT20 | 3.0 | 4.0 | 2.00 | 1.00 |
| D  | TMVW+p   | MT20 | 4.0 | 6.0 | 2.25 | 2.00 |
| E  | BMVK1+p  | MT20 | 4.0 | 4.0 |      |      |
| F  | BMWWWW-t | MT20 | 4.0 | 6.0 |      |      |
| G  | BMWW+t   | MT20 | 3.0 | 4.0 |      |      |
| H  | BMV1+p   | MT20 | 2.0 | 4.0 |      |      |

|    | FACTORED       |      | MAXIMUM FACTORED |      |        | INPUT      | REQRD |
|----|----------------|------|------------------|------|--------|------------|-------|
|    | GROSS REACTION |      | GROSS REACTION   |      |        | BRG        | BRG   |
| JT | VERT           | HORZ | DOWN             | HORZ | UPLIFT | IN-SX      | IN-SX |
| H  | 814            | 0    | 814              | 0    | 0      | MECHANICAL |       |
| E  | 833            | 0    | 833              | 0    | 0      | 3-8        | 2-8   |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT H. MINIMUM BEARING LENGTH AT JOINT H = 1-8.

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H         | 581      | 352 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 228 / 0 | 0 / 0 |
| E         | 594      | 363 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 231 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |        |               | WEBS               |       |                           |               |  |
|--------|---------------------------|---------------------------|--------|---------------|--------------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1    | MAX. CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM                      | TO     |               |                    | FR-TO |                           |               |  |
| A-B    | -557 / 0                  | -78.0                     | -78.0  | 0.19 (1)      | 6.25               | G-B   | -92 / 55                  | 0.06 (1)      |  |
| B-C    | -354 / 0                  | -114.5                    | -114.5 | 0.53 (1)      | 6.25               | B-F   | -8 / 0                    | 0.01 (1)      |  |
| C-D    | -550 / 0                  | -78.0                     | -78.0  | 0.19 (1)      | 6.25               | F-C   | -115 / 48                 | 0.08 (1)      |  |
| H-A    | -776 / 0                  | 0.0                       | 0.0    | 0.11 (1)      | 7.81               | A-G   | 0 / 421                   | 0.10 (1)      |  |
| E-D    | -796 / 0                  | 0.0                       | 0.0    | 0.11 (1)      | 7.81               | F-D   | 0 / 475                   | 0.12 (1)      |  |
|        |                           |                           |        |               |                    |       |                           |               |  |
| H-G    | 0 / 0                     | -27.2                     | -27.2  | 0.05 (4)      | 10.00              |       |                           |               |  |
| G-F    | 0 / 359                   | -27.2                     | -27.2  | 0.08 (4)      | 10.00              |       |                           |               |  |
| F-E    | -55 / 0                   | -27.2                     | -27.2  | 0.05 (4)      | 6.25               |       |                           |               |  |

| JT | LOC.  | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|-------|------|------|------|-------|------|-------|------|-------|
| B  | 3-5-8 | -107 | -107 | ---  | FRONT | VERT | TOTAL | ---  | C1    |
| C  | 8-4-8 | -116 | -116 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



|                  |     |      |      |     |
|------------------|-----|------|------|-----|
| SPECIFIED LOADS: |     |      |      |     |
| TOP              | CH. | LL = | 21.0 | PSF |
|                  |     | DL = | 6.0  | PSF |
| BOT              | CH. | LL = | 0.0  | PSF |
|                  |     | DL = | 7.4  | PSF |
| TOTAL LOAD       |     | =    | 34.4 | PSF |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE  
OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip  
LEFT SETBACK = 3-5-8  
RIGHT SETBACK = 3-9-0  
END SETBACK = 3-10-8  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADD'L LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF PART  
9. NBCC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF BCBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.39")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.39")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.53/1.00 (B-C:1), BC=0.08/1.00 (F-G:4), WB=0.12/1.00 (D-F:1), SSI=0.24/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00  
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

| PLATE | GRIP(DRY) |     | SHEAR |     | SECTION |      |
|-------|-----------|-----|-------|-----|---------|------|
|       | (PSI)     |     | (PLI) |     | (PLI)   |      |
|       | MAX       | MIN | MAX   | MIN | MAX     | MIN  |
| MT20  | 650       | 371 | 1747  | 788 | 1987    | 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

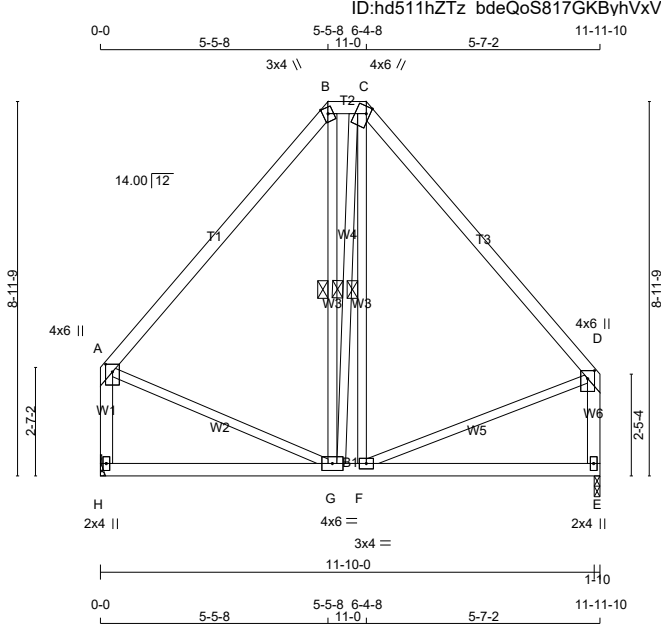
JSI GRIP= 0.68 (G) (INPUT = 0.90 )  
JSI METAL= 0.22 (A) (INPUT = 1.00 )

|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H103S      |          | 1   | TRUSS DESC. JT 45147 | E21104369 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:24 2021 Page 1

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TOTAL WEIGHT = 3 X 69 = 208 lb

[M][F]

| LUMBER            |      |        |        |     |
|-------------------|------|--------|--------|-----|
| N. L. G. A. RULES |      |        |        |     |
| CHORDS            | SIZE | LUMBER | DESCR. |     |
| A - B             | 2x4  | DRY    | No.2   | SPF |
| B - C             | 2x4  | DRY    | No.2   | SPF |
| C - D             | 2x4  | DRY    | No.2   | SPF |
| H - A             | 2x4  | DRY    | No.2   | SPF |
| E - D             | 2x4  | DRY    | No.2   | SPF |
| H - E             | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS          | 2x3  | DRY    | No.2   | SPF |
| EXCEPT            |      |        |        |     |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| A                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| B                           | TTW+m   | MT20   | 3.0 | 4.0 | Edge      |
| C                           | TTWW+m  | MT20   | 4.0 | 6.0 | 2.00 1.00 |
| D                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| E                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| F                           | BMWW-t  | MT20   | 3.0 | 4.0 |           |
| G                           | BMWWW-t | MT20   | 4.0 | 6.0 |           |
| H                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT |        | REQRD      |       |
|-------------------------|------|---------------------------------|------|-------|--------|------------|-------|
| JT                      | VERT | HORZ                            | DOWN | HORZ  | UPLIFT | IN-SX      | IN-SX |
| H                       | 577  | 0                               | 577  | 0     | 0      | MECHANICAL |       |
| E                       | 577  | 0                               | 577  | 0     | 0      | 1-10       | 1-8   |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT H. MINIMUM BEARING LENGTH AT JOINT H = 1-8.

**UNFACTORED REACTIONS**

| 1ST LCASE COMBINED |     | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|--------------------|-----|-------------------------------|-------|-----------|-------|---------|-------|
| JT                 |     | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H                  | 412 | 251 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 160 / 0 | 0 / 0 |
| E                  | 412 | 251 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 160 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF B-G, C-G, C-F.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                        | WEBS  |                           |                        |          |
|--------|---------------------------|---------------------------|------------------------|-------|---------------------------|------------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |          |
| FR-TO  |                           | FROM TO                   |                        | FR-TO |                           |                        |          |
| A-B    | -317 / 0                  | -78.0 -78.0               | 0.30 (1)               | 6.25  | G-B                       | -7 / 46                | 0.02 (4) |
| B-C    | -205 / 0                  | -78.0 -78.0               | 0.01 (1)               | 6.25  | G-C                       | -10 / 0                | 0.01 (1) |
| C-D    | -318 / 0                  | -78.0 -78.0               | 0.32 (1)               | 6.25  | F-C                       | -1 / 45                | 0.02 (4) |
| H-A    | -536 / 0                  | 0.0 0.0                   | 0.07 (1)               | 7.81  | A-G                       | 0 / 221                | 0.05 (1) |
| E-D    | -535 / 0                  | 0.0 0.0                   | 0.07 (1)               | 7.81  | F-D                       | 0 / 220                | 0.05 (1) |
| H-G    | 0 / 0                     | -18.5 -18.5               | 0.14 (4)               | 10.00 |                           |                        |          |
| G-F    | 0 / 206                   | -18.5 -18.5               | 0.16 (4)               | 10.00 |                           |                        |          |
| F-E    | 0 / 0                     | -18.5 -18.5               | 0.14 (4)               | 10.00 |                           |                        |          |

**DESIGN CRITERIA**

SPECIFIED LOADS:

|            |           |     |
|------------|-----------|-----|
| TOP CH.    | LL = 21.0 | PSF |
|            | DL = 6.0  | PSF |
| BOT CH.    | LL = 0.0  | PSF |
|            | DL = 7.4  | PSF |
| TOTAL LOAD | = 34.4    | PSF |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.40")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.03")

CSI: TC=0.32/1.00 (C-D:1) , BC=0.16/1.00 (F-G:4) , WB=0.05/1.00 (A-G:1) , SSI=0.11/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

**NAIL VALUES**

| PLATE | GRIP(DRY) | SHEAR | SECTION |
|-------|-----------|-------|---------|
|       | (PSI)     | (PLI) | (PLI)   |
|       | MAX       | MIN   | MAX     |
| MT20  | 650       | 371   | 1747    |
|       | 788       | 1987  | 1873    |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.36 (B) (INPUT = 0.90 )  
JSI METAL= 0.16 (D) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

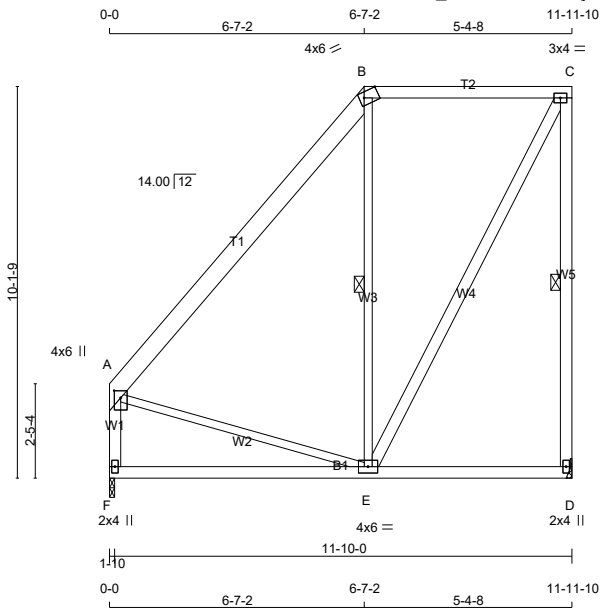


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H104S      |          | 1   | TRUSS DESC. JT 45147 | E21104371 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:27 2021 Page 1

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TOTAL WEIGHT = 77 lb

[M][F]

| LUMBER            |      |     |        |  |        |
|-------------------|------|-----|--------|--|--------|
| N. L. G. A. RULES |      |     |        |  |        |
| CHORDS            | SIZE |     | LUMBER |  | DESCR. |
| A - B             | 2x6  | DRY | No.2   |  | SPF    |
| B - C             | 2x4  | DRY | No.2   |  | SPF    |
| D - C             | 2x4  | DRY | No.2   |  | SPF    |
| F - A             | 2x4  | DRY | No.2   |  | SPF    |
| F - D             | 2x4  | DRY | No.2   |  | SPF    |
| ALL WEBS          | 2x3  | DRY | No.2   |  | SPF    |
| EXCEPT            |      |     |        |  |        |
| E - C             | 2x4  | DRY | No.2   |  | SPF    |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |           |      |
|-----------------------------|---------|--------|-----|-----|-----------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y         | X    |
| A                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25      | 2.00 |
| B                           | TTW-m   | MT20   | 4.0 | 6.0 | Edge 4.50 |      |
| C                           | TMVW-t  | MT20   | 3.0 | 4.0 |           |      |
| D                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |      |
| E                           | BMVWW-t | MT20   | 4.0 | 6.0 |           |      |
| F                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|    | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT UPLIFT | REQD BRG IN-SX | REQD BRG IN-SX |
|----|-------------------------|------|---------------------------------|------|--------------|----------------|----------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |              |                |                |
| JT | 577                     | 0    | 577                             | 0    | 0            | 1-10           | 1-8            |
| D  | 577                     | 0    | 577                             | 0    | 0            | MECHANICAL     |                |
| F  | 577                     | 0    | 577                             | 0    | 0            | 1-10           | 1-8            |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT D. MINIMUM BEARING LENGTH AT JOINT D = 1-8.

**UNFACTORED REACTIONS**

|    | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
|    |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| JT | 412                | 251 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 160 / 0 | 0 / 0 |
| D  | 412                | 251 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 160 / 0 | 0 / 0 |
| F  | 412                | 251 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 160 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) F

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-D, B-E.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS MAX. FACTORED FORCE (LBS) |       | FACTORED VERT. LOAD (PLF) |       |          |       | WEBS MAX. FACTORED FORCE (LBS) |          |
|-------|----------------------------------|-------|---------------------------|-------|----------|-------|--------------------------------|----------|
|       | FR-TO                            | MEMB. | FROM                      | TO    | LC1      | MAX   | MEMB.                          | FR-TO    |
| A-B   | -285 / 0                         |       | -78.0                     | -78.0 | 0.21 (1) | 6.25  | E-B                            | -253 / 0 |
| B-C   | -181 / 0                         |       | -78.0                     | -78.0 | 0.29 (1) | 6.25  | E-C                            | 0 / 384  |
| D-C   | -544 / 0                         |       | 0.0                       | 0.0   | 0.27 (1) | 6.25  | A-E                            | 0 / 191  |
| F-A   | -528 / 0                         |       | 0.0                       | 0.0   | 0.06 (1) | 7.81  |                                |          |
| F-E   | 0 / 0                            |       | -18.5                     | -18.5 | 0.20 (4) | 10.00 |                                |          |
| E-D   | 0 / 0                            |       | -18.5                     | -18.5 | 0.20 (4) | 10.00 |                                |          |

**DESIGN CRITERIA**

SPECIFIED LOADS:

|            |     |    |   |      |            |
|------------|-----|----|---|------|------------|
| TOP        | CH. | LL | = | 21.0 | PSF        |
|            |     | DL | = | 6.0  | PSF        |
| BOT        | CH. | LL | = | 0.0  | PSF        |
|            |     | DL | = | 7.4  | PSF        |
| TOTAL LOAD |     |    |   |      | = 34.4 PSF |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.40")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.40")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.05")

CSI: TC=0.29/1.00 (B-C:1) , BC=0.20/1.00 (E-F:4) , WB=0.18/1.00 (B-E:1) , SSI=0.16/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |                 |             |               |         |           |
|-------------|-----------------|-------------|---------------|---------|-----------|
| PLATE       | GRIP(DRY) (PSI) | SHEAR (PLI) | SECTION (PLI) | MAX MIN | MAX MIN   |
| MT20        | 650             | 371         | 1747          | 788     | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.63 (C) (INPUT = 0.90 )  
JSI METAL= 0.16 (A) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

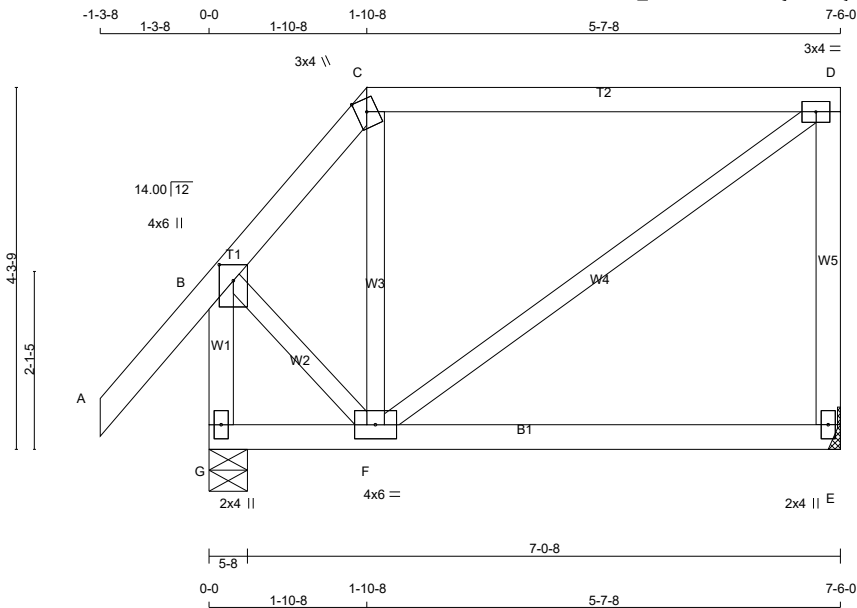


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H105       |          | 1   | TRUSS DESC. JT 45147 | E21104372 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:28 2021 Page 1

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TOTAL WEIGHT = 2 X 37 = 74 lb

|                       |      |        |        |     |
|-----------------------|------|--------|--------|-----|
| <b>LUMBER</b>         |      |        |        |     |
| N. L. G. A. RULES     |      |        |        |     |
| CHORDS                | SIZE | LUMBER | DESCR. |     |
| A - C                 | 2x4  | DRY    | No.2   | SPF |
| A - D                 | 2x4  | DRY    | No.2   | SPF |
| E - D                 | 2x4  | DRY    | No.2   | SPF |
| G - B                 | 2x4  | DRY    | No.2   | SPF |
| G - E                 | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS              | 2x3  | DRY    | No.2   | SPF |
| EXCEPT                |      |        |        |     |
| DRY: SEASONED LUMBER. |      |        |        |     |

|                                    |         |        |     |     |           |
|------------------------------------|---------|--------|-----|-----|-----------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |           |
| JT                                 | TYPE    | PLATES | W   | LEN | Y X       |
| B                                  | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| C                                  | TTW+m   | MT20   | 3.0 | 4.0 | Edge      |
| D                                  | TMVW-t  | MT20   | 3.0 | 4.0 |           |
| E                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| F                                  | BMWWW-t | MT20   | 4.0 | 6.0 |           |
| G                                  | BMV1+p  | MT20   | 2.0 | 4.0 |           |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

|                 |      |                |      |                  |        |            |       |       |       |
|-----------------|------|----------------|------|------------------|--------|------------|-------|-------|-------|
| <b>BEARINGS</b> |      | FACTORED       |      | MAXIMUM FACTORED |        | INPUT      |       | REQRD |       |
|                 |      | GROSS REACTION |      | GROSS REACTION   |        | BRG        |       | BRG   |       |
| JT              | VERT | HORZ           | DOWN | HORZ             | UPLIFT | IN-SX      | IN-SX | IN-SX | IN-SX |
| E               | 352  | 0              | 352  | 0                | 0      | MECHANICAL |       |       |       |
| G               | 481  | 0              | 481  | 0                | 0      | 5-8        | 1-8   |       |       |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

**UNFACTORED REACTIONS**

|           |          |                               |       |           |       |         |       |  |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|--|
| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |  |
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| E         | 251      | 152 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 99 / 0  | 0 / 0 |  |
| G         | 341      | 222 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 119 / 0 | 0 / 0 |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

|               |          |                           |                           |                                |       |     |                           |
|---------------|----------|---------------------------|---------------------------|--------------------------------|-------|-----|---------------------------|
| <b>CHORDS</b> |          |                           |                           | <b>WEBS</b>                    |       |     |                           |
| MEMB.         |          | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED VERT. LOAD (PLF) | MEMB. |     | MAX. FACTORED FORCE (LBS) |
|               |          |                           | LC1                       | LC2                            |       |     |                           |
| FR-TO         |          |                           | FROM                      | TO                             | FR-TO |     |                           |
| A-B           | 0 / 41   | -78.0                     | -78.0                     | 0.11 (1)                       | 10.00 | F-C | -100 / 19                 |
| B-C           | -230 / 0 | -78.0                     | -78.0                     | 0.11 (1)                       | 6.25  | F-D | 0 / 155                   |
| C-D           | -126 / 0 | -78.0                     | -78.0                     | 0.42 (1)                       | 6.25  | B-F | 0 / 171                   |
| E-D           | -309 / 0 | 0.0                       | 0.0                       | 0.09 (1)                       | 7.81  |     |                           |
| G-B           | -488 / 0 | 0.0                       | 0.0                       | 0.06 (1)                       | 7.81  |     |                           |
| G-F           | 0 / 0    | -18.5                     | -18.5                     | 0.12 (4)                       | 10.00 |     |                           |
| F-E           | 0 / 0    | -18.5                     | -18.5                     | 0.12 (4)                       | 10.00 |     |                           |

**DESIGN CRITERIA**

SPECIFIED LOADS:

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 21.0 | PSF |
|            | DL | =    | 6.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.4  | PSF |
| TOTAL LOAD | =  | 34.4 | PSF  |     |

**SPACING = 24.0 IN./C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.42/1.00 (C-D:1) , BC=0.12/1.00 (F-G:4) , WB=0.04/1.00 (B-F:1) , SSI=0.17/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

|       |           |       |                    |
|-------|-----------|-------|--------------------|
| PLATE | GRIP(DRY) | SHEAR | SECTION            |
|       | (PSI)     | (PLI) | (PLI)              |
|       | MAX       | MIN   | MAX MIN            |
| MT20  | 650       | 371   | 1747 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.58 (C) (INPUT = 0.90 )  
JSI METAL= 0.12 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

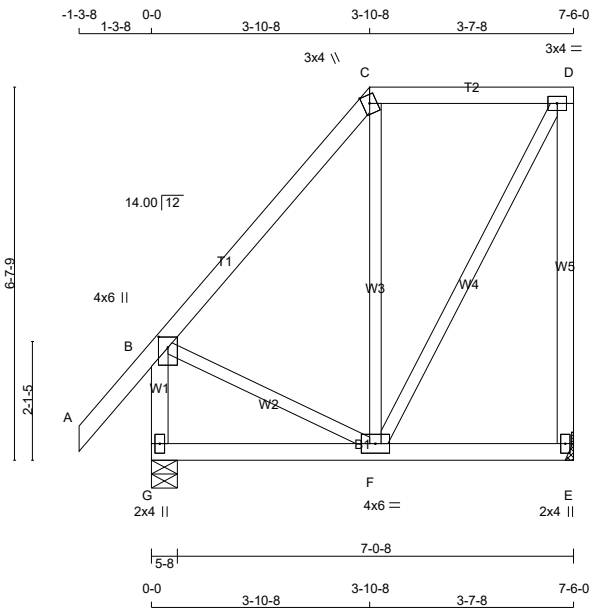


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H106       |          | 1   | TRUSS DESC. JT 45147 | E21104373 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:29 2021 Page 1

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Scale = 1:41.0

TOTAL WEIGHT = 2 X 45 = 89 lb

| LUMBER                |      |        |        |     |
|-----------------------|------|--------|--------|-----|
| N. L. G. A. RULES     |      |        |        |     |
| CHORDS                | SIZE | LUMBER | DESCR. |     |
| A - C                 | 2x4  | DRY    | No.2   | SPF |
| C - D                 | 2x4  | DRY    | No.2   | SPF |
| E - D                 | 2x4  | DRY    | No.2   | SPF |
| G - B                 | 2x4  | DRY    | No.2   | SPF |
| G - E                 | 2x4  | DRY    | No.2   | SPF |
| ALL WEBS              | 2x3  | DRY    | No.2   | SPF |
| EXCEPT                |      |        |        |     |
| DRY: SEASONED LUMBER. |      |        |        |     |

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| C                           | TTW+m   | MT20   | 3.0 | 4.0 | Edge |      |
| D                           | TMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| E                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F                           | BMVWW-t | MT20   | 4.0 | 6.0 |      |      |
| G                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

|    | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG  | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|------------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ | IN-SX      | IN-SX     |
| JT | 362                     | 0    | 362                             | 0    | MECHANICAL |           |
| E  | 362                     | 0    | 362                             | 0    | 5-8        | 1-8       |
| G  | 471                     | 0    | 471                             | 0    |            |           |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

UNFACTORED REACTIONS

|    | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
|    |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| JT | 258                | 157 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 101 / 0 | 0 / 0 |
| E  | 334                | 216 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 117 / 0 | 0 / 0 |
| G  |                    |                               |       |           |       |         |       |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |       |          | WEBS               |       |                           |          |          |
|--------|---------------------------|---------------------------|-------|----------|--------------------|-------|---------------------------|----------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1   | MAX      | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX      | CSi (LC) |
| FR-TO  |                           | FROM                      | TO    |          |                    | FR-TO |                           |          |          |
| A-B    | 0 / 41                    | -78.0                     | -78.0 | 0.11 (1) | 10.00              | F-C   | -162 / 0                  | 0.12 (1) |          |
| B-C    | -173 / 0                  | -78.0                     | -78.0 | 0.15 (1) | 6.25               | F-D   | 0 / 225                   | 0.05 (1) |          |
| C-D    | -109 / 0                  | -78.0                     | -78.0 | 0.13 (1) | 6.25               | B-F   | 0 / 122                   | 0.03 (1) |          |
| E-D    | -337 / 0                  | 0.0                       | 0.0   | 0.31 (1) | 7.81               |       |                           |          |          |
| G-B    | -441 / 0                  | 0.0                       | 0.0   | 0.05 (1) | 7.81               |       |                           |          |          |
| G-F    | 0 / 0                     | -18.5                     | -18.5 | 0.07 (4) | 10.00              |       |                           |          |          |
| F-E    | 0 / 0                     | -18.5                     | -18.5 | 0.07 (4) | 10.00              |       |                           |          |          |

DESIGN CRITERIA

SPECIFIED LOADS:

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 21.0 | PSF |
|            | DL | =    | 6.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.4  | PSF |
| TOTAL LOAD | =  | 34.4 | PSF  |     |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 9 OF CBC 2018 , ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.01")

CSI: TC=0.31/1.00 (D-E:1) , BC=0.07/1.00 (E-F:4) , WB=0.12/1.00 (C-F:1) , SSI=0.11/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES

| PLATE | GRIP(DRY) (PSI) | SHEAR (PLI) | SECTION (PLI)      |
|-------|-----------------|-------------|--------------------|
|       | MAX             | MIN         | MAX MIN            |
| MT20  | 650             | 371         | 1747 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.43 (D) (INPUT = 0.90 )  
JSI METAL= 0.12 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

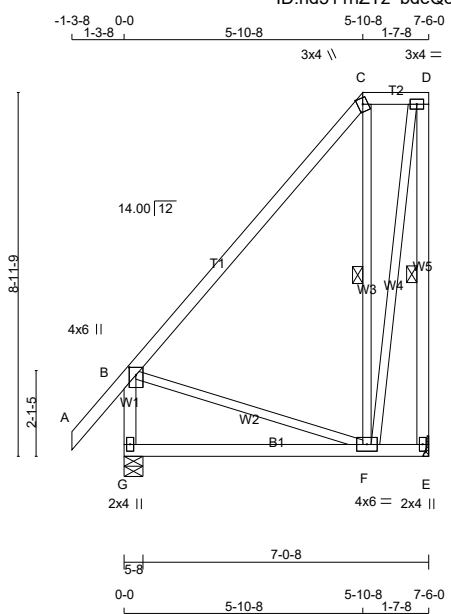


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H107       |          | 1   | TRUSS DESC. JT 45147 | E21104374 |

Alpa Roof Truss, Maple

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Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:31 2021 Page 1



Scale = 1:56.8

TOTAL WEIGHT = 2 X 53 = 107 lb  
[M][F]

|                       |      |        |      |        |
|-----------------------|------|--------|------|--------|
| <b>LUMBER</b>         |      |        |      |        |
| N. L. G. A. RULES     |      |        |      |        |
| CHORDS                | SIZE | LUMBER |      | DESCR. |
| A - C                 | 2x4  | DRY    | No.2 | SPF    |
| C - D                 | 2x4  | DRY    | No.2 | SPF    |
| E - D                 | 2x4  | DRY    | No.2 | SPF    |
| G - B                 | 2x4  | DRY    | No.2 | SPF    |
| G - E                 | 2x4  | DRY    | No.2 | SPF    |
| ALL WEBS              | 2x3  | DRY    | No.2 | SPF    |
| EXCEPT                |      |        |      |        |
| DRY: SEASONED LUMBER. |      |        |      |        |

|                                    |         |        |     |     |      |      |
|------------------------------------|---------|--------|-----|-----|------|------|
| <b>PLATES (table is in inches)</b> |         |        |     |     |      |      |
| JT                                 | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                                  | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| C                                  | TTW+m   | MT20   | 3.0 | 4.0 | Edge |      |
| D                                  | TMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| E                                  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F                                  | BMWWW-t | MT20   | 4.0 | 6.0 |      |      |
| G                                  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG IN-SX | REQD BRG IN-SX |
|----|-------------------------|------|---------------------------------|------|-----------------|----------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |                 |                |
| E  | 362                     | 0    | 362                             | 0    | 0               | MECHANICAL     |
| G  | 471                     | 0    | 471                             | 0    | 0               | 5-8 1-8        |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-8.

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|----|--------------------|-------------------------------|-------|-----------|-------|---------|-------|
|    |                    | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E  | 258                | 157 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 101 / 0 | 0 / 0 |
| G  | 334                | 216 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 117 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) G

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF D-E, C-F.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                     |              |                    | WEBS  |                           |               |              |  |
|--------|---------------------------|---------------------|--------------|--------------------|-------|---------------------------|---------------|--------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD |              |                    | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED |              |  |
|        |                           | LC1 (PLF)           | MAX CSI (LC) | MAX. UNBRAC LENGTH |       |                           | FORCE (LBS)   | MAX CSI (LC) |  |
| FR-TO  |                           | FROM                | TO           | FR-TO              |       |                           |               |              |  |
| A-B    | 0 / 42                    | -78.0               | -78.0        | 0.11 (1)           | 10.00 | F-C                       | -225 / 0      | 0.12 (1)     |  |
| B-C    | -91 / 0                   | -78.0               | -78.0        | 0.34 (1)           | 6.25  | F-D                       | 0 / 326       | 0.07 (1)     |  |
| C-D    | -56 / 0                   | -78.0               | -78.0        | 0.03 (1)           | 6.25  | B-F                       | 0 / 61        | 0.01 (1)     |  |
| E-D    | -383 / 0                  | 0.0                 | 0.0          | 0.14 (1)           | 6.25  |                           |               |              |  |
| G-B    | -425 / 0                  | 0.0                 | 0.0          | 0.05 (1)           | 7.81  |                           |               |              |  |
| G-F    | 0 / 0                     | -18.5               | -18.5        | 0.14 (4)           | 10.00 |                           |               |              |  |
| F-E    | 0 / 0                     | -18.5               | -18.5        | 0.14 (4)           | 10.00 |                           |               |              |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 21.0 PSF  
DL = 6.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.4 PSF  
TOTAL LOAD = 34.4 PSF

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF BCBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.25")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.04")

CSI: TC=0.34/1.00 (B-C:1) , BC=0.14/1.00 (F-G:4) , WB=0.12/1.00 (C-F:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

|                 |             |               |           |  |
|-----------------|-------------|---------------|-----------|--|
| NAIL VALUES     |             |               |           |  |
| PLATE GRIP(DRY) | SHEAR (PSI) | SECTION (PLI) |           |  |
|                 | MAX MIN     | MAX MIN       | MAX MIN   |  |
| MT20            | 650 371     | 1747 788      | 1987 1873 |  |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.64 (D) (INPUT = 0.90 )  
JSI METAL= 0.12 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2

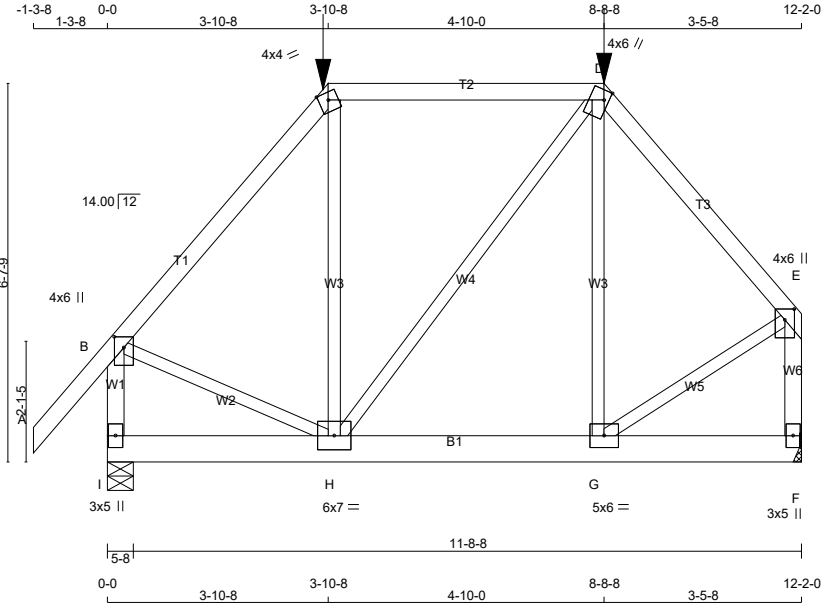


|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H151       |          | 1   | TRUSS DESC. JT 45147 | E21104390 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:37:59 2021 Page 1

ID:hd511hZTz bdeQoS817GKBVhVxV-Fh8WrVsvVhZBjQMr8VffNZ mCxYTF0q8FSARQyTUDS



TOTAL WEIGHT = 69 lb [M]

| LUMBER            |      |          |        |
|-------------------|------|----------|--------|
| N. L. G. A. RULES |      |          |        |
| CHORDS            | SIZE | LUMBER   | DESCR. |
| A - C             | 2x4  | DRY No.2 | SPF    |
| C - D             | 2x4  | DRY No.2 | SPF    |
| D - E             | 2x4  | DRY No.2 | SPF    |
| I - B             | 2x4  | DRY No.2 | SPF    |
| F - E             | 2x4  | DRY No.2 | SPF    |
| I - F             | 2x6  | DRY No.2 | SPF    |
| ALL WEBS EXCEPT   | 2x3  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| C                           | TTW-m   | MT20   | 4.0 | 4.0 | Edge |      |
| D                           | TTWW+m  | MT20   | 4.0 | 6.0 | 2.00 | 1.00 |
| E                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 | 2.00 |
| F                           | BMV1+p  | MT20   | 3.0 | 5.0 |      |      |
| G                           | BMWW-t  | MT20   | 5.0 | 6.0 |      |      |
| H                           | BMWWW-t | MT20   | 6.0 | 7.0 |      |      |
| I                           | BMV1+p  | MT20   | 3.0 | 5.0 |      |      |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER

| BEARINGS |      | FACTORED GROSS REACTION |  | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |            | REQRD BRG |  |
|----------|------|-------------------------|--|---------------------------------|------|-----------|------------|-----------|--|
| JT       | VERT | HORZ                    |  | DOWN                            | HORZ | UPLIFT    | IN-SX      | IN-SX     |  |
| I        | 946  | 0                       |  | 946                             | 0    | 0         | 5-8        | 1-8       |  |
| F        | 845  | 0                       |  | 845                             | 0    | 0         | MECHANICAL |           |  |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |  |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|--|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| I         | 673      | 420 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 252 / 0 | 0 / 0 |  |
| F         | 603      | 366 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 237 / 0 | 0 / 0 |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                      | WEBS               |       |                           |              |
|--------|---------------------------|---------------------------|----------------------|--------------------|-------|---------------------------|--------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO                   |                    | FR-TO |                           |              |
| A - B  | 0 / 42                    | -78.0                     | -78.0 0.12 (1)       | 10.00              | H - C | -75 / 67                  | 0.05 (1)     |
| B - C  | -620 / 0                  | -78.0                     | -78.0 0.24 (1)       | 6.25               | H - D | 0 / 40                    | 0.01 (1)     |
| C - D  | -400 / 0                  | -114.5                    | -114.5 0.51 (1)      | 6.25               | G - D | -105 / 47                 | 0.07 (1)     |
| D - E  | -584 / 0                  | -78.0                     | -78.0 0.19 (1)       | 6.25               | B - H | 0 / 435                   | 0.11 (1)     |
| I - B  | -900 / 0                  | 0.0                       | 0.0 0.11 (1)         | 7.81               | G - E | 0 / 441                   | 0.11 (1)     |
| F - E  | -807 / 0                  | 0.0                       | 0.0 0.11 (1)         | 7.81               |       |                           |              |
| I - H  | 0 / 0                     | -27.2                     | -27.2 0.06 (4)       | 10.00              |       |                           |              |
| H - G  | 0 / 376                   | -27.2                     | -27.2 0.09 (4)       | 10.00              |       |                           |              |
| G - F  | 0 / 0                     | -27.2                     | -27.2 0.05 (4)       | 10.00              |       |                           |              |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC.   | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|--------|------|------|------|-------|------|-------|------|-------|
| C  | 3-10-8 | -120 | -120 | ---  | FRONT | VERT | TOTAL | ---  | C1    |
| D  | 8-8-8  | -107 | -107 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

CONNECTION REQUIREMENTS

1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.

DESIGN CRITERIA

SPECIFIED LOADS:

|            |           |     |
|------------|-----------|-----|
| TOP CH.    | LL = 21.0 | PSF |
|            | DL = 6.0  | PSF |
| BOT CH.    | LL = 0.0  | PSF |
|            | DL = 7.4  | PSF |
| TOTAL LOAD | = 34.4    | PSF |

**SPACING = 24.0 IN./C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

GIRDER TYPE: CPrimeHip  
LEFT SETBACK = 3-10-8  
RIGHT SETBACK = 3-5-8  
END SETBACK = 3-10-8  
END WALL WIDTH = 0-0  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADDTL LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.41")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.51/1.00 (C-D:1) , BC=0.09/1.00 (G-H:4) , WB=0.11/1.00 (E-G:1) , SSI=0.24/1.00 (C-D:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00  
COMP=1.00 SHEAR=1.00 TENS= 1.00

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

| NAIL VALUES |           |       |         |               |
|-------------|-----------|-------|---------|---------------|
| PLATE       | GRIP(DRY) | SHEAR | SECTION |               |
| (PSI)       | (PLI)     | (PLI) |         |               |
| MT20        | 650       | 371   | 1747    | 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.56 (C) (INPUT = 0.90 )  
JSI METAL= 0.27 (B) (INPUT = 1.00 )

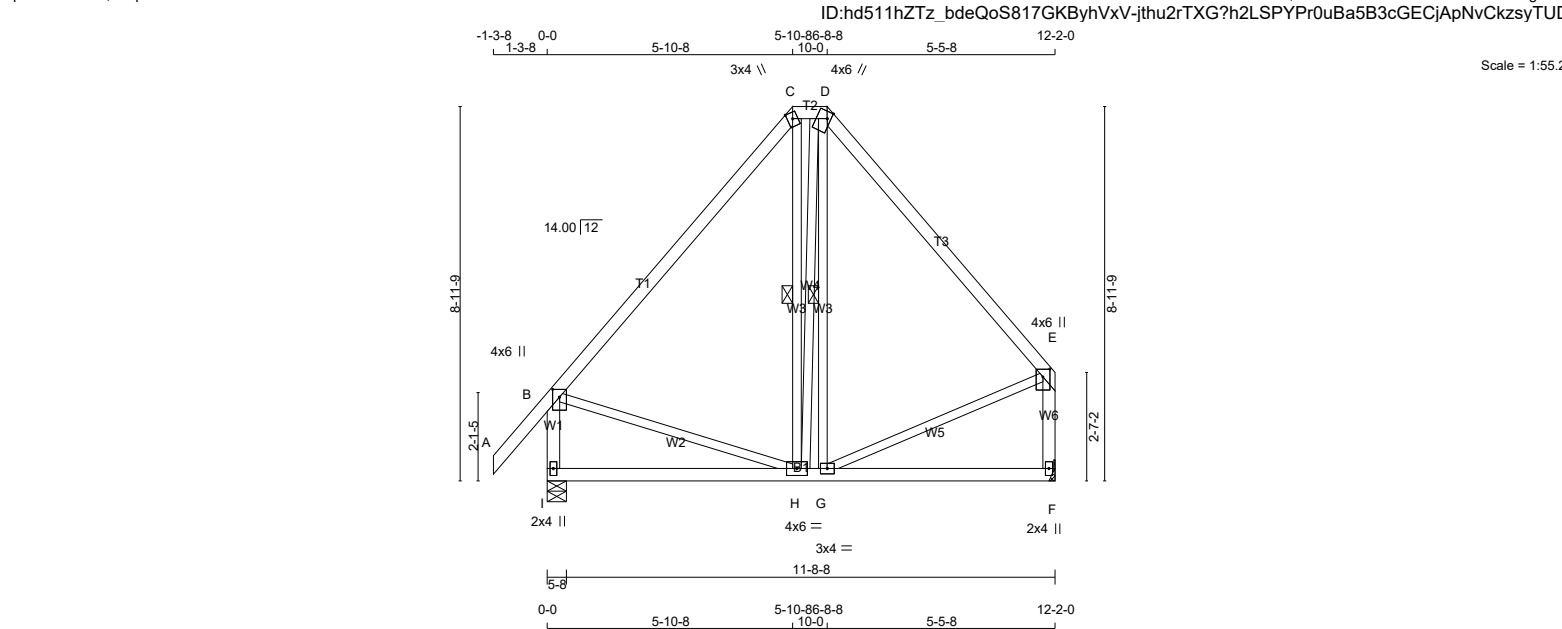
LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



|          |            |          |     |                      |           |
|----------|------------|----------|-----|----------------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.            | DRWG NO.  |
| 336323   | H152       |          | 1   | TRUSS DESC. JT 45147 | E21104391 |

Alpa Roof Truss, Maple

Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 14:38:00 2021 Page 1



| LUMBER            |      |        |        |
|-------------------|------|--------|--------|
| N. L. G. A. RULES |      |        |        |
| CHORDS            | SIZE | LUMBER | DESCR. |
| A - C             | 2x4  | DRY    | No.2   |
| C - D             | 2x4  | DRY    | No.2   |
| D - E             | 2x4  | DRY    | No.2   |
| I - B             | 2x4  | DRY    | No.2   |
| F - E             | 2x4  | DRY    | No.2   |
| I - F             | 2x4  | DRY    | No.2   |
| ALL WEBS          | 2x3  | DRY    | No.2   |
| EXCEPT            |      |        | SPF    |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| C                           | TTW+m   | MT20   | 3.0 | 4.0 | Edge      |
| D                           | TTWW+m  | MT20   | 4.0 | 6.0 | 2.00 1.00 |
| E                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| F                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| G                           | BMWW-t  | MT20   | 3.0 | 4.0 |           |
| H                           | BMWWW-t | MT20   | 4.0 | 6.0 |           |
| I                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.

**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| BEARINGS |      | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |        | INPUT      |     | REQRD |     |
|----------|------|-------------------------|------|---------------------------------|--------|------------|-----|-------|-----|
| JT       | VERT | HORZ                    | DOWN | HORZ                            | UPLIFT | IN-SX      | BRG | IN-SX | BRG |
| I        | 696  | 0                       | 696  | 0                               | 0      | 5-8        | 1-8 |       |     |
| F        | 587  | 0                       | 587  | 0                               | 0      | MECHANICAL |     |       |     |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.

**UNFACTORED REACTIONS**

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |  |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|--|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| I         | 494      | 314 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 180 / 0 | 0 / 0 |  |
| F         | 418      | 255 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 163 / 0 | 0 / 0 |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) I

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF C-H, D-G.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                | WEBS               |       |                           |               |
|--------|---------------------------|---------------------------|----------------|--------------------|-------|---------------------------|---------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC)  | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. LC1 (LC) |
| FR-TO  |                           | FROM                      | TO             |                    | FR-TO |                           |               |
| A-B    | 0 / 42                    | -78.0                     | -78.0 0.11 (1) | 10.00              | H-C   | -10 / 48                  | 0.02 (4)      |
| B-C    | -330 / 0                  | -78.0                     | -78.0 0.35 (1) | 6.25               | H-D   | 0 / 27                    | 0.01 (4)      |
| C-D    | -214 / 0                  | -78.0                     | -78.0 0.01 (1) | 6.25               | G-D   | -24 / 22                  | 0.01 (1)      |
| D-E    | -327 / 0                  | -78.0                     | -78.0 0.30 (1) | 6.25               | B-H   | 0 / 223                   | 0.05 (1)      |
| I-B    | -652 / 0                  | 0.0                       | 0.0 0.08 (1)   | 7.81               | G-E   | 0 / 228                   | 0.05 (1)      |
| F-E    | -546 / 0                  | 0.0                       | 0.0 0.08 (1)   | 7.81               |       |                           |               |
| I-H    | 0 / 0                     | -18.5                     | -18.5 0.17 (4) | 10.00              |       |                           |               |
| H-G    | 0 / 212                   | -18.5                     | -18.5 0.19 (4) | 10.00              |       |                           |               |
| G-F    | 0 / 0                     | -18.5                     | -18.5 0.14 (4) | 10.00              |       |                           |               |

**DESIGN CRITERIA**

SPECIFIED LOADS:

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 21.0 | PSF |
|            | DL | =    | 6.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.4  | PSF |
| TOTAL LOAD | =  | 34.4 | PSF  |     |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.41")  
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.00")  
ALLOWABLE DEFL.(TL)= L/360 (0.41")  
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.03")

CSI: TC=0.35/1.00 (B-C:1) , BC=0.19/1.00 (G-H:4) , WB=0.05/1.00 (E-G:1) , SSI=0.12/1.00 (B-C:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 650 371 1747 788 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.37 (B) (INPUT = 0.90 )  
JSI METAL= 0.20 (B) (INPUT = 1.00 )

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



Scale = 1:53.1

CONTINUED ON PAGE 2



Version 8.420 S Jan 21 2021 MiTek Industries, Inc. Thu Oct 14 15:14:11 2021 Page 1



DRY: SEASONED LUMBER.

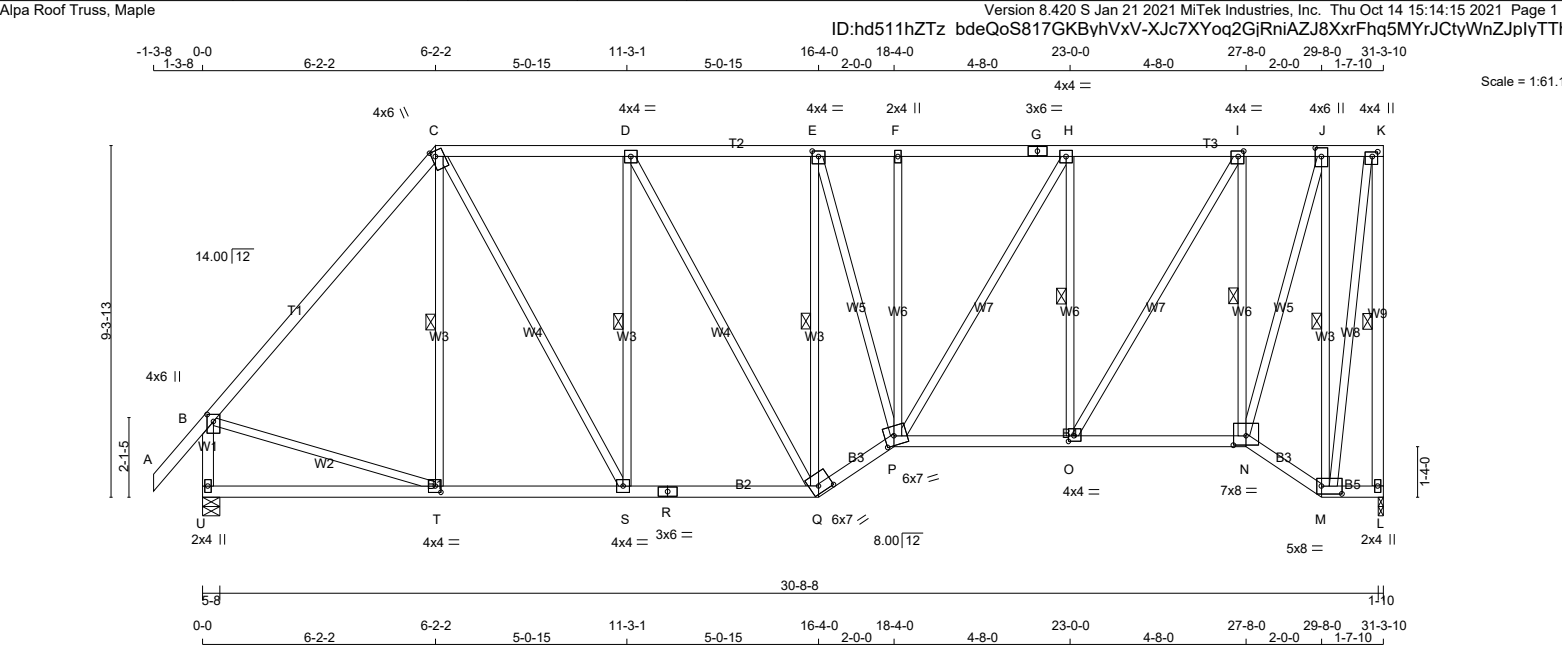
JSI GRIP= 0.90 (I) (INPUT = 0.90 )  
JSI METAL= 0.53 (R) (INPUT = 1.00 )

Scale = 1:53.1



JSI GRIP= 0.90 (K) (INPUT = 0.90 )  
JSI METAL= 0.51 (B) (INPUT = 1.00 )

|          |            |          |     |             |           |
|----------|------------|----------|-----|-------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO.  |
| 336327   | H34TA      |          | 1   | TRUSS DESC. | JT 45147  |
|          |            |          |     |             | E21104395 |



| LUMBER            |      |                |        |
|-------------------|------|----------------|--------|
| N. L. G. A. RULES |      |                |        |
| CHORDS            | SIZE | LUMBER         | DESCR. |
| A - C             | 2x4  | DRY 2100F 1.8E | SPF    |
| C - G             | 2x4  | DRY No.2       | SPF    |
| G - K             | 2x4  | DRY No.2       | SPF    |
| L - K             | 2x4  | DRY No.2       | SPF    |
| U - B             | 2x4  | DRY No.2       | SPF    |
| U - R             | 2x4  | DRY No.2       | SPF    |
| R - Q             | 2x4  | DRY No.2       | SPF    |
| Q - P             | 2x4  | DRY No.2       | SPF    |
| P - N             | 2x4  | DRY No.2       | SPF    |
| N - M             | 2x4  | DRY No.2       | SPF    |
| M - L             | 2x4  | DRY No.2       | SPF    |
| ALL WEBS EXCEPT   | 2x3  | DRY No.2       | SPF    |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |           |
|-----------------------------|---------|--------|-----|-----|-----------|
| JT                          | TYPE    | PLATES | W   | LEN | Y X       |
| B                           | TMVW+p  | MT20   | 4.0 | 6.0 | 2.25 2.00 |
| C                           | TTWW+m  | MT20   | 4.0 | 6.0 | 1.75 1.25 |
| D                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| E                           | TMWW-t  | MT20   | 4.0 | 4.0 | 1.75 2.00 |
| F                           | TMW+w   | MT20   | 2.0 | 4.0 |           |
| G                           | TS-t    | MT20   | 3.0 | 6.0 |           |
| H                           | TMWW-t  | MT20   | 4.0 | 4.0 |           |
| I                           | TMWW-t  | MT20   | 4.0 | 4.0 | 1.75 1.75 |
| J                           | TMWW-t  | MT20   | 4.0 | 6.0 | 2.75 2.00 |
| K                           | TMVW+p  | MT20   | 4.0 | 4.0 | 1.50 1.75 |
| L                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |
| M                           | BBWW-i  | MT20   | 5.0 | 8.0 | 2.50 6.50 |
| N                           | BBWW-i  | MT20   | 7.0 | 8.0 | 3.00 4.00 |
| O                           | BBWW-t  | MT20   | 4.0 | 4.0 | 1.75 1.75 |
| P                           | BBWWW-m | MT20   | 6.0 | 7.0 | 3.00 3.00 |
| Q                           | BBWW-h  | MT20   | 6.0 | 7.0 | 2.25 4.25 |
| R                           | BS-t    | MT20   | 3.0 | 6.0 |           |
| S                           | BMWW-t  | MT20   | 4.0 | 4.0 |           |
| T                           | BMWW-t  | MT20   | 4.0 | 4.0 | 2.00 1.75 |
| U                           | BMV1+p  | MT20   | 2.0 | 4.0 |           |

LATERAL BRACE(S) SHOWN SHALL BE  
2X4 SPF#2



**DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER**

| BEARINGS |      | FACTORED GROSS REACTION |  | MAXIMUM FACTORED GROSS REACTION |      | INPUT  |       | REQRD |  |
|----------|------|-------------------------|--|---------------------------------|------|--------|-------|-------|--|
| JT       | VERT | HORZ                    |  | DOWN                            | HORZ | UPLIFT | IN-SX | IN-SX |  |
| L        | 1510 | 0                       |  | 1510                            | 0    | 0      | 1-10  | 1-10  |  |
| U        | 1619 | 0                       |  | 1619                            | 0    | 0      | 5-8   | 1-12  |  |

| UNFACTORED REACTIONS |          | 1ST LCASE |       | MAX./MIN. COMPONENT REACTIONS |       |         |       |  |  |
|----------------------|----------|-----------|-------|-------------------------------|-------|---------|-------|--|--|
| JT                   | COMBINED | SNOW      | LIVE  | PERM.LIVE                     | WIND  | DEAD    | SOIL  |  |  |
| L                    | 1076     | 657 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 419 / 0 | 0 / 0 |  |  |
| U                    | 1152     | 716 / 0   | 0 / 0 | 0 / 0                         | 0 / 0 | 436 / 0 | 0 / 0 |  |  |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) L, U

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.07 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

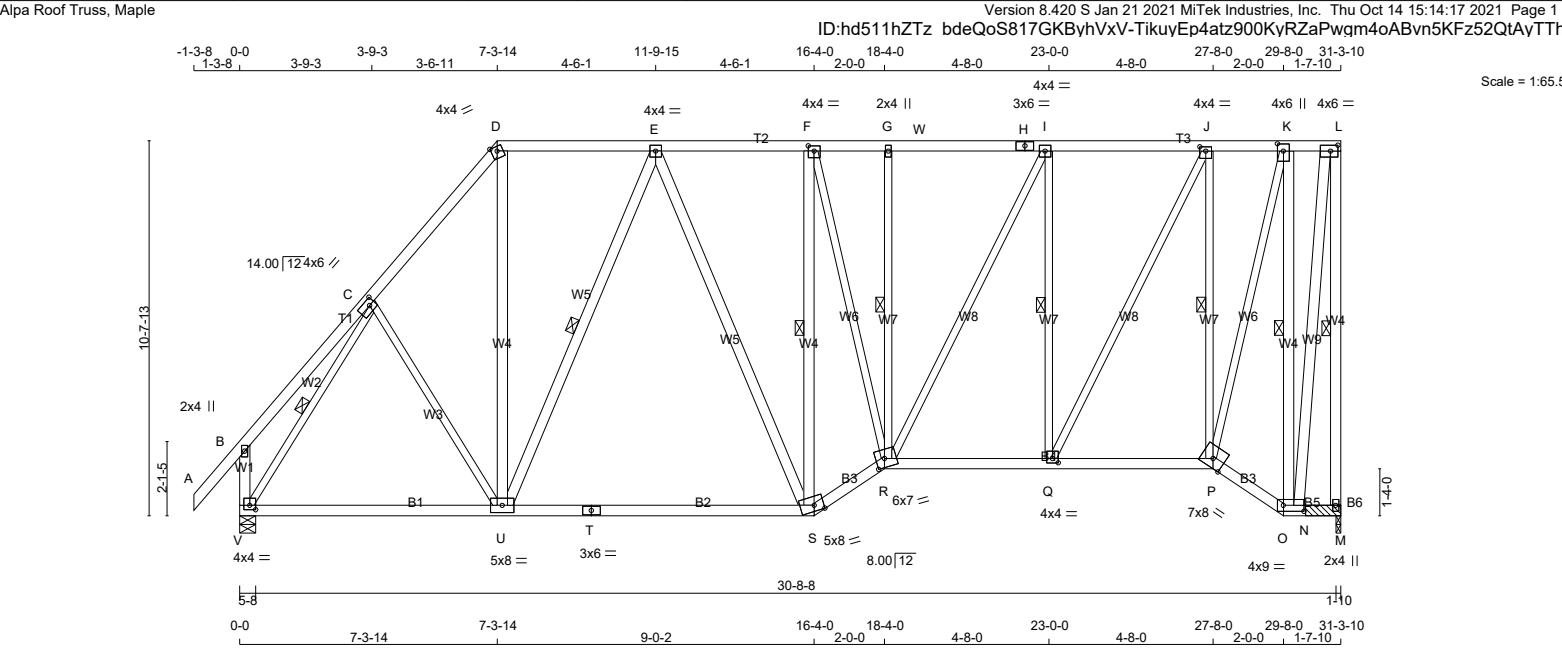
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF K-L, C-T, D-S, E-Q, H-O, I-N, J-M.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

| LOADING |             | TOTAL LOAD CASES: (4) |       |          |               |       |             |               |          |
|---------|-------------|-----------------------|-------|----------|---------------|-------|-------------|---------------|----------|
| CHORDS  |             | MAX. FACTORED         |       | FACTORED |               | WEBS  |             | MAX. FACTORED |          |
| MEMB.   | FORCE (LBS) | VERT. LOAD (PLF)      | LC1   | MAX      | UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX           | CSI (LC) |
| FR-TO   |             | FROM TO               |       |          |               | FR-TO |             |               |          |
| A-B     | 0 / 42      | -78.0                 | -78.0 | 0.07 (1) | 10.00         | T-C   | -112 / 42   | 0.06 (1)      |          |
| B-C     | -1299 / 0   | -78.0                 | -78.0 | 0.42 (1) | 6.18          | C-S   | 0 / 798     | 0.18 (1)      |          |
| C-D     | -1234 / 0   | -78.0                 | -78.0 | 0.34 (1) | 5.35          | S-D   | -605 / 0    | 0.35 (1)      |          |
| D-E     | -1321 / 0   | -78.0                 | -78.0 | 0.34 (1) | 5.21          | D-Q   | 0 / 178     | 0.04 (1)      |          |
| E-F     | -1500 / 0   | -78.0                 | -78.0 | 0.16 (1) | 5.19          | Q-E   | -966 / 0    | 0.55 (1)      |          |
| F-G     | -1503 / 0   | -78.0                 | -78.0 | 0.26 (1) | 5.07          | E-P   | 0 / 720     | 0.16 (1)      |          |
| G-H     | -1503 / 0   | -78.0                 | -78.0 | 0.26 (1) | 5.07          | P-F   | -225 / 0    | 0.27 (1)      |          |
| H-I     | -1223 / 0   | -78.0                 | -78.0 | 0.25 (1) | 5.51          | P-H   | 0 / 540     | 0.12 (1)      |          |
| I-J     | -640 / 0    | -78.0                 | -78.0 | 0.11 (1) | 6.25          | O-H   | -856 / 0    | 0.34 (1)      |          |
| J-K     | -253 / 0    | -78.0                 | -78.0 | 0.09 (1) | 6.25          | O-I   | 0 / 1109    | 0.25 (1)      |          |
| L-K     | -1495 / 0   | 0.0                   | 0.0   | 0.61 (1) | 5.37          | N-I   | -1265 / 0   | 0.51 (1)      |          |
| U-B     | -1572 / 0   | 0.0                   | 0.0   | 0.19 (1) | 6.58          | N-J   | 0 / 1531    | 0.34 (1)      |          |
|         |             |                       |       |          |               | M-J   | -1518 / 0   | 0.87 (1)      |          |
|         |             |                       |       |          |               | B-T   | 0 / 874     | 0.20 (1)      |          |
| U-T     | 0 / 0       | -18.5                 | -18.5 | 0.16 (4) | 10.00         |       |             |               |          |
| T-S     | 0 / 841     | -18.5                 | -18.5 | 0.24 (4) | 10.00         |       |             |               |          |
| S-R     | 0 / 1234    | -18.5                 | -18.5 | 0.25 (1) | 10.00         |       |             |               |          |
| R-Q     | 0 / 1234    | -18.5                 | -18.5 | 0.25 (1) | 10.00         |       |             |               |          |
| Q-P     | 0 / 1574    | -18.5                 | -18.5 | 0.27 (1) | 10.00         |       |             |               |          |
| P-O     | 0 / 1223    | -18.5                 | -18.5 | 0.25 (1) | 10.00         |       |             |               |          |
| O-N     | 0 / 657     | -18.5                 | -18.5 | 0.17 (4) | 10.00         |       |             |               |          |
| N-M     | 0 / 283     | -18.5                 | -18.5 | 0.06 (1) | 10.00         |       |             |               |          |
| M-L     | 0 / 0       | -18.5                 | -18.5 | 0.01 (4) | 10.00         |       |             |               |          |

|          |            |          |     |             |           |
|----------|------------|----------|-----|-------------|-----------|
| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO.  |
| 336327   | H35TA      |          | 1   | TRUSS DESC. | E21104396 |



**LUMBER** N. L. G. A. RULES CHORDS SIZE LUMBER DESCR. DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER BEARINGS UNFACTORED REACTIONS BEARING CRITERIA

|                 |     |     |      |     |
|-----------------|-----|-----|------|-----|
| A - D           | 2x4 | DRY | No.2 | SPF |
| D - H           | 2x4 | DRY | No.2 | SPF |
| H - L           | 2x4 | DRY | No.2 | SPF |
| M - L           | 2x4 | DRY | No.2 | SPF |
| V - B           | 2x4 | DRY | No.2 | SPF |
| V - T           | 2x4 | DRY | No.2 | SPF |
| T - S           | 2x4 | DRY | No.2 | SPF |
| S - R           | 2x4 | DRY | No.2 | SPF |
| R - P           | 2x4 | DRY | No.2 | SPF |
| P - O           | 2x4 | DRY | No.2 | SPF |
| O - M           | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| U - D           | 2x4 | DRY | No.2 | SPF |
| U - E           | 2x4 | DRY | No.2 | SPF |
| E - S           | 2x4 | DRY | No.2 | SPF |
| S - F           | 2x4 | DRY | No.2 | SPF |
| O - K           | 2x4 | DRY | No.2 | SPF |
| O - L           | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

|    |         |        |     |     |      |      |
|----|---------|--------|-----|-----|------|------|
| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
| B  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| C  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.00 |
| D  | TTW-m   | MT20   | 4.0 | 4.0 |      | Edge |
| E  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| F  | TMWW-t  | MT20   | 4.0 | 4.0 | 1.75 | 2.00 |
| G  | TMW+w   | MT20   | 2.0 | 4.0 |      |      |
| H  | TS-t    | MT20   | 3.0 | 6.0 |      |      |
| I  | TMWW-t  | MT20   | 4.0 | 4.0 |      |      |
| J  | TMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 2.00 |
| K  | TMWW-t  | MT20   | 4.0 | 6.0 | 2.50 | 2.00 |
| L  | TMVW-t  | MT20   | 4.0 | 6.0 | 2.00 | 2.50 |
| M  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| O  | BBWW-l  | MT20   | 4.0 | 9.0 | 2.00 | 7.00 |
| P  | BBWW-h  | MT20   | 7.0 | 8.0 |      | Edge |
| Q  | BMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 2.00 |
| R  | BBWWW-m | MT20   | 6.0 | 7.0 | 3.00 | 3.00 |
| S  | BBWW-m  | MT20   | 5.0 | 8.0 | 2.00 | 3.25 |
| T  | BS-t    | MT20   | 3.0 | 6.0 |      |      |
| U  | BMWWW-t | MT20   | 5.0 | 8.0 |      |      |

LATERAL BRACE(S) SHOWN SHALL BE 2X4 SPF#2



| FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG    |
|-------------------------|---------------------------------|-----------|--------------|
| JT VERT                 | DOWN                            | UPLIFT    | IN-SX        |
| M 1621                  | 0                               | 1-10      | 1-10 & BLOCK |
| V 1688                  | 0                               | 5-8       | 1-13         |

| UNFACTORED REACTIONS |          |                               |       |           |       |         |       |
|----------------------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| 1ST LCASE            |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
| JT                   | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| M                    | 1165     | 657 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 508 / 0 | 0 / 0 |
| V                    | 1207     | 716 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 491 / 0 | 0 / 0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) M, V  
2x4 DRY SPF No.2 BEARING BLOCK 12" LONG AT JT. M ATTACHED TO FRONT SIDE WITH 2 ROWS OF (0.122"x3") SPIRAL NAILS SPACED 3" C.C. 8 NAILS TOTAL.

**BRACING**  
FOR SECTION D-L, MAX. PURLIN SPACING = 2.00 FT.  
FOR OTHER SECTIONS, TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.33 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

1 LATERAL BRACE(S) AT 1/2 LENGTH OF L-M, E-U, F-S, G-R, I-Q, J-P, K-O, C-V.

END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW

**LOADING**  
TOTAL LOAD CASES: (4)

| CHORDS | MAX. FACTORED | FACTORED             | WEBS  | MAX. FACTORED |
|--------|---------------|----------------------|-------|---------------|
| MEMB.  | FORCE (LBS)   | VERT. LOAD (PLF)     | MEMB. | FORCE (LBS)   |
| FR-TO  |               | FROM TO              | FR-TO |               |
| A-B    | 0 / 42        | -78.0 -78.0 0.11 (1) | C-U   | 0 / 64        |
| B-C    | 0 / 24        | -78.0 -78.0 0.16 (1) | U-D   | 0 / 766       |
| C-D    | -1387 / 0     | -78.0 -78.0 0.20 (1) | E-S   | -666 / 0      |
| D-E    | -894 / 0      | -85.5 -85.5 0.27 (1) | S-F   | 0 / 194       |
| E-F    | -1230 / 0     | -85.5 -85.5 0.29 (1) | F-R   | -903 / 0      |
| F-G    | -1369 / 0     | -85.5 -85.5 0.13 (1) | R-G   | 0 / 656       |
| G-W    | -1372 / 0     | -85.5 -85.5 0.28 (1) | W-H   | -261 / 0      |
| H-I    | -1372 / 0     | -85.5 -85.5 0.28 (1) | I-J   | 0 / 553       |
| I-J    | -1118 / 0     | -85.5 -85.5 0.27 (1) | J-K   | -925 / 0      |
| J-K    | -585 / 0      | -85.5 -85.5 0.11 (1) | K-L   | 0 / 1147      |
| K-L    | -241 / 0      | -85.5 -85.5 0.05 (1) | L-M   | -1341 / 0     |
| M-L    | -1606 / 0     | 0.0 0.0 0.92 (1)     | P-K   | 0 / 1584      |
| V-B    | -219 / 0      | 0.0 0.0 0.03 (1)     | O-K   | -1635 / 0     |
|        |               |                      | C-L   | 0 / 1543      |
|        |               |                      | V-C   | -1661 / 0     |

|     |          |                      |       |
|-----|----------|----------------------|-------|
| V-U | 0 / 861  | -18.5 -18.5 0.45 (4) | 10.00 |
| U-T | 0 / 1152 | -18.5 -18.5 0.48 (4) | 10.00 |
| T-S | 0 / 1152 | -18.5 -18.5 0.48 (4) | 10.00 |
| S-R | 0 / 1462 | -18.5 -18.5 0.25 (1) | 10.00 |
| R-Q | 0 / 1118 | -18.5 -18.5 0.23 (1) | 10.00 |
| Q-P | 0 / 600  | -18.5 -18.5 0.17 (4) | 10.00 |
| P-O | 0 / 262  | -18.5 -18.5 0.05 (1) | 10.00 |
| O-N | 0 / 0    | -18.5 -18.5 0.01 (4) | 10.00 |
| N-M | 0 / 0    | -18.5 -18.5 0.01 (4) | 10.00 |

|                  |            |
|------------------|------------|
| SPECIFIED LOADS: |            |
| TOP CH. LL       | = 21.0 PSF |
| DL               | = 6.0 PSF  |
| BOT CH. LL       | = 0.0 PSF  |
| DL               | = 7.4 PSF  |
| TOTAL LOAD       | = 34.4 PSF |

**SPACING = 24.0 IN. C/C**

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 3.0 P.S.F.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2015

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018 , ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 23.0 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 21.0 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.09")  
ALLOWABLE DEFL.(TL)= L/360 (1.04")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.28")

CSI: TC=0.92/1.00 (L-M:1) , BC=0.48/1.00 (S-U:4) , WB=0.93/1.00 (K-O:1) , SSI=0.18/1.00 (D-E:1)

DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS= 1.10

COMPANION LIVE LOAD FACTOR = 1.00

TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .

|                               |                            |
|-------------------------------|----------------------------|
| NAIL VALUES                   |                            |
| PLATE GRIP(DRY) SHEAR SECTION |                            |
| (PSI) (PLI) (PLI)             |                            |
| MAX MIN MAX MIN MAX MIN       |                            |
| MT20                          | 650 371 1747 788 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (Q) (INPUT = 0.90 )  
JSI METAL= 0.42 (T) (INPUT = 1.00 )

# HUS/LJS – Double Shear Joist Hangers



All hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

**Material:** See table

**Finish:** G90 galvanized

**Design:**

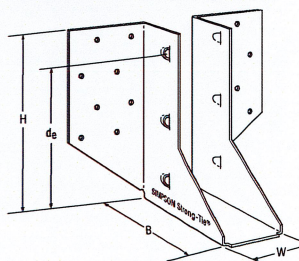
- Factored resistances are in accordance with CSA O86 -14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

**Installation:**

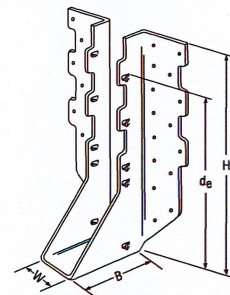
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

**Options:**

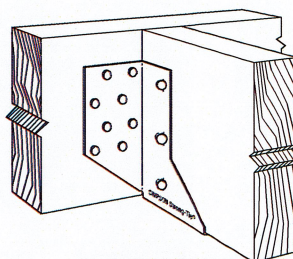
- See current catalogue for options



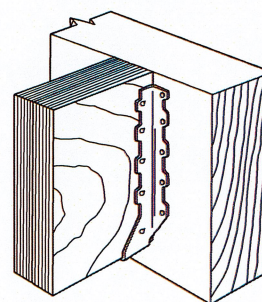
LJS26DS



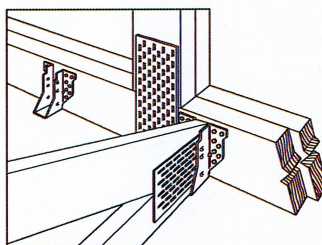
HUS210  
(HUS26, HUS28, similar)



Typical LJS26DS  
Installation



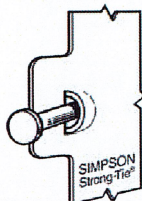
Typical HUS  
Installation



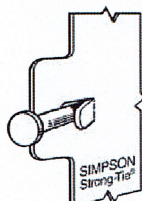
Typical HUS Installation  
(Truss Designer to provide fastener  
quantity for connecting multiple  
members together)

| Model No.  | Ga. | Dimensions (in.) |    |    |                             | Fasteners |          | Factored Resistance (lb.)               |                                         |                                         |                                         |
|------------|-----|------------------|----|----|-----------------------------|-----------|----------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|            |     | W                | H  | B  | d <sub>e</sub> <sup>1</sup> | Face      | Joist    | D.Fir-L                                 |                                         | S-P-F                                   |                                         |
|            |     |                  |    |    |                             |           |          | Uplift<br>(K <sub>0</sub> =1.15)<br>lb. | Normal<br>(K <sub>0</sub> =1.00)<br>lb. | Uplift<br>(K <sub>0</sub> =1.15)<br>lb. | Normal<br>(K <sub>0</sub> =1.00)<br>lb. |
| LJS26DS    | 18  | 1½               | 5  | 3½ | 4⅞                          | (16) 16d  | (6) 16d  | 2055                                    | 4265                                    | 1460                                    | 4115                                    |
| HUS26      | 16  | 1⅝               | 5⅞ | 3  | 3½                          | (14) 16d  | (6) 16d  | 2705                                    | 4940                                    | 2065                                    | 3875                                    |
| HUS28      | 16  | 1⅝               | 7⅜ | 3  | 6⅜                          | (22) 16d  | (8) 16d  | 3605                                    | 5365                                    | 2675                                    | 4345                                    |
| HUS210     | 16  | 1⅝               | 9⅜ | 3  | 7⅜                          | (30) 16d  | (10) 16d | 4505                                    | 5795                                    | 4010                                    | 4740                                    |
| HUS1.81/10 | 16  | 1⅜               | 9  | 3  | 8                           | (30) 16d  | (10) 16d | 4505                                    | 6450                                    | 4010                                    | 5200                                    |

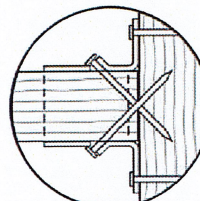
1. d<sub>e</sub> is the distance from the seat of the hanger to the highest joist nail.



Dome Double Shear Nailing prevents tabs breaking off (available on some models).  
U.S. Patent 5,603,580



Double Shear Nailing Side View. Do not bend tab back.



Double Shear Nailing Top View.



LIMIT  
STATES  
DESIGN

This technical bulletin is effective until June 30, 2022, and reflects information available as of April 1, 2020. This information is updated periodically and should not be relied upon after June 30, 2022. Contact Simpson Strong-Tie for current information and limited warranty or see [strongtie.com](http://strongtie.com).

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T-SPECHUS20 3/20 exp. 6/22

(800) 999-5099  
[strongtie.com](http://strongtie.com)

# HHUS – Double Shear Joist Hangers

All HHUS hangers have double shear nailing. This patented innovation distributes the load through two points on each joist nail for greater strength. It also allows the use of fewer nails, faster installation and the use of common nails for all connections. Do not bend or remove tabs.

**Material:** 14 gauge

**Finish:** G90 galvanized

**Design:**

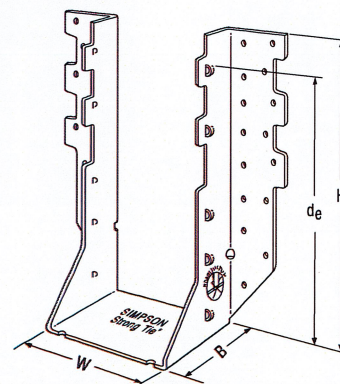
- Factored resistances are in accordance with CSA O86-14.
- Uplift resistances have been increased 15%. No further increase is permitted.
- Wood shear is not considered in the factored resistances given. The specifier must ensure that the joist and header capacities are capable of withstanding these loads.

**Installation:**

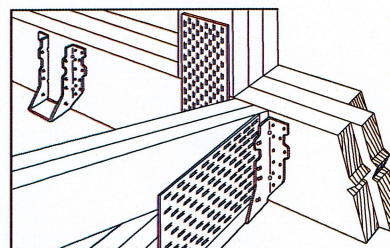
- Use all specified fasteners
- Nails: 16d = 0.162" dia. x 3½" long common wire
- Double shear nails must be driven at an angle through the joist or truss into the header to achieve the table loads
- Not designed for welded or nailer applications

**Options:**

- See current catalogue for options



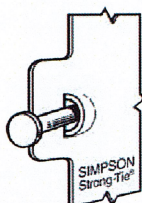
HHUS410



Typical HHUS Installation  
(Truss Designer to provide fastener quantity for connecting multiple members together)

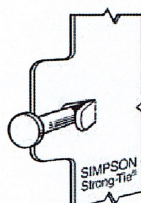
| Model No.   | Ga. | Dimensions (in.) |    |    |                             | Fasteners |          | Factored Resistance (lb.)        |                                  |                                  |                                  |
|-------------|-----|------------------|----|----|-----------------------------|-----------|----------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|             |     | W                | H  | B  | d <sub>e</sub> <sup>1</sup> | Face      | Joist    | D.Fir-L                          |                                  | S-P-F                            |                                  |
|             |     |                  |    |    |                             |           |          | Uplift<br>(K <sub>0</sub> =1.15) | Normal<br>(K <sub>0</sub> =1.00) | Uplift<br>(K <sub>0</sub> =1.15) | Normal<br>(K <sub>0</sub> =1.00) |
| HHUS26-2    | 14  | 3½               | 5¼ | 3  | 3¼                          | (14) 16d  | (6) 16d  | 2850                             | 7335                             | 2065                             | 5205                             |
| HHUS28-2    | 14  | 3½               | 7½ | 3  | 6½                          | (22) 16d  | (8) 16d  | 3765                             | 8940                             | 2675                             | 6345                             |
| HHUS210-2   | 14  | 3½               | 9¾ | 3  | 8                           | (30) 16d  | (10) 16d | 4670                             | 9660                             | 4235                             | 7000                             |
| HHUS210-3   | 14  | 4¼               | 9  | 3  | 7¼                          | (30) 16d  | (10) 16d | 4670                             | 9670                             | 4235                             | 6865                             |
| HHUS210-4   | 14  | 6¼               | 8¾ | 3  | 7¾                          | (30) 16d  | (10) 16d | 4670                             | 10155                            | 4235                             | 7210                             |
| HHUS46      | 14  | 3¾               | 5¼ | 3  | 3¼                          | (14) 16d  | (6) 16d  | 2540                             | 7335                             | 2065                             | 5205                             |
| HHUS48      | 14  | 3¾               | 7¼ | 3  | 6¼                          | (22) 16d  | (8) 16d  | 3765                             | 8940                             | 2675                             | 6345                             |
| HHUS410     | 14  | 3¾               | 9  | 3  | 8                           | (30) 16d  | (10) 16d | 4670                             | 9855                             | 4235                             | 7000                             |
| HHUS5.50/10 | 14  | 5½               | 9  | 3  | 8                           | (30) 16d  | (10) 16d | 4670                             | 10155                            | 4235                             | 7210                             |
| HHUS7.25/10 | 14  | 7¼               | 9  | 3¾ | 7¾                          | (30) 16d  | (10) 16d | 4670                             | 10155                            | 3370                             | 7210                             |

1. d<sub>e</sub> is the distance from the seat of the hanger to the highest joist nail.

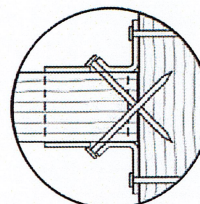


Dome Double Shear Nailing prevents tabs breaking off (available on some models).

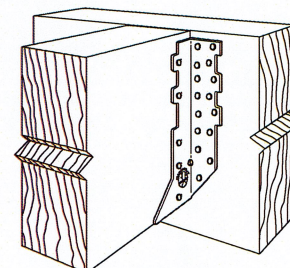
U.S. Patent  
5,603,580



Double Shear Nailing Side View. Do not bend tab back.



Double Shear Nailing Top View.



Typical HHUS Installation



LIMIT  
STATES  
DESIGN

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# TC – Truss Connectors

**SIMPSON**  
**Strong-Tie**

The TC truss connector is an ideal connector for scissor trusses and can allow horizontal movement up to 1¼". The TC also attaches plated trusses to top plates or sill plates to resist uplift forces. Typically used on one or both ends of truss as determined by the building designer.

**Material:** 16 gauge

**Finish:** G90 galvanized

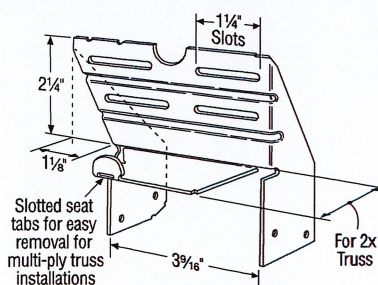
**Design:** Factored resistances are in accordance with CSA 086-14

## Installation:

- Use all specified fasteners.
- Nails: 10d = 0.148" dia. x 3" long common wire, 10d x 1½" = 0.148" dia. x 1½" long.
- Drive 10d nails into the truss at the inside end of the slotted holes (inside end is towards the centre of the truss) and clinch on the back side. Do not seat these nails into the truss—allow room under the nail head for movement of the truss with respect to the wall.

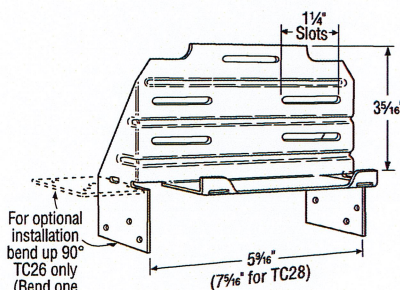
## Optional TC Installation:

- Bend one flange up 90°. Drive specified nails into the top and face of the top plates or install Titen® screws into the top and face of masonry wall. See optional load tables and installation details.



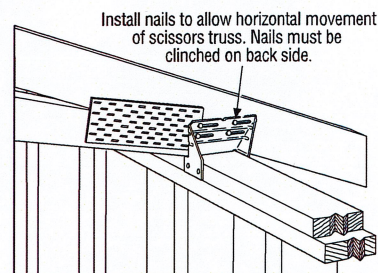
**TC24**

U.S. Patent 4,932,173

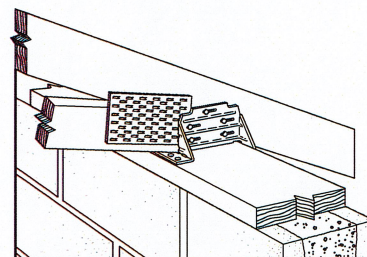


**TC26**

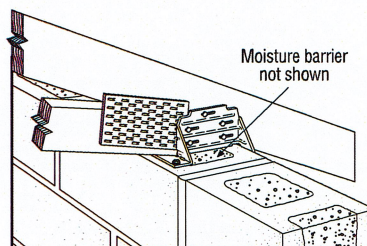
(TC28 Similar)



**Typical TC24 Installation**



**Optional TC26 Installation for Grouted Concrete Block using a Wood Nailer**  
(8", 10", 12" Wall Installation Similar)



**Optional TC26 Installation for Grouted Concrete Block using Titen Screws**

| Model No. | Fasteners |             | Factored Resistance           |                               |
|-----------|-----------|-------------|-------------------------------|-------------------------------|
|           | Truss     | Wall Plates | D.Fir-L                       | S-P-F                         |
|           |           |             | Uplift (K <sub>0</sub> =1.15) | Uplift (K <sub>0</sub> =1.15) |
| TC24      | (4) 10d   | (4) 10d     | 605                           | 430                           |
| TC26      | (5) 10d   | (6) 10d     | 1015                          | 720                           |
| TC28      | (5) 10d   | (6) 10d     | 1015                          | 720                           |

## Optional TC Installation Table

| Model No. | Fasteners |               | Factored Resistance           |                               |
|-----------|-----------|---------------|-------------------------------|-------------------------------|
|           | Truss     | Wall Plates   | D.Fir-L                       | S-P-F                         |
|           |           |               | Uplift (K <sub>0</sub> =1.15) | Uplift (K <sub>0</sub> =1.15) |
| TC26      | (5) 10d   | (6) 10d x 1½" | 810                           | 660                           |
|           | (5) 10d   | (6) 10d       | 930                           | 660                           |

1. Factored resistances have been increased 15% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.
2. Grout strength is 15 MPa minimum.
3. Optional TC26 installation with 10d nails requires minimum 3" top plate thickness.
4. TC26 fastened to grouted concrete block with (6) – ¾" x 2¼" Titen screws has a factored uplift resistance of 275 lb.



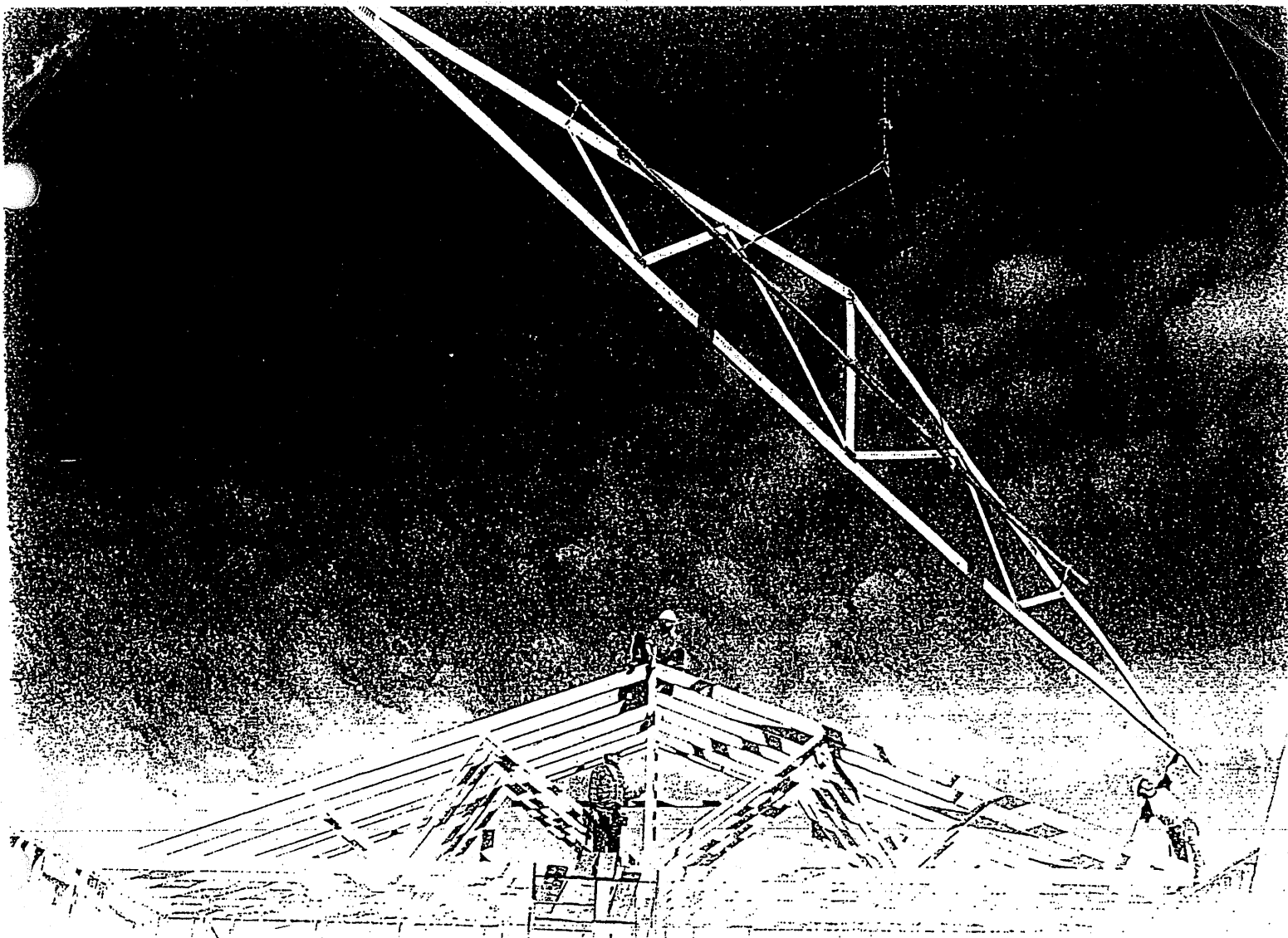
**LIMIT  
STATES  
DESIGN**

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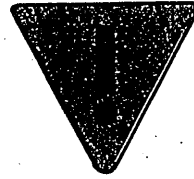
# **Wood Truss Installation**

**A Guide to proper handling, erecting and bracing  
metal plate connected wood trusses**

# Table of Content

|                                                            |    |
|------------------------------------------------------------|----|
| Warning.....                                               | 4  |
| <b>1</b> Unloading & Lifting.....                          | 5  |
| <b>2</b> Job Site Handling.....                            | 5  |
| <b>3</b> Hoisting.....                                     | 6  |
| <b>4</b> Beginning the Erection Process.....               | 7  |
| <b>5</b> Erection Tolerance.....                           | 8  |
| <b>6</b> Bracing.....                                      | 8  |
| <b>7</b> Bracing Requirements for<br>3 Planes of Roof..... | 9  |
| <b>8</b> Stacking Materials.....                           | 10 |
| Caution Notes.....                                         | 11 |

# Warning



## General

Familiarity with the Construction Design Documents, the Truss Design Drawings, and Truss Placement Plans (if required by the Construction Design Documents) is required to properly erect, brace, and connect the trusses to the building system.

All of the care and quality involved in the design and manufacture of wood trusses can be jeopardized if the trusses are not properly handled, erected, and braced.

**The consequences of improper handling, erecting, and bracing may be a collapse of the structure, which at best is a substantial loss of time and materials, and at worst is a loss of life. The majority of truss accidents occur during truss installation and not as a result of improper design or manufacture.**

Prior to truss erection, the builder/erector shall meet with the erection crew for a safety and planning meeting, making sure each crew member understands his or her roles and responsibilities during the erection process.

## Temporary Erection Bracing

**Trusses are not marked in any way to identify the frequency, or location of temporary erection bracing.**

All temporary bracing shall comply with the latest edition of *Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses* (HIB), published by the Truss Plate Institute, and/or as specified in the Construction Design Documents prepared by the building designer.

## Permanent Truss Bracing

Permanent bracing for the roof or floor trusses is the responsibility of the building designer and should be shown on the Construction Design Documents. Permanent bracing locations for individual compression members of a wood truss are shown on the Truss Design Drawings, and shall be installed by the building or erection contractor. This bracing is needed for the proper performance of individual trusses within the roof or floor system. The design and connection of the bracing to the truss and then to the overall building system is the responsibility of the building designer, and is in addition to the permanent bracing plan, which is also specified by the building designer.

## Special Design Requirements

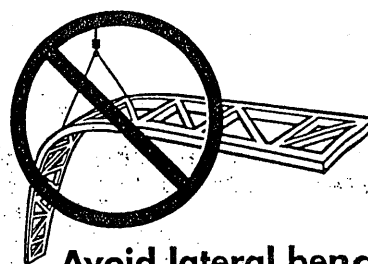
Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for all bracing as needed to resist these forces.

# 1

## Unloading & Lifting

### Never handle trusses flat

Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid lateral bending of trusses, which can cause damage to the lumber and metal connector plates at the joints.

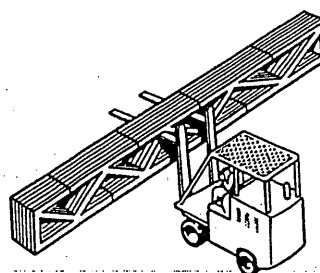
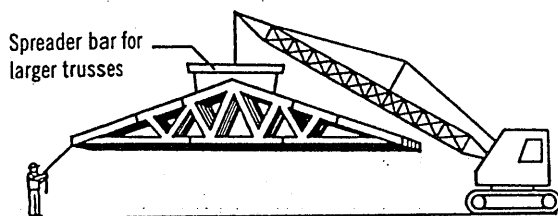


**Avoid lateral bending**

- Use special care in windy weather.
- If using a crane within 10 feet of an electric line, contact the local power company.
- If using a crane within 5 miles of an airport, contact the airport 30 days prior to erection to learn about any safety regulations that must be followed.

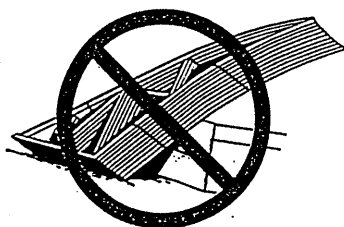
# 2

## Job Site Handling



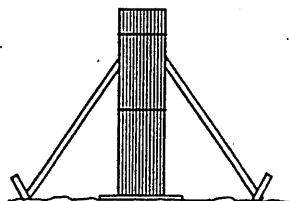
### All trusses should be picked up at the top chords in a vertical position only

Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. Do not break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



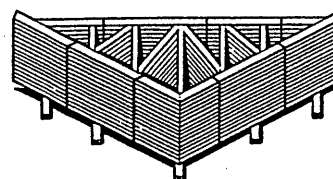
### Do not store unbraced bundles upright

If trusses are stored vertically they shall be braced in a manner that will prevent tipping or topping. Generally cutting of the banding is done just prior to installation.



### Do not store on uneven ground

If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

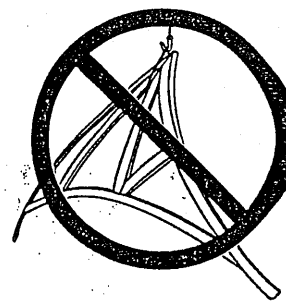


### Care should be exercised when removing banding to avoid damaging trusses.

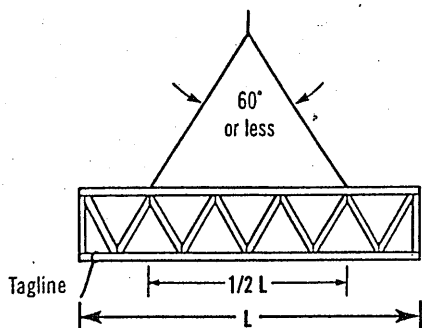
During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

### 3 Hoisting

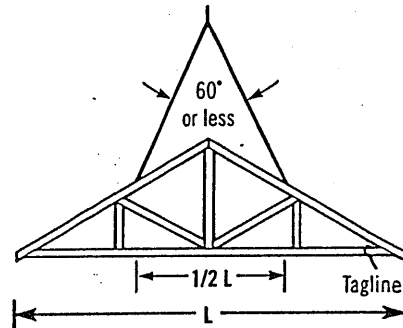
All trusses that are erected one at a time shall be held safely in position by the erection equipment until such time as all necessary bracing has been installed and the ends of the trusses are securely fastened to the building.



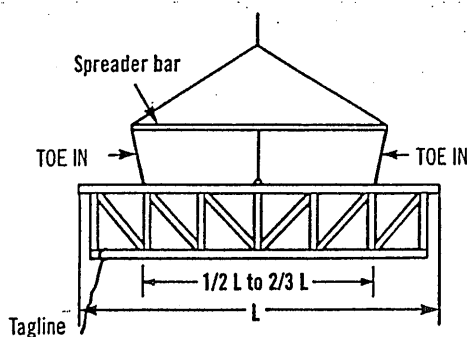
**Avoid lateral bending**



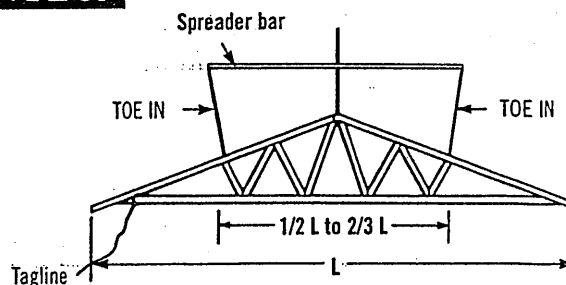
$L \leq 30'$



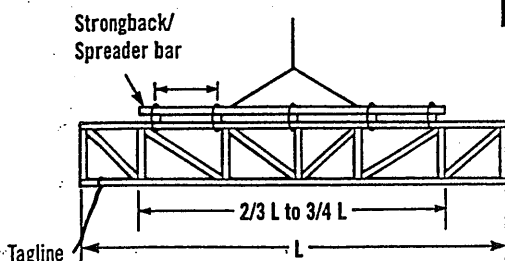
Truss sling is acceptable where these criteria are met.



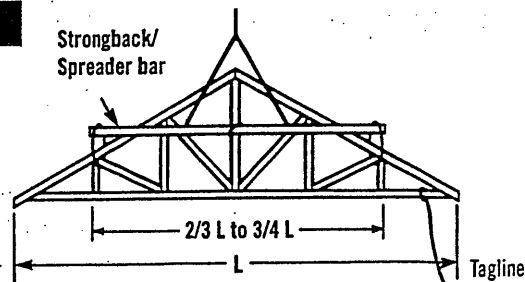
$30' < L \leq 60'$



Use spreader bar in all other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



$L > 60'$



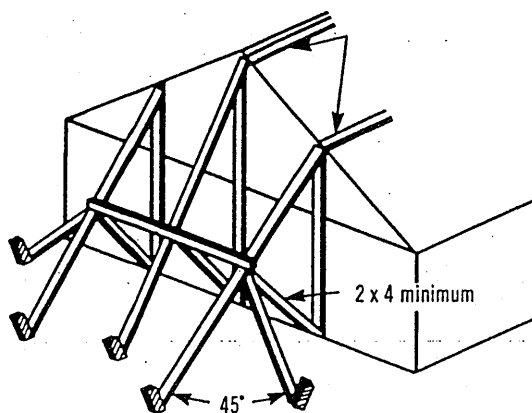
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

# 4 Beginning the Erection Process

It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

## Ground Brace - Exterior

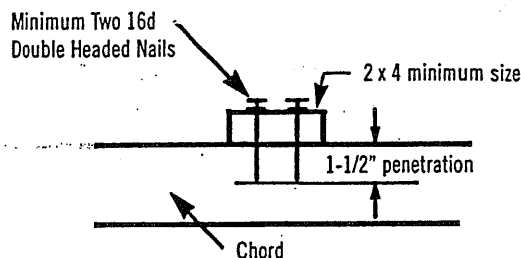
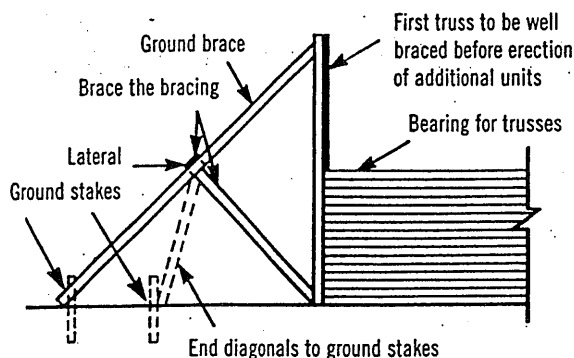
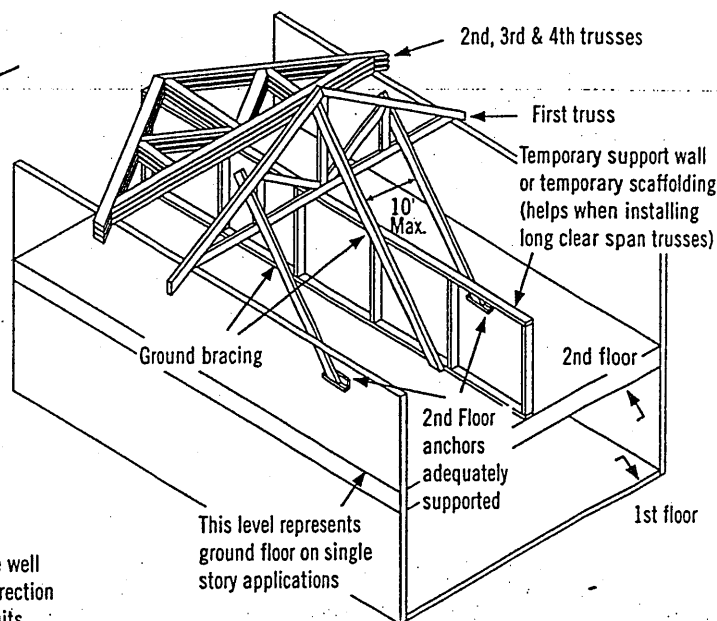
One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.



Note: Locate ground braces for first truss directly in line with all rows of top chord continuous lateral bracing (either temporary or permanent).

## Ground Brace - Interior

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.

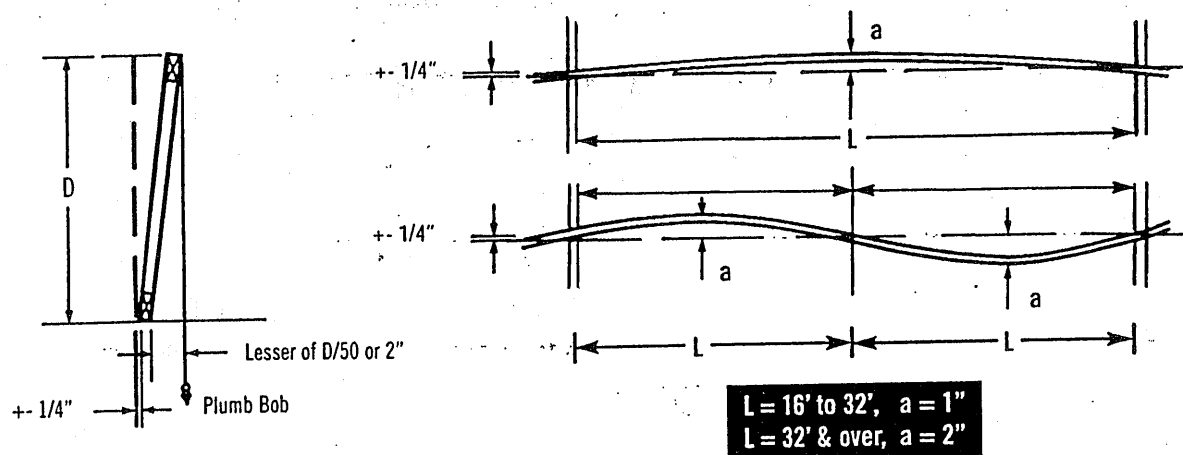


**Inadequate size of bracing material or inadequate fastening is a major cause of erection dominoing.**

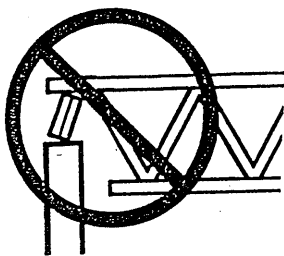
## 5 Erection Tolerance

Complying with erection tolerances is critical to achieving an acceptable roof or floor line, and to accomplishing effective bracing. Setting trusses within tolerance the first time will prevent the need for the hazardous practice of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chords when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing.

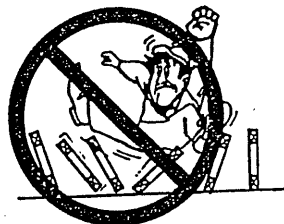
**When sheathing, make sure nails are driven into the top chord of the trusses.**



## 6 Bracing



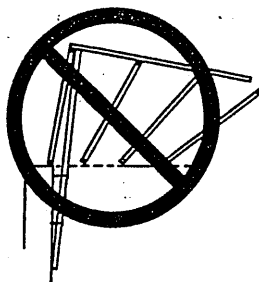
**Do not install trusses on temporarily connected supports**



**Do not walk on unbraced trusses**



**Do not walk on trusses or gable ends lying flat**

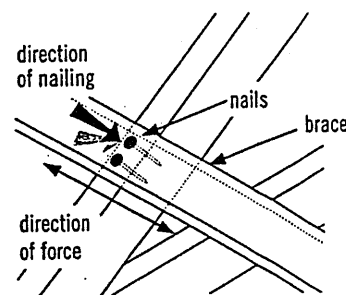


**Nails in withdrawal (parallel to force)**

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

Nailing scabs to the end of the building to brace the first truss is not recommended.

All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.



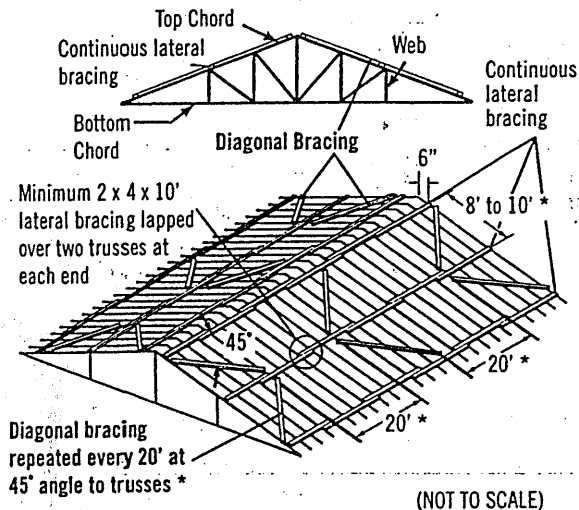
**Well nailed (perpendicular to force)**

# 7 Bracing Requirements for 3 Planes of Roof

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) Top Chord (sheathing), Plane 2) Bottom Chord (ceiling plane), and Plane 3) Web Member plane or vertical plane perpendicular to trusses.

## 1) Top Chord Plane

Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.

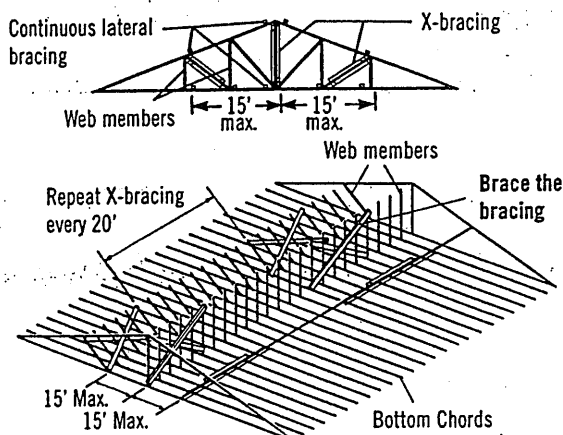


Exact spacing between trusses should be maintained as bracing is installed to avoid the hazardous practice of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

## 3) Web Member Plane

"X" bracing, as shown, is critical in preventing trusses from leaning or dominoing. Repeat as shown to create a succession of rigid units.

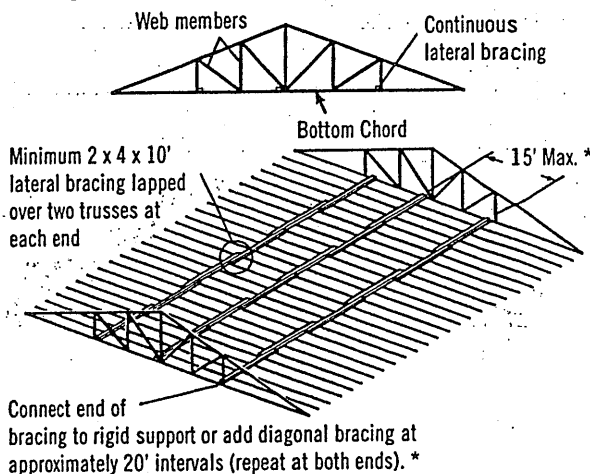
X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood or OSB may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

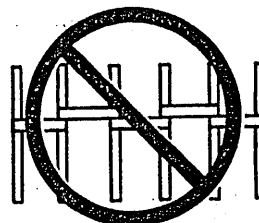
## 2) Bottom Chord Plane

In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.

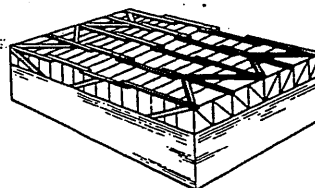


\* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses) for details.

**Diagonal or cross-bracing is very important!**



**Do not use short blocks to brace individual trusses without a specific bracing plan detailing their use**

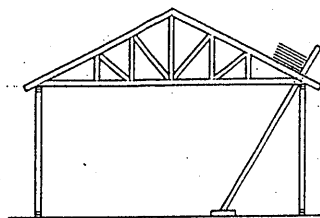
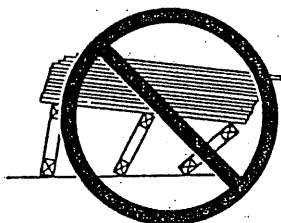


**Bracing requirements using the same principles apply to parallel chord trusses**

# 8 Stacking Materials

**Do not proceed with building completion until all bracing is securely and properly in place**

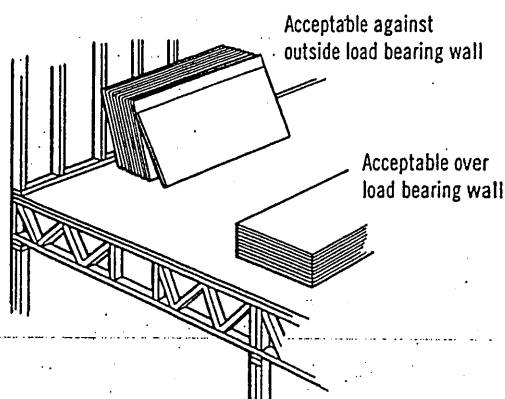
**Never stack materials on unbraced or inadequately braced trusses**



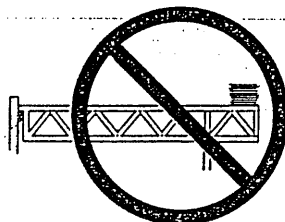
Platform must be rigidly braced

Proper distribution of construction materials is a must during construction.

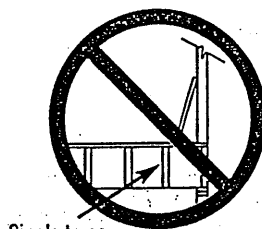
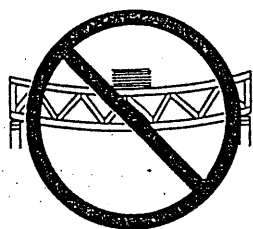
**Never stack materials near a peak**



**Never stack materials on the cantilever of a truss**

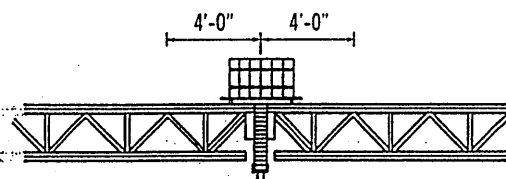


Always stack materials over two or more trusses.



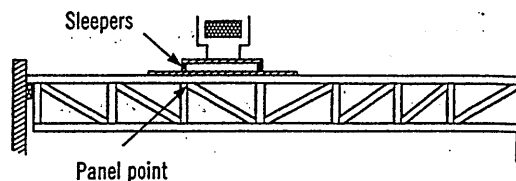
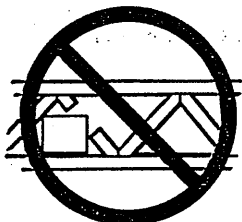
Single truss

**Never overload small groups or single trusses. Position load over as many trusses as possible.**



Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

**Never cut any structural member of a truss.**



Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

## Caution Notes

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier before erection of trusses begins.

Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses safely in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a guide for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

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