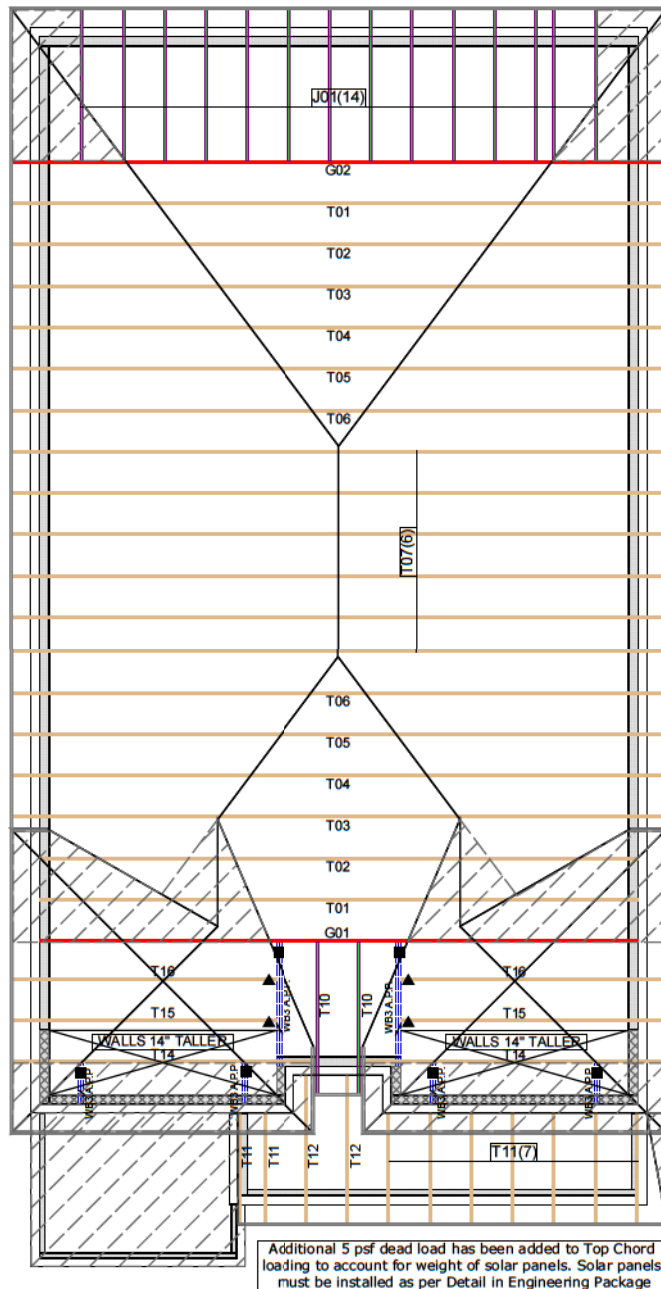




| Hanger Name | Symbol | QTY |
|-------------|--------|-----|
| LUS24       | ▲      | 4   |
| HGUS26-2    | ■      | 6   |



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

#### CONVENTIONAL FRAMING BY OTHERS

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE OBC. ROOF RAFTERS THAT CROSS OVER TRUSSES TO BE MIN. 2x4 SIF @ 24" C/C WITH A 2x4 VERTICAL POST TO THE TRUSS BELOW. VERTICAL POSTS TO BE LATERALLY BRACED SO THAT UNBRACED LENGTH DOES NOT EXCEED 6'. DESIGN OF CONVENTIONAL FRAMING IS THE RESPONSIBILITY OF THE PROJECT ENGINEER.

#### JOB INFORMATION

|           |                                                                                  |
|-----------|----------------------------------------------------------------------------------|
| Customer  | GREENPARK HOMES                                                                  |
| Job #     | 20-00418R0                                                                       |
| Address   | TRINAR HALL<br>EAST GWILLIMBURY, ON                                              |
| Model     | BRENTWOOD 2 EL 1                                                                 |
| Sales Rep | RALPH MIRIGELLO                                                                  |
| Designer  | KR                                                                               |
| Date      | 12/18/2020                                                                       |
| Path      | C:\MITEK\CA\JOBS\GREENPARK HOMES\TRINAR HALL\BRENTWOOD 2\LEVEL 1\T-BRENTWOOD2-1\ |

#### DESIGN INFORMATION

|               |                                                       |
|---------------|-------------------------------------------------------|
| Code          | NBCC 2015                                             |
| Bldg          | Residential - HSB (NBCC Part 9)                       |
| TC LL         | 34.8 lb/ft <sup>2</sup>                               |
| TC DL         | 8.0 lb/ft <sup>2</sup>                                |
| BC LL         | 10.5 lb/ft <sup>2</sup>                               |
| BC DL         | 7.3 lb/ft <sup>2</sup>                                |
| Deflection    | LL=L/360 TL=L/360                                     |
| Spacing       | 24" O/C unless otherwise noted                        |
| Complies With | OBC 2012 (2019 Amendment)<br>CSA O86-14 and TPIC 2014 |

#### IMPORTANT INFORMATION

Refer to truss drawings in the Truss Engineering Package for ply-to-ply attachment notes

For site-framed valleys: top chords of all roof trusses must be laterally supported using 2x4 continuous bracing @24 O/C - all bracing must be anchored at ends as per TPIC Installation Guidelines

Read all notes on this page in addition to those shown on the KOTT Truss Engineering package

Field erection, handling and bracing are not the responsibility of KOTT, or KOTT Engineering

Unless noted otherwise, hurricane ties are to be installed at the bearings of all trusses > 40 ft clear span, and any girder or beam supporting trusses with a clear span >40 ft. See hanger legend for type.

Unless noted otherwise, for Part 9 bldgs, all trusses are to be anchored to the top of supporting walls as follows: trusses with a clear span <40 ft use 3-1/4" nails @ each bearing; trusses with a clear span >40 ft use 3-1/4" nails @ each bearing in addition to the appropriate hurricane tie.

KOTT Inc.  
14 Anderson Blvd.  
Uxbridge, ON  
905.642.4400



NE1220-126  
GREENPARK - TRINAR HALL -  
BRENTWOOD 2 EL 1 -



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

## **ENGINEERING NOTE PAGE (ENP-1)**

### **PLEASE READ PRIOR TO INSTALLATION**

### **RESPONSIBILITIES**

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY KOTT DESIGN. THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF FAULTY OR INCORRECT INFORMATION, SPECIFICATION AND/OR DESIGNS FURNISHED TO THE ENGINEER. THE UNDERSIGNED ENGINEER IS ONLY RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THIS BUILDING COMPONENT FOR THE CONDITIONS AND LOADS SHOWN ON THIS DRAWING. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE VERIFICATION OF THE DIMENSIONS AND THE DESIGN LOADS USED ARE THE RESPONSIBILITY OF THE BUILDING DESIGNER.

TRUSSES ARE DESIGNED IN CONFORMANCE WITH THE RELEVANT SECTIONS OF THE NATIONAL BUILDING CODE OF CANADA OR THE CANADIAN CODE FOR FARM BUILDINGS, WHICHEVER APPLIES TO THE BUILDING TYPE INDICATED ON THE DRAWING

IT IS THE RESPONSIBILITY OF KOTT TO ENSURE THAT TRUSSES ARE MANUFACTURED IN CONFORMANCE WITH THESE DESIGNS AND WITH THE SPECIFICATIONS OUTLINED BELOW. THE UNDERSIGNED ENGINEER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

### **USE AND OCCUPANCY**

- The building is of the type indicated on the drawing

### **LOADING**

- The truss loading intensity and distribution as well as load transfer mechanism is that indicated on the drawing
- No buildings, trees, parapets or other projections higher than the roof for which the trusses are used are located within a distance less than ten (10) times the difference in height, or five metres (16 ft) whichever is greater, unless the drawing indicates that the snow drifting has been taken into account

### **HANDLING, INSTALLATION AND BRACING**

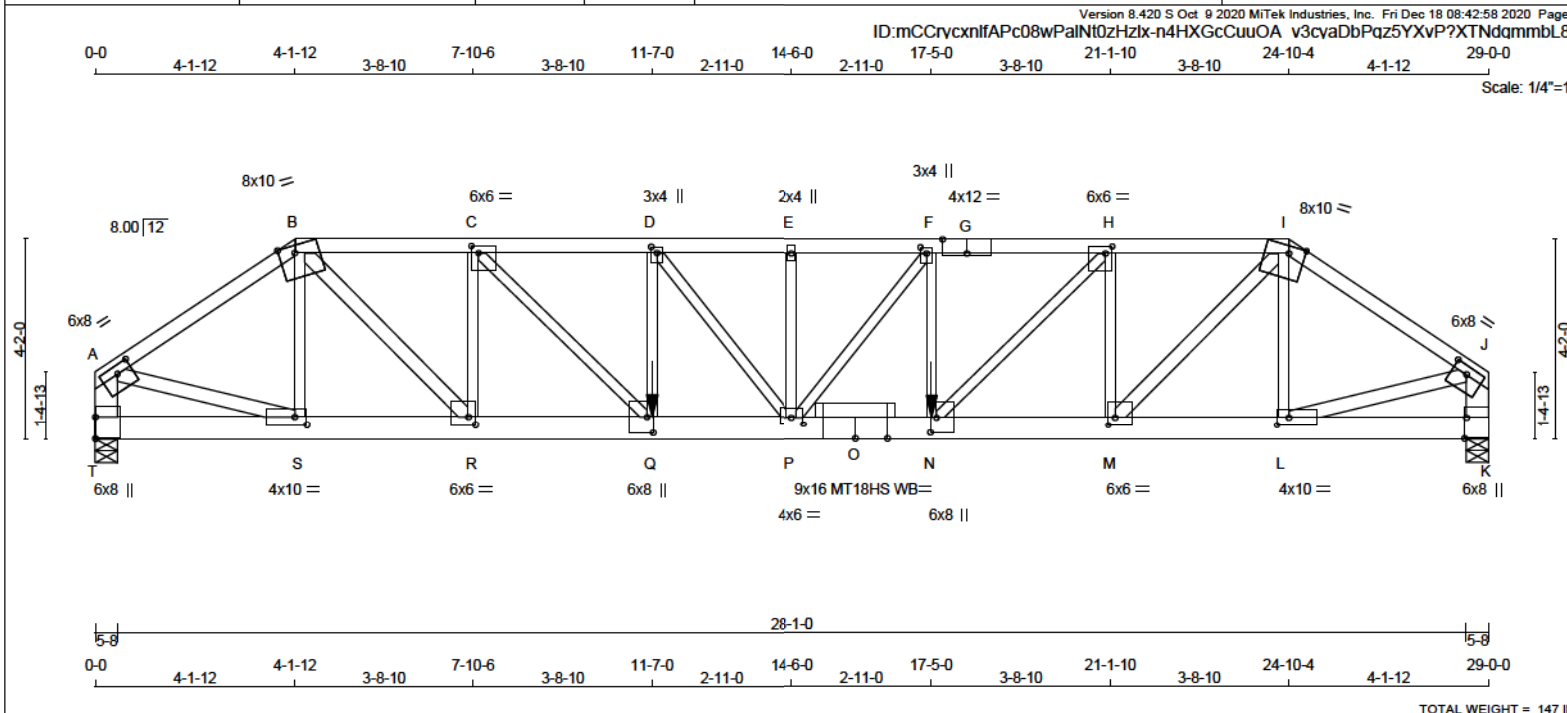
- The trusses must be handled and installed by a qualified professional as per the supplied document titled *Information for Truss Installers* and the BCSI-B1 and BCSI-B3 Summary Sheets
- The compression chords are laterally braced by continuous rigid diaphragm sheathing or as specified on the drawing
- Temporary and permanent bracing must be installed as indicated on the truss drawing and according to the BCSI-B1 and BCSI-B3 Summary Sheets. Bracing for the lateral stability of the truss is to be provided by the building designer
- **It is recommended that a Professional Engineer's advice be obtained for the bracing of trusses spanning more than 12.37m (40'-7")**

### **SUPPORTS**

- The trusses are to be supported at the bearing points indicated and anchored to the supports where considered necessary by the designer of the overall structure
- Bearing sizes shown are the minimum required to prevent crushing of the truss members and do not necessarily take into account stability of the overall building structure
- Elevation of bearings must be carefully checked and shimmed to alignment for solid bearings
- Adequate wood truss bearing is the responsibility of the building designer.

### **DIMENSIONS**

- Geometry of the truss and dimensions indicated on the drawing are identical to those of the installed truss.



|                                                                                         |  |            |  |                                                                                                      |  |                   |  |               |  |                                    |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
|-----------------------------------------------------------------------------------------|--|------------|--|------------------------------------------------------------------------------------------------------|--|-------------------|--|---------------|--|------------------------------------|--|----------------------------------------|--|--------------------------------|--|---------------------|--|----------------------------------------------|--|------------------------------------------------------------|--|------------------------------|--|--|--|
| <b>LUMBER</b>                                                                           |  |            |  | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> |  |                   |  |               |  |                                    |  |                                        |  | <b>DESIGN CRITERIA</b>         |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>N. L. G. A. RULES</b>                                                                |  |            |  | <b>BEARINGS</b>                                                                                      |  |                   |  |               |  |                                    |  |                                        |  | *** SPECIAL LOADS ANALYSIS *** |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>CHORDS</b>                                                                           |  |            |  | <b>SIZE</b>                                                                                          |  | <b>LUMBER</b>     |  | <b>DESCR.</b> |  | <b>FACTORED GROSS REACTION</b>     |  | <b>MAXIMUM FACTORED GROSS REACTION</b> |  | <b>INPUT BRG</b>               |  | <b>REQRD BRG</b>    |  | GEOMETRY AND/OR BASIC LOADS CHANGED BY USER. |  |                                                            |  |                              |  |  |  |
| <b>A - B</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>JT VERT</b>                     |  | <b>DOWN</b>                            |  | <b>HORIZ</b>                   |  | <b>UPLIFT IN-SX</b> |  | <b>IN-SX</b>                                 |  | LOADS WERE DERIVED FROM USER INPUT                         |  |                              |  |  |  |
| <b>B - G</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>T</b>                           |  | <b>4403 0</b>                          |  | <b>4403 0</b>                  |  | <b>0 5-8</b>        |  | <b>5-8</b>                                   |  | NO FURTHER MODIFICATIONS WERE MADE                         |  |                              |  |  |  |
| <b>G - I</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>K</b>                           |  | <b>4403 0</b>                          |  | <b>4403 0</b>                  |  | <b>0 5-8</b>        |  | <b>5-8</b>                                   |  |                                                            |  |                              |  |  |  |
| <b>I - J</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>UNFACTORED REACTIONS</b>        |  |                                        |  |                                |  |                     |  |                                              |  | SPECIFIED LOADS:                                           |  |                              |  |  |  |
| <b>T - A</b>                                                                            |  | <b>2x6</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>1ST LCASE</b>                   |  |                                        |  |                                |  |                     |  |                                              |  | <b>TOP CH. LL = 34.8 PSF</b>                               |  |                              |  |  |  |
| <b>K - J</b>                                                                            |  | <b>2x6</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>MAX/MIN COMPONENT REACTIONS</b> |  |                                        |  |                                |  |                     |  |                                              |  | <b>DL = 8.0 PSF</b>                                        |  |                              |  |  |  |
| <b>T - O</b>                                                                            |  | <b>2x6</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>JT COMBINED</b>                 |  |                                        |  |                                |  |                     |  |                                              |  | <b>BOT CH. LL = 10.5 PSF</b>                               |  |                              |  |  |  |
| <b>O - K</b>                                                                            |  | <b>2x6</b> |  | <b>DRY</b>                                                                                           |  | <b>2100F 1.8E</b> |  | <b>SPF</b>    |  | <b>SNOW</b>                        |  |                                        |  |                                |  |                     |  |                                              |  | <b>DL = 7.3 PSF</b>                                        |  |                              |  |  |  |
| <b>ALL WEBS</b>                                                                         |  |            |  | <b>2x3</b>                                                                                           |  | <b>DRY</b>        |  | <b>No.2</b>   |  | <b>SPF</b>                         |  | <b>LIVE</b>                            |  |                                |  |                     |  |                                              |  |                                                            |  | <b>TOTAL LOAD = 60.6 PSF</b> |  |  |  |
| <b>EXCEPT</b>                                                                           |  |            |  | <b>2x4</b>                                                                                           |  | <b>DRY</b>        |  | <b>No.2</b>   |  | <b>SPF</b>                         |  | <b>PERM.LIVE</b>                       |  |                                |  |                     |  |                                              |  |                                                            |  | <b>SPACING = 24.0 IN./C</b>  |  |  |  |
| <b>B - R</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>WIND</b>                        |  |                                        |  |                                |  |                     |  |                                              |  | LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.0019 MINIMUM |  |                              |  |  |  |
| <b>M - I</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>DEAD</b>                        |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>A - S</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>SOIL</b>                        |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>L - J</b>                                                                            |  | <b>2x4</b> |  | <b>DRY</b>                                                                                           |  | <b>No.2</b>       |  | <b>SPF</b>    |  | <b>0 / 0</b>                       |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) T, K</b>                       |  |            |  |                                                                                                      |  |                   |  |               |  |                                    |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>BRACING</b>                                                                          |  |            |  |                                                                                                      |  |                   |  |               |  |                                    |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.00 FT.</b>                       |  |            |  |                                                                                                      |  |                   |  |               |  |                                    |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |
| <b>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.</b> |  |            |  |                                                                                                      |  |                   |  |               |  |                                    |  |                                        |  |                                |  |                     |  |                                              |  |                                                            |  |                              |  |  |  |

|                                                                            |        |        |     |      |           |                                                                                                                                                                                                                             |                           |                           |               |             |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------|--------|--------|-----|------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------|-------------|-------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--|--|--|--|--|--|--|--|--|--|
| DRY, SEASONED LUMBER.                                                      |        |        |     |      |           | MAX. UNBRACED BOTTOM CHORD LENGTH = 10.0 FT. OR RIGID CEILING DIRECTLY APPLIED.                                                                                                                                             |                           |                           |               |             |       | 2.00 IN. MINIMUM                                                                                                                      |                          |  |  |  |  |  |  |  |  |  |  |
| ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED. |        |        |     |      |           |                                                                                                                                                                                                                             |                           |                           |               |             |       | *** NON STANDARD GIRDER ***<br>ADDTL USER-DEFINED LOADS APPLIED TO ALL LOAD CASES.                                                    |                          |  |  |  |  |  |  |  |  |  |  |
| LOADING                                                                    |        |        |     |      |           |                                                                                                                                                                                                                             |                           |                           |               |             |       | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015                                            |                          |  |  |  |  |  |  |  |  |  |  |
| TOTAL LOAD CASES: (4)                                                      |        |        |     |      |           |                                                                                                                                                                                                                             |                           |                           |               |             |       | THIS DESIGN COMPLIES WITH:<br>- PART 9 OF CBC 2018 , ABC 2019<br>- PART 9 OF OBC 2012 (2019 AMENDMENT)<br>- CSA 086-14<br>- TPIC 2014 |                          |  |  |  |  |  |  |  |  |  |  |
| PLATES (table is in inches)                                                |        |        |     |      |           | CHORDS                                                                                                                                                                                                                      |                           |                           |               |             |       | WEBS                                                                                                                                  |                          |  |  |  |  |  |  |  |  |  |  |
| JT                                                                         | TYPE   | PLATES | W   | LEN  | Y X       | MEMB.                                                                                                                                                                                                                       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX. (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS)                                                                                                             | MAX. FACTORED FORCE (LC) |  |  |  |  |  |  |  |  |  |  |
| A                                                                          | TMVW-t | MT20   | 6.0 | 8.0  | 2.00 3.75 | FR-TO                                                                                                                                                                                                                       |                           | FROM TO                   |               | LENGTH      | FR-TO |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
| B                                                                          | TTWW-m | MT20   | 8.0 | 10.0 | Edge 4.00 | A-B                                                                                                                                                                                                                         | -5415 / 0                 | -124.4 -124.4             | 0.48 (1)      | 3.39        | S-B   | -896 / 0                                                                                                                              | 0.23 (1)                 |  |  |  |  |  |  |  |  |  |  |
| C                                                                          | TMVW-t | MT20   | 6.0 | 6.0  | 1.75 1.75 | B-C                                                                                                                                                                                                                         | -7849 / 0                 | -124.4 -124.4             | 0.49 (1)      | 2.83        | B-R   | 0 / 4812                                                                                                                              | 0.85 (1)                 |  |  |  |  |  |  |  |  |  |  |
| D                                                                          | TMVW-t | MT20   | 3.0 | 4.0  | 1.50 1.50 | C-D                                                                                                                                                                                                                         | -10510 / 0                | -124.4 -124.4             | 0.75 (1)      | 2.17        | R-C   | -3202 / 0                                                                                                                             | 0.83 (1)                 |  |  |  |  |  |  |  |  |  |  |
| E                                                                          | TMVW-w | MT20   | 2.0 | 4.0  |           | D-E                                                                                                                                                                                                                         | -10876 / 0                | -281.9 -281.9             | 0.77 (1)      | 2.00        | C-Q   | 0 / 3801                                                                                                                              | 0.94 (1)                 |  |  |  |  |  |  |  |  |  |  |
| F                                                                          | TMVW-t | MT20   | 3.0 | 4.0  | 1.50 1.50 | E-F                                                                                                                                                                                                                         | -10876 / 0                | -281.9 -281.9             | 0.77 (1)      | 2.00        | Q-D   | -1210 / 0                                                                                                                             | 0.31 (1)                 |  |  |  |  |  |  |  |  |  |  |
| G                                                                          | TS-t   | MT20   | 4.0 | 12.0 | Edge 6.00 | F-G                                                                                                                                                                                                                         | -10510 / 0                | -124.4 -124.4             | 0.75 (1)      | 2.17        | D-P   | 0 / 785                                                                                                                               | 0.19 (1)                 |  |  |  |  |  |  |  |  |  |  |
| H                                                                          | TMVW-t | MT20   | 6.0 | 6.0  | 1.75 1.75 | G-H                                                                                                                                                                                                                         | -10510 / 0                | -124.4 -124.4             | 0.75 (1)      | 2.17        | P-E   | -896 / 0                                                                                                                              | 0.23 (1)                 |  |  |  |  |  |  |  |  |  |  |
| I                                                                          | TTWW-m | MT20   | 8.0 | 10.0 | Edge 4.00 | H-I                                                                                                                                                                                                                         | -7849 / 0                 | -124.4 -124.4             | 0.49 (1)      | 2.83        | P-F   | 0 / 785                                                                                                                               | 0.19 (1)                 |  |  |  |  |  |  |  |  |  |  |
| J                                                                          | TMVW-t | MT20   | 6.0 | 8.0  | 2.00 3.75 | I-J                                                                                                                                                                                                                         | -5415 / 0                 | -124.4 -124.4             | 0.48 (1)      | 3.39        | N-F   | -1210 / 0                                                                                                                             | 0.31 (1)                 |  |  |  |  |  |  |  |  |  |  |
| K                                                                          | BMV1+p | MT20   | 6.0 | 8.0  | Edge 0.50 | T-A                                                                                                                                                                                                                         | -4327 / 0                 | 0.0                       | 0.0 0.31 (1)  | 5.13        | N-H   | 0 / 3801                                                                                                                              | 0.94 (1)                 |  |  |  |  |  |  |  |  |  |  |
| L                                                                          | BMVW-t | MT20   | 4.0 | 10.0 | 2.00 3.00 | K-J                                                                                                                                                                                                                         | -4327 / 0                 | 0.0                       | 0.0 0.31 (1)  | 5.13        | M-H   | -3202 / 0                                                                                                                             | 0.83 (1)                 |  |  |  |  |  |  |  |  |  |  |
| M                                                                          | BMVW-t | MT20   | 6.0 | 6.0  | 2.00 1.75 |                                                                                                                                                                                                                             |                           |                           |               |             | M-I   | 0 / 4812                                                                                                                              | 0.85 (1)                 |  |  |  |  |  |  |  |  |  |  |
| N                                                                          | BMVW-t | MT20   | 6.0 | 8.0  | 4.00 1.50 | T-S                                                                                                                                                                                                                         | 0 / 0                     | -39.2 -39.2               | 0.04 (3)      | 10.00       | L-I   | -896 / 0                                                                                                                              | 0.23 (1)                 |  |  |  |  |  |  |  |  |  |  |
| O                                                                          | BS-t   | MT18HS | 9.0 | 16.0 |           | S-R                                                                                                                                                                                                                         | 0 / 4473                  | -39.2 -39.2               | 0.25 (1)      | 10.00       | A-S   | 0 / 4620                                                                                                                              | 0.82 (1)                 |  |  |  |  |  |  |  |  |  |  |
| P                                                                          | BMVW-t | MT20   | 4.0 | 6.0  | 1.75 3.00 | R-Q                                                                                                                                                                                                                         | 0 / 7849                  | -39.2 -39.2               | 0.52 (1)      | 10.00       | L-J   | 0 / 4620                                                                                                                              | 0.82 (1)                 |  |  |  |  |  |  |  |  |  |  |
| Q                                                                          | BMVW-t | MT20   | 6.0 | 8.0  | 4.00 1.50 | Q-P                                                                                                                                                                                                                         | 0 / 10510                 | -97.0 -97.0               | 0.68 (1)      | 10.00       |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
| R                                                                          | BMVW-t | MT20   | 6.0 | 6.0  | 2.00 1.75 | P-O                                                                                                                                                                                                                         | 0 / 10510                 | -97.0 -97.0               | 0.68 (1)      | 10.00       |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
| S                                                                          | BMVW-t | MT20   | 4.0 | 10.0 | 2.00 3.00 | O-N                                                                                                                                                                                                                         | 0 / 10510                 | -97.0 -97.0               | 0.68 (1)      | 10.00       |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
| T                                                                          | BMV1+p | MT20   | 6.0 | 8.0  | 5.50      | N-M                                                                                                                                                                                                                         | 0 / 7849                  | -39.2 -39.2               | 0.52 (1)      | 10.00       |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |
| Edge - INDICATES REFERENCE CORNER OF PLATE TOUCHES EDGE OF CHORD.          |        |        |     |      |           | CSi: TC=0.77/1.00 (D-E-1) , BC=0.68/1.00 (N-P-1) ,<br>WB=0.94/1.00 (C-Q-1) , SSI=0.37/1.00 (D-E-1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00<br>SHEAR=1.00 TENS=1.00<br><br>COMPANION LIVE LOAD FACTOR = 1.00 |                           |                           |               |             |       |                                                                                                                                       |                          |  |  |  |  |  |  |  |  |  |  |

**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 = 34.8 PSF  
 DL = 8.0 PSF  
 BOT CH. LL = 10.5 PSF  
 DL = 7.3 PSF  
 TOTAL LOAD = 60.6 PSF

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

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

\*\*\* 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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
 EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.97")  
 CALCULATED VERT. DEFL.(LL) = L/876 (0.40")  
 ALLOWABLE DEFL.(TL) = L/360 (0.97")  
 CALCULATED VERT. DEFL.(TL) = L/539 (0.65")

CSI: TC=0.77/1.00 (D-E-1), BC=0.68/1.00 (N-P-1), WB=0.94/1.00 (C-Q-1), SSI=0.37/1.00 (D-E-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)  
 MAX MIN MAX MIN MAX MIN  
 MT20 650 371 1747 788 1987 1873  
 MT18HS588 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches  
 PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (N) (INPUT = 0.90 )  
 JSI METAL= 0.99 (A) (INPUT = 1.00 )

These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

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

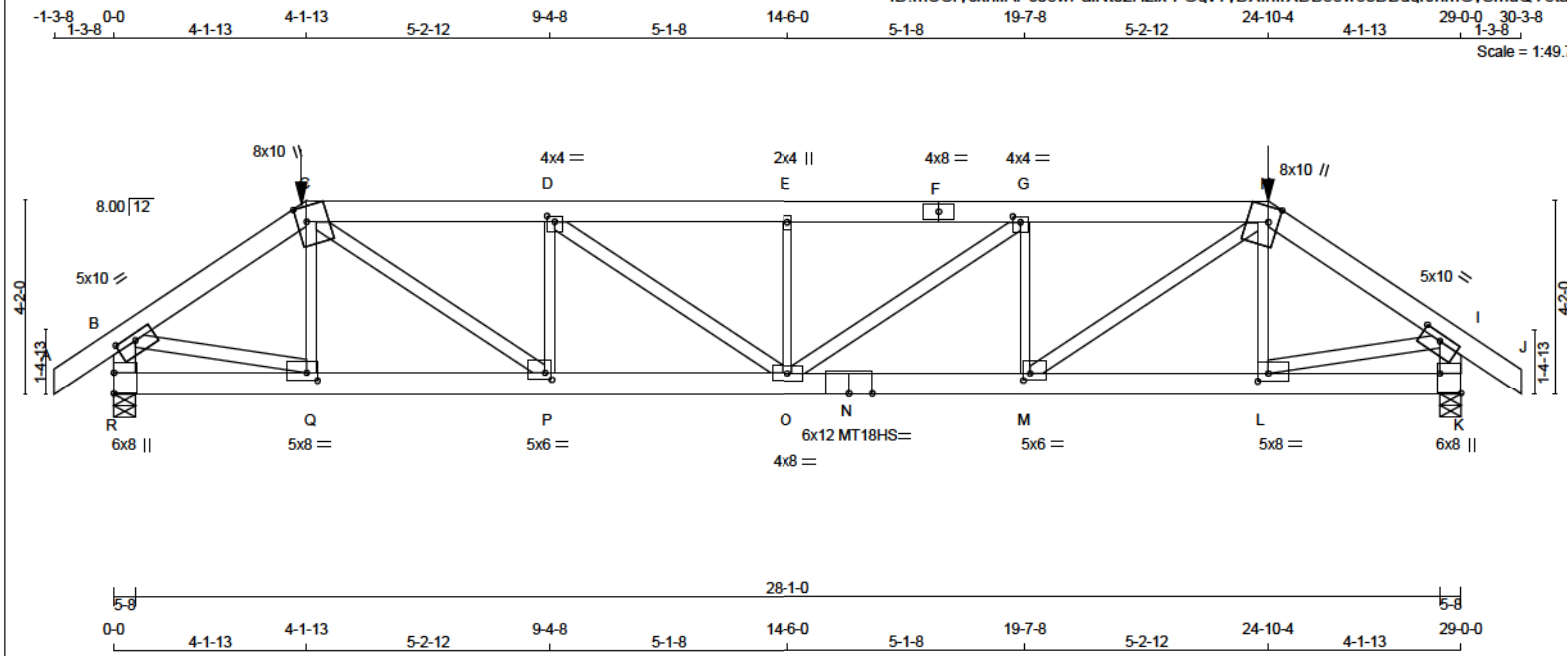
**CONNECTION REQUIREMENTS**

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

| Discipline     | Reviewer  | BCIN  | Date       |
|----------------|-----------|-------|------------|
| Building Code  | H. Author | 43236 | 2021-02-04 |
| Seismic System |           |       |            |
| Zoning         |           |       |            |



Version 8.420 S Oct 9 2020 MiTek Industries, Inc. Fri Dec 18 08:42:59 2020 Page 1  
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**LUMBER**  
N. L. G. A. RULES

| CHORDS          | SIZE | LUMBER         | DESCR. |
|-----------------|------|----------------|--------|
| A - C           | 2x6  | DRY No.2       | SPF    |
| C - F           | 2x6  | DRY No.2       | SPF    |
| F - H           | 2x6  | DRY No.2       | SPF    |
| H - J           | 2x6  | DRY No.2       | SPF    |
| R - B           | 2x6  | DRY No.2       | SPF    |
| K - I           | 2x6  | DRY No.2       | SPF    |
| R - N           | 2x6  | DRY 2100F 1.8E | SPF    |
| N - K           | 2x6  | DRY 2100F 1.8E | SPF    |
| ALL WEBS EXCEPT | 2x4  | DRY No.2       | SPF    |
| Q - C           | 2x3  | DRY No.2       | SPF    |
| P - D           | 2x3  | DRY No.2       | SPF    |
| O - E           | 2x3  | DRY No.2       | SPF    |
| M - G           | 2x3  | DRY No.2       | SPF    |
| L - H           | 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 | 10.0 | 1.75 | 5.00 |
| C TTWW+m  | MT20   | 8.0 | 10.0 | Edge | 2.50 |
| D TMVW-t  | MT20   | 4.0 | 4.0  | 1.50 | 2.00 |
| E TMW+w   | MT20   | 2.0 | 4.0  |      |      |
| F TS-t    | MT20   | 4.0 | 8.0  |      |      |
| G TMWW-t  | MT20   | 4.0 | 4.0  | 1.50 | 2.00 |
| H TTWW+m  | MT20   | 8.0 | 10.0 | Edge | 2.50 |
| I TMVW-t  | MT20   | 5.0 | 10.0 | 1.75 | 5.00 |
| K BMV1+p  | MT20   | 6.0 | 8.0  | 5.50 | Edge |
| L BMWW-t  | MT20   | 5.0 | 8.0  | 2.00 | 2.75 |
| M BMWW-t  | MT20   | 5.0 | 8.0  | 1.75 | 1.75 |
| N BS-t    | MT18HS | 6.0 | 12.0 |      |      |
| O BMWWW-t | MT20   | 4.0 | 8.0  |      |      |
| P BMWW-t  | MT20   | 5.0 | 8.0  | 1.75 | 1.75 |
| Q BMWW-t  | MT20   | 5.0 | 8.0  | 2.00 | 2.75 |
| R BMV1+p  | MT20   | 6.0 | 8.0  | 5.50 |      |

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  | 4582                    | 4582                            | 0         | 5-8       |
| R HORZ   | 0                       | 0                               | 0         | 5-8       |
| K UPLIFT | 4582                    | 4582                            | 0         | 5-8       |

**UNFACTORED REACTIONS**

| 1ST LCASE    | MAX/MIN COMPONENT REACTIONS |
|--------------|-----------------------------|
| JT COMBINED  | 3387                        |
| R SNOW       | 1963 / 0                    |
| K LIVE       | 574 / 0                     |
| R PERM. LIVE | 0 / 0                       |
| R WIND       | 0 / 0                       |
| R DEAD       | 850 / 0                     |
| R SOIL       | 0 / 0                       |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 1.88 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) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |          |
| FR-TO  |                           |                           |                  | FROM  |                           |                        |          |
| A-B    | 0 / 49                    | -124.4                    | -124.4 0.10 (1)  | 10.00 | Q-C                       | -557 / 87              | 0.14 (1) |
| B-C    | -5491 / 0                 | -124.4                    | -124.4 0.38 (1)  | 3.41  | C-P                       | 0 / 4221               | 0.75 (1) |
| C-D    | -7991 / 0                 | -234.6                    | -234.6 0.88 (1)  | 2.23  | P-D                       | -2061 / 0              | 0.50 (1) |
| D-E    | -8998 / 0                 | -234.6                    | -234.6 0.99 (1)  | 1.88  | D-O                       | 0 / 1242               | 0.22 (1) |
| E-F    | -8998 / 0                 | -234.6                    | -234.6 0.99 (1)  | 1.88  | O-E                       | -1106 / 0              | 0.27 (1) |
| F-G    | -8998 / 0                 | -234.6                    | -234.6 0.99 (1)  | 1.88  | O-G                       | 0 / 1242               | 0.22 (1) |
| G-H    | -7991 / 0                 | -234.6                    | -234.6 0.88 (1)  | 2.23  | M-G                       | -2061 / 0              | 0.50 (1) |
| H-I    | -5491 / 0                 | -124.4                    | -124.4 0.38 (1)  | 3.41  | M-H                       | 0 / 4221               | 0.75 (1) |
| I-J    | 0 / 49                    | -124.4                    | -124.4 0.10 (1)  | 10.00 | L-H                       | -557 / 87              | 0.14 (1) |
| R-B    | -4459 / 0                 | 0.0                       | 0.0 0.32 (1)     | 5.05  | B-Q                       | 0 / 4657               | 0.82 (1) |
| K-I    | -4459 / 0                 | 0.0                       | 0.0 0.32 (1)     | 5.05  | L-I                       | 0 / 4657               | 0.82 (1) |
| R-Q    | 0 / 0                     | -74.0                     | -74.0 0.08 (3)   | 10.00 |                           |                        |          |
| Q-P    | 0 / 4541                  | -74.0                     | -74.0 0.30 (1)   | 10.00 |                           |                        |          |
| P-O    | 0 / 7992                  | -74.0                     | -74.0 0.52 (1)   | 10.00 |                           |                        |          |
| O-N    | 0 / 7992                  | -74.0                     | -74.0 0.52 (1)   | 10.00 |                           |                        |          |
| N-M    | 0 / 7992                  | -74.0                     | -74.0 0.52 (1)   | 10.00 |                           |                        |          |
| M-L    | 0 / 4541                  | -74.0                     | -74.0 0.30 (1)   | 10.00 |                           |                        |          |
| L-K    | 0 / 0                     | -74.0                     | -74.0 0.08 (3)   | 10.00 |                           |                        |          |

**FACTORED CONCENTRATED LOADS (LBS)**

| JT | LOC.    | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|---------|------|------|------|-------|------|-------|------|-------|
| C  | 4-1-13  | -387 | -387 | ---  | FRONT | VERT | TOTAL | ---  | C1    |
| H  | 24-10-4 | -387 | -387 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

**CONNECTION REQUIREMENTS**

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

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 PSF

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

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

GIRDER TYPE: CPrimeHip  
SIDE SETBACK = 4-1-13  
END SETBACK = 6-0-0  
END WALL WIDTH = 5-8  
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 BCBC 2018, ABC 2019  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 086-14  
- TPIC 2014

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEF. (LL) = L/360 (0.97")  
CALCULATED VERT. DEF. (LL) = L/999 (0.30")  
ALLOWABLE DEF. (TL) = L/360 (0.97")  
CALCULATED VERT. DEF. (TL) = L/699 (0.50")

CSI: TC=0.99/1.00 (E-G-1), BC=0.52/1.00 (M-O-1), WB=0.82/1.00 (I-L-1), SI=0.48/1.00 (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

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  
MT18HS588 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (G) (INPUT = 0.90)  
JSI METAL= 0.84 (N) (INPUT = 1.00)

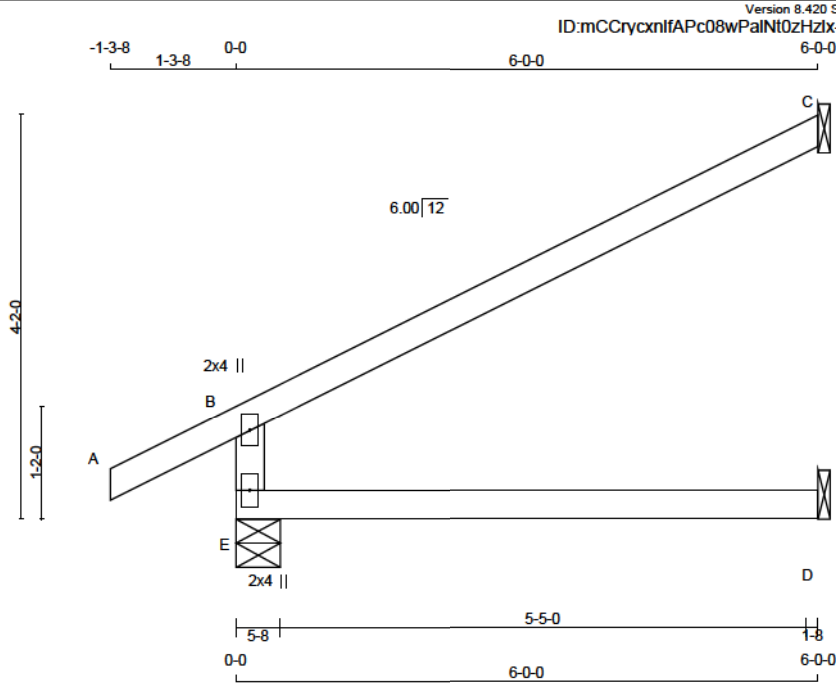


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer  | BCIN  | Date       |
|---------------|-----------|-------|------------|
| Building Code | H. Author | 43236 | 2021-02-04 |
| Sewage System |           |       |            |
| Zoning        |           |       |            |

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**





TOTAL WEIGHT = 14 X 17 = 239 lb

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

DESCR. SPF  
SPF  
SPF

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |        |        |     |         |
|-----------------------------|--------|--------|-----|---------|
| JT                          | TYPE   | PLATES | W   | LEN Y X |
| B                           | TMV+p  | MT20   | 2.0 | 4.0     |
| E                           | 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 BRG | REQRD BRG    |
|----------|------|-------------------------|---------------------------------|-----------|--------------|
| JT       | VERT | HORZ                    | DOWN                            | HORZ      | UPLIFT IN-SX |
| E        | 774  | 0                       | 774                             | 0         | 5-8          |
| C        | 280  | 0                       | 280                             | 0         | 1-8          |
| D        | 97   | 0                       | 123                             | 0         | 1-8          |

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

| UNFACTORED REACTIONS |          | 1ST LCASE | MAX / MIN | COMPONENT REACTIONS |
|----------------------|----------|-----------|-----------|---------------------|
| JT                   | COMBINED | SNOW      | LIVE      | PERM. LIVE          |
| E                    | 563      | 355 / 0   | 74 / 0    | 0 / 0               |
| C                    | 193      | 157 / 0   | 0 / 0     | 0 / 0               |
| D                    | 88       | 0 / 0     | 52 / 0    | 0 / 0               |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 8.25 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) | MAX. FACTORED VERT. LOAD (PLF) | MAX. FACTORED HORZ. LOAD (PLF) |
| FR-TO       |                           |                                |                                |
| E-B         | -835 / 0                  | 0.0                            | 0.0                            |
| A-B         | 0 / 38                    | -124.4                         | -124.4                         |
| B-C         | -42 / 0                   | -124.4                         | -124.4                         |
| E-D         | 0 / 0                     | -39.2                          | -39.2                          |

#### DESIGN CRITERIA

**SPECIFIED LOADS:**  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 PSF

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

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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 874 (0.08")

CSI: TC=0.76/1.00 (B-C:1) , BC=0.24/1.00 (D-E:3) ,  
WB=0.00/1.00 (n/a:0) , SSI=0.33/1.00 (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= 0.36 (B) (INPUT = 0.90 )  
JSI METAL= 0.26 (B) (INPUT = 1.00 )

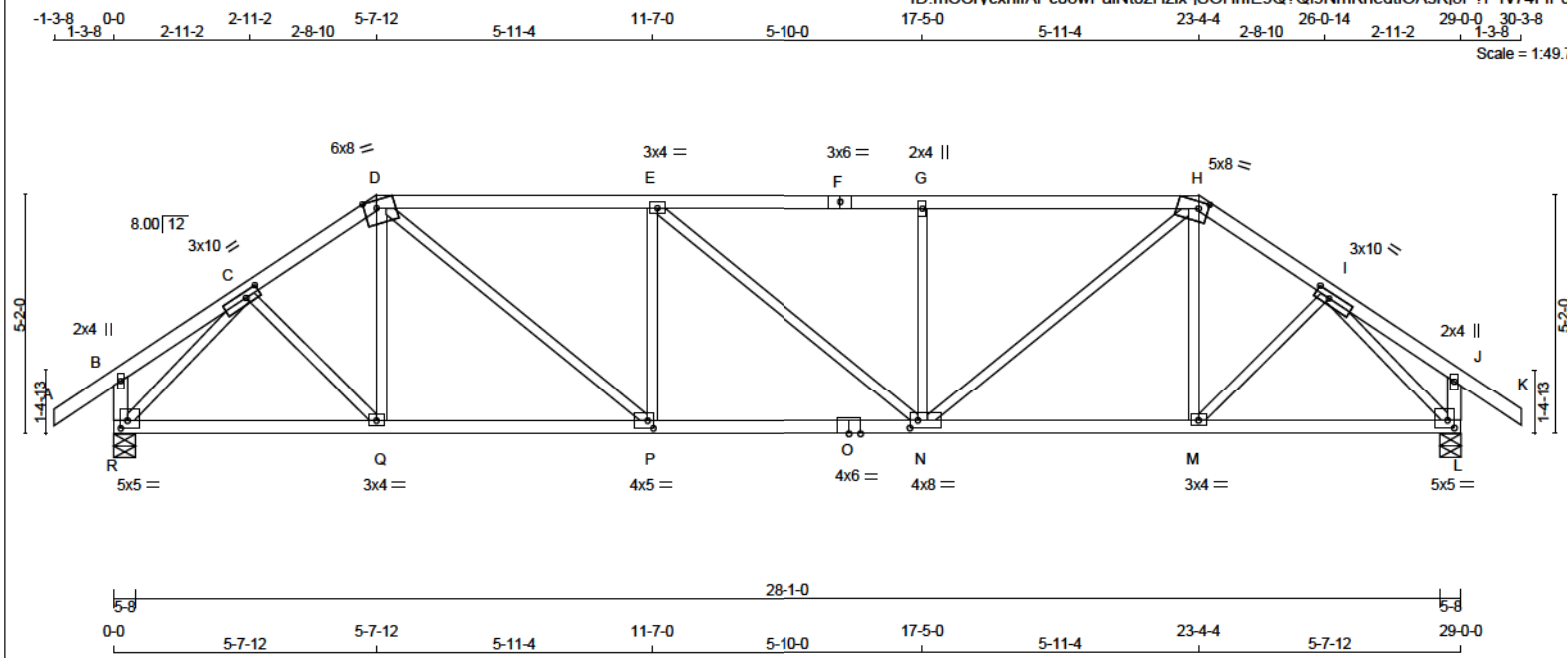


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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |



**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**



TOTAL WEIGHT = 2 X 120 = 240 lb

| LUMBER            |      |          |        |  |
|-------------------|------|----------|--------|--|
| N. L. G. A. RULES | SIZE | LUMBER   | DESCR. |  |
| CHORDS            |      |          |        |  |
| A - D             | 2x4  | DRY No.2 | SPF    |  |
| D - F             | 2x4  | DRY No.2 | SPF    |  |
| F - H             | 2x4  | DRY No.2 | SPF    |  |
| H - K             | 2x4  | DRY No.2 | SPF    |  |
| R - B             | 2x4  | DRY No.2 | SPF    |  |
| L - J             | 2x4  | DRY No.2 | SPF    |  |
| R - O             | 2x4  | DRY No.2 | SPF    |  |
| O - L             | 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 TMV+p   | MT20   | 2.0 | 4.0  |      |      |
| C TMWW-t  | MT20   | 3.0 | 10.0 | 1.50 | 3.75 |
| D TTWW-m  | MT20   | 6.0 | 8.0  | 2.00 | 3.25 |
| E TMWW-t  | MT20   | 3.0 | 4.0  |      |      |
| F TS-t    | MT20   | 3.0 | 6.0  |      |      |
| G TMW+w   | MT20   | 2.0 | 4.0  |      |      |
| H TTWW-m  | MT20   | 5.0 | 8.0  | 1.75 | 2.50 |
| I TMWW-t  | MT20   | 3.0 | 10.0 | 1.50 | 3.75 |
| J TMV+p   | MT20   | 2.0 | 4.0  |      |      |
| L BMVW1-t | MT20   | 5.0 | 5.0  | 2.00 | 1.75 |
| M BMWW-t  | MT20   | 3.0 | 4.0  |      |      |
| N BMWW-t  | MT20   | 4.0 | 8.0  | 2.00 | 2.00 |
| O BS-t    | MT20   | 4.0 | 6.0  |      |      |
| P BMWW-t  | MT20   | 4.0 | 5.0  | 2.00 | 1.50 |
| Q BMWW-t  | MT20   | 3.0 | 4.0  |      |      |
| R BMVW1-t | MT20   | 5.0 | 5.0  | 2.00 | 1.75 |

**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 | 0                       | 0                               | 0         | 0         |
| R 2544  | 0                       | 2544                            | 0         | 5-8       |
| L 2544  | 0                       | 2544                            | 0         | 5-8       |

**UNFACTORED REACTIONS**

| 1ST LCASE | MAX/MIN COMPONENT REACTIONS |          |         |           |       |         |       |
|-----------|-----------------------------|----------|---------|-----------|-------|---------|-------|
| JT        | COMBINED                    | SNOW     | LIVE    | PERM.LIVE | WIND  | DEAD    | SOIL  |
| R         | 1875                        | 1105 / 0 | 305 / 0 | 0 / 0     | 0 / 0 | 486 / 0 | 0 / 0 |
| L         | 1875                        | 1105 / 0 | 305 / 0 | 0 / 0     | 0 / 0 | 486 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.80 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) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |           |
| FR-TO  |                           | FROM                      | TO               | LENGTH   | FR-TO                     |                        |           |
| A-B    | 0 / 47                    | -124.4                    | -124.4           | 0.17 (1) | 10.00                     | C-Q                    | 0 / 303   |
| B-C    | 0 / 16                    | -124.4                    | -124.4           | 0.12 (1) | 10.00                     | Q-D                    | 0 / 172   |
| C-D    | -2728 / 0                 | -124.4                    | -124.4           | 0.21 (1) | 4.03                      | D-P                    | 0 / 1603  |
| D-E    | -3460 / 0                 | -124.4                    | -124.4           | 0.95 (1) | 2.80                      | P-E                    | -792 / 0  |
| E-F    | -3468 / 0                 | -124.4                    | -124.4           | 0.93 (1) | 2.80                      | E-N                    | -2 / 0    |
| F-G    | -3488 / 0                 | -124.4                    | -124.4           | 0.93 (1) | 2.80                      | N-G                    | -792 / 0  |
| G-H    | -3488 / 0                 | -124.4                    | -124.4           | 0.94 (1) | 2.81                      | N-H                    | 0 / 1600  |
| H-I    | -2727 / 0                 | -124.4                    | -124.4           | 0.21 (1) | 4.03                      | M-H                    | 0 / 172   |
| I-J    | 0 / 16                    | -124.4                    | -124.4           | 0.12 (1) | 10.00                     | M-I                    | 0 / 303   |
| J-K    | 0 / 47                    | -124.4                    | -124.4           | 0.17 (1) | 10.00                     | R-C                    | -2952 / 0 |
| R-B    | -317 / 0                  | 0.0                       | 0.0              | 0.03 (1) | 7.81                      | I-L                    | -2952 / 0 |
| L-J    | -317 / 0                  | 0.0                       | 0.0              | 0.03 (1) | 7.81                      |                        |           |
| R-Q    | 0 / 2037                  | -39.2                     | -39.2            | 0.50 (1) | 10.00                     |                        |           |
| Q-P    | 0 / 2250                  | -39.2                     | -39.2            | 0.54 (1) | 10.00                     |                        |           |
| P-O    | 0 / 3460                  | -39.2                     | -39.2            | 0.68 (1) | 10.00                     |                        |           |
| O-N    | 0 / 3460                  | -39.2                     | -39.2            | 0.68 (1) | 10.00                     |                        |           |
| N-M    | 0 / 2251                  | -39.2                     | -39.2            | 0.54 (1) | 10.00                     |                        |           |
| M-L    | 0 / 2037                  | -39.2                     | -39.2            | 0.51 (1) | 10.00                     |                        |           |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.17")  
ALLOWABLE DEFL.(TL) = L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.29")

CSI: TC=0.95/1.00 (D-E-1), BC=0.68/1.00 (N-P-1),  
WB=0.80/1.00 (I-L-1), SSI=0.34/1.00 (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 (H) (INPUT = 0.90 )  
JSI METAL = 0.81 (O) (INPUT = 1.00 )



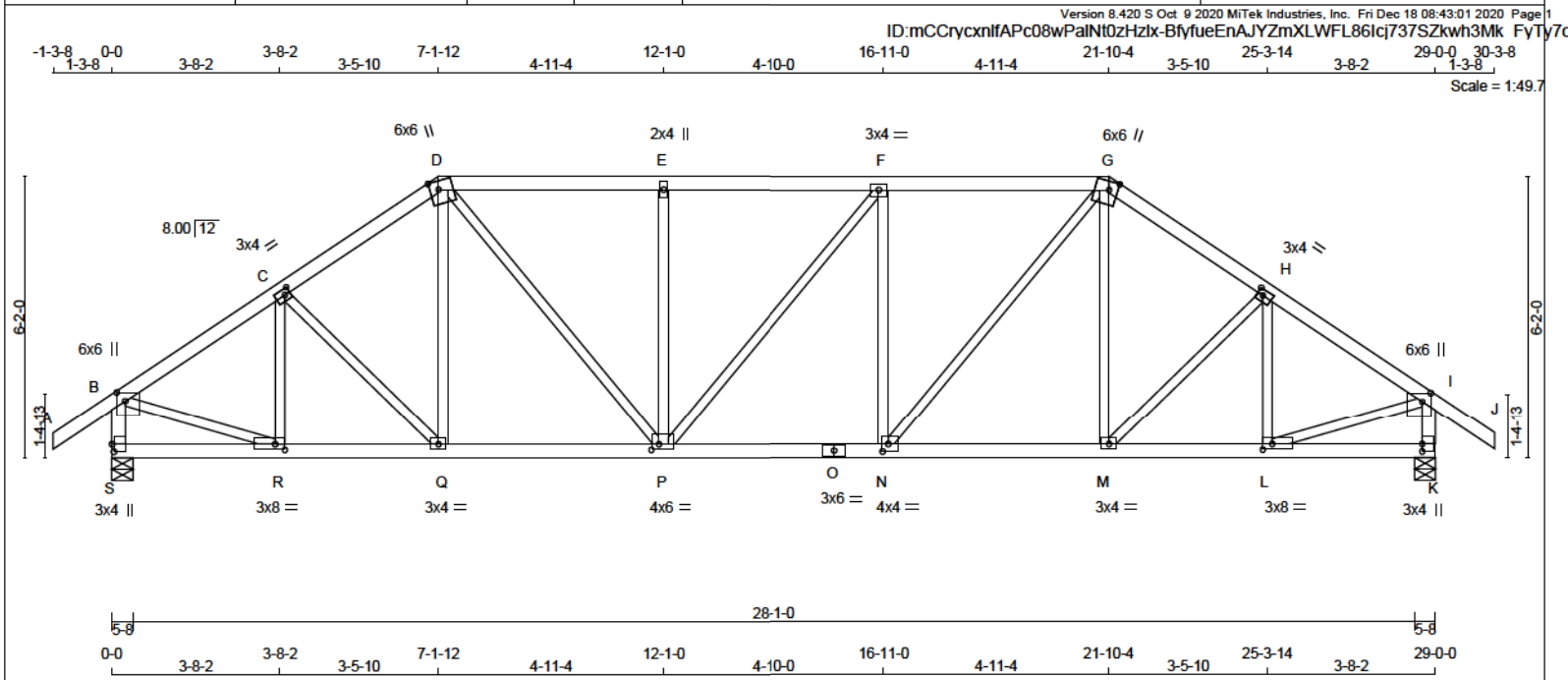
These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline     | Reviewer  | BCIN  | Date       |
|----------------|-----------|-------|------------|
| Building Code  | H. Author | 43236 | 2021-02-04 |
| Seepage System |           |       |            |
| Zoning         |           |       |            |



READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.





**LUMBER**  
N. L. G. A. RULES

| CHORDS          | SIZE | LUMBER   | DESCR. |
|-----------------|------|----------|--------|
| A - D           | 2x4  | DRY No.2 | SPF    |
| D - G           | 2x4  | DRY No.2 | SPF    |
| G - J           | 2x4  | DRY No.2 | SPF    |
| S - B           | 2x4  | DRY No.2 | SPF    |
| K - I           | 2x4  | DRY No.2 | SPF    |
| S - O           | 2x4  | DRY No.2 | SPF    |
| O - K           | 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   | 6.0 | 6.0 | 2.25 | 2.25 |
| C  | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D  | TTWW+m | MT20   | 6.0 | 6.0 | 2.25 | 2.25 |
| E  | TMW+w  | MT20   | 2.0 | 4.0 |      |      |
| F  | TMW-t  | MT20   | 3.0 | 4.0 |      |      |
| G  | TTWW+m | MT20   | 6.0 | 6.0 | 2.25 | 2.25 |
| H  | TMW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| I  | TMVW+p | MT20   | 6.0 | 6.0 | 2.25 | 2.25 |
| K  | BMV-t  | MT20   | 3.0 | 4.0 | 2.00 |      |
| L  | BMW-t  | MT20   | 3.0 | 8.0 | 1.50 | 2.50 |
| M  | BMW-t  | MT20   | 3.0 | 4.0 |      |      |
| N  | BMW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| O  | BS-t   | MT20   | 3.0 | 6.0 |      |      |
| P  | BMW-t  | MT20   | 4.0 | 6.0 | 1.50 | 2.00 |
| Q  | BMW-t  | MT20   | 3.0 | 4.0 |      |      |
| R  | BMW-t  | MT20   | 3.0 | 8.0 | 1.50 | 2.50 |
| S  | BMV-t  | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

**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 | 2544                    | 0                               | 5-8       | 4-12      |
| S       | 2544                    | 0                               | 5-8       | 4-12      |
| K       | 2544                    | 0                               | 5-8       | 4-12      |

**UNFACTORED REACTIONS**

| 1ST LCASE   | MAX  | MIN      | COMPONENT REACTIONS         |
|-------------|------|----------|-----------------------------|
| JT COMBINED | SNOW | LIVE     | PERM. LIVE WIND DEAD SOIL   |
| S           | 1875 | 1105 / 0 | 305 / 0 0 / 0 486 / 0 0 / 0 |
| K           | 1875 | 1105 / 0 | 305 / 0 0 / 0 486 / 0 0 / 0 |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.52 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) | UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO  |                           | FROM TO                   |                  |                 | FR-TO |                           |              |
| A-B    | 0 / 47                    | -124.4 -124.4             | 0.17 (1)         | 10.00           | R-C   | -514 / 0                  | 0.12 (1)     |
| B-C    | -2633 / 0                 | -124.4 -124.4             | 0.35 (1)         | 3.94            | C-Q   | -31 / 2                   | 0.01 (1)     |
| C-D    | -2686 / 0                 | -124.4 -124.4             | 0.34 (1)         | 3.92            | Q-D   | 0 / 233                   | 0.05 (2)     |
| D-E    | -2605 / 0                 | -124.4 -124.4             | 0.55 (1)         | 3.53            | D-P   | 0 / 1104                  | 0.25 (1)     |
| E-F    | -2605 / 0                 | -124.4 -124.4             | 0.55 (1)         | 3.52            | P-E   | -854 / 0                  | 0.39 (1)     |
| F-G    | -2608 / 0                 | -124.4 -124.4             | 0.56 (1)         | 3.52            | P-F   | -4 / 0                    | 0.00 (1)     |
| G-H    | -2685 / 0                 | -124.4 -124.4             | 0.34 (1)         | 3.92            | N-F   | -855 / 0                  | 0.39 (1)     |
| H-I    | -2634 / 0                 | -124.4 -124.4             | 0.35 (1)         | 3.94            | N-G   | 0 / 1108                  | 0.25 (1)     |
| I-J    | 0 / 47                    | -124.4 -124.4             | 0.17 (1)         | 10.00           | M-G   | 0 / 231                   | 0.05 (3)     |
| S-B    | -2478 / 0                 | 0.0                       | 0.0 0.28 (1)     | 5.45            | M-H   | -32 / 2                   | 0.01 (1)     |
| K-I    | -2478 / 0                 | 0.0                       | 0.0 0.28 (1)     | 5.44            | L-H   | -513 / 0                  | 0.12 (1)     |
| S-R    | 0 / 0                     | -39.2                     | -39.2 0.09 (3)   | 10.00           | B-R   | 0 / 2306                  | 0.52 (1)     |
| R-Q    | 0 / 2213                  | -39.2                     | -39.2 0.44 (1)   | 10.00           | L-I   | 0 / 2306                  | 0.52 (1)     |
| Q-P    | 0 / 2194                  | -39.2                     | -39.2 0.44 (1)   | 10.00           |       |                           |              |
| P-O    | 0 / 2908                  | -39.2                     | -39.2 0.56 (1)   | 10.00           |       |                           |              |
| O-N    | 0 / 2908                  | -39.2                     | -39.2 0.56 (1)   | 10.00           |       |                           |              |
| N-M    | 0 / 2194                  | -39.2                     | -39.2 0.45 (1)   | 10.00           |       |                           |              |
| M-L    | 0 / 2213                  | -39.2                     | -39.2 0.44 (1)   | 10.00           |       |                           |              |
| L-K    | 0 / 0                     | -39.2                     | -39.2 0.09 (3)   | 10.00           |       |                           |              |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.12")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.21")

CSI: TC=0.56/1.00 (F-G:1) , BC=0.56/1.00 (N-P:1) ,  
WB=0.52/1.00 (I-L:1) , SS=0.28/1.00 (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= 0.90 (K) (INPUT = 0.90 )  
JSI METAL = 0.85 (O) (INPUT = 1.00 )

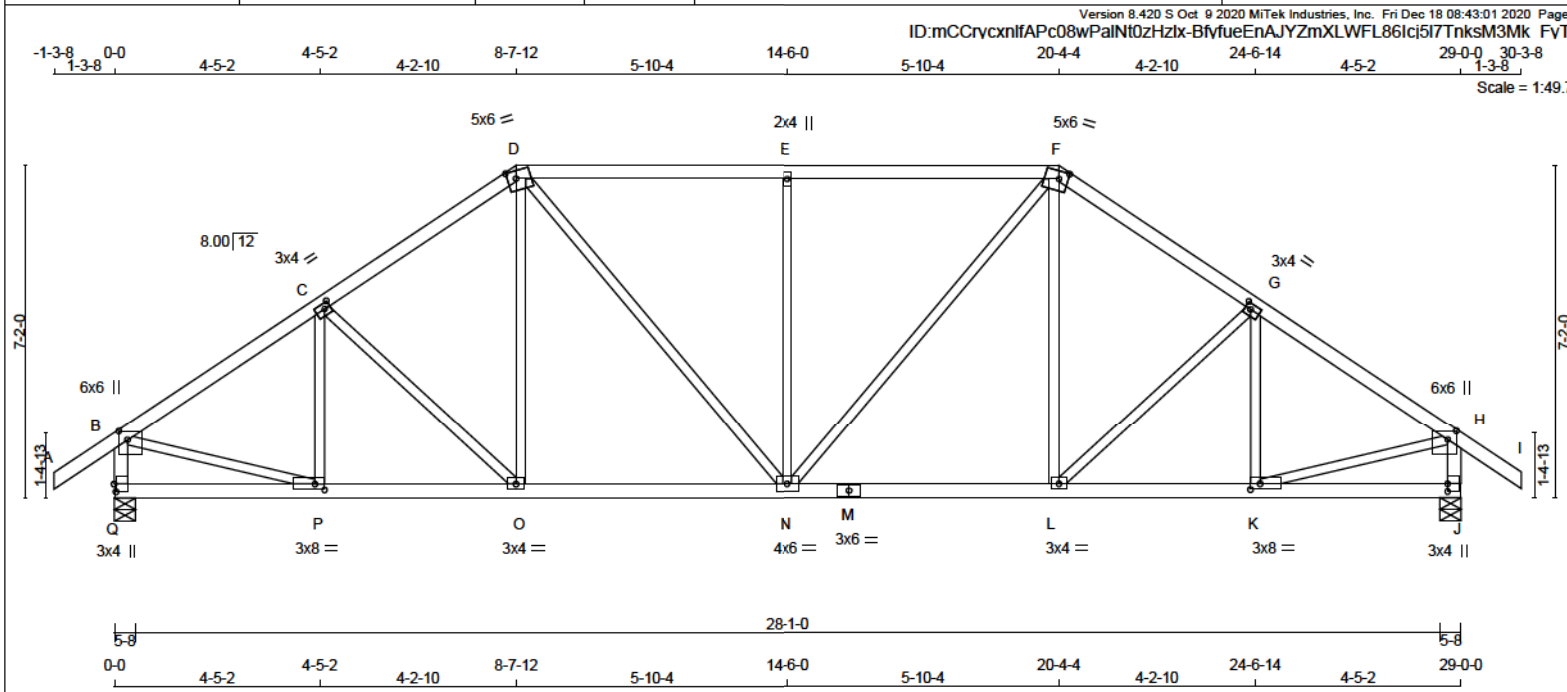


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| Discipline     | Reviewer  | BCIN  | Date       |
|----------------|-----------|-------|------------|
| Building Code  | H. Author | 43236 | 2021-02-04 |
| Seismic System |           |       |            |
| Zoning         |           |       |            |

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**





**LUMBER**

| N. L. G. A. RULES | CHORDS | SIZE | LUMBER | DESCR. |
|-------------------|--------|------|--------|--------|
| A - D             | 2x4    | DRY  | No.2   | SPF    |
| D - F             | 2x4    | DRY  | No.2   | SPF    |
| F - I             | 2x4    | DRY  | No.2   | SPF    |
| Q - B             | 2x4    | DRY  | No.2   | SPF    |
| J - H             | 2x4    | DRY  | No.2   | SPF    |
| Q - M             | 2x4    | DRY  | No.2   | SPF    |
| M - J             | 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   | 6.0 | 6.0 | 2.25 | 2.25 |
| C - TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D - TTWW-m  | MT20   | 5.0 | 6.0 | 2.00 | 2.25 |
| E - TMVW+w  | MT20   | 2.0 | 4.0 |      |      |
| F - TTWW-m  | MT20   | 5.0 | 6.0 | 2.00 | 2.25 |
| G - TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| H - TMVW+p  | MT20   | 6.0 | 6.0 | 2.25 | 2.25 |
| J - BMV1+p  | MT20   | 3.0 | 4.0 | 2.00 |      |
| K - BMVW-t  | MT20   | 3.0 | 8.0 | 1.50 | 2.50 |
| L - BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| M - BS-t    | MT20   | 3.0 | 6.0 |      |      |
| N - BMVWV-t | MT20   | 4.0 | 6.0 |      |      |
| O - BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| P - BMVW-t  | MT20   | 3.0 | 8.0 | 1.50 | 2.50 |
| Q - BMV1+p  | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

**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                 | DOWN                            | UPLIFT    | IN-SX     |
| Q 2544 0                | 2544 0                          | 0 0       | 5-8 4-12  |
| J 2544 0                | 2544 0                          | 0 0       | 5-8 4-12  |

**UNFACTORED REACTIONS**

| 1ST LCASE       | MAX     | MIN   | COMPONENT REACTIONS       |
|-----------------|---------|-------|---------------------------|
| JT COMBINED     | SNOW    | LIVE  | PERM. LIVE WIND DEAD SOIL |
| Q 1875 1105 / 0 | 304 / 0 | 0 / 0 | 0 / 0 486 / 0 0 / 0       |
| J 1875 1105 / 0 | 304 / 0 | 0 / 0 | 0 / 0 486 / 0 0 / 0       |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.55 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 (LC)    | MAX. UNBRACED LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |
| FR-TO  |                           |                           |                 |                      | FR-TO |                           |                        |
| A-B    | 0 / 47                    | -124.4                    | -124.4 0.17 (1) | 10.00                | P-C   | -384 / 0                  | 0.11 (1)               |
| B-C    | -2714 / 0                 | -124.4                    | -124.4 0.39 (1) | 3.87                 | C-O   | -243 / 0                  | 0.15 (1)               |
| C-D    | -2573 / 0                 | -124.4                    | -124.4 0.37 (1) | 3.97                 | O-D   | 0 / 388                   | 0.09 (2)               |
| D-E    | -2592 / 0                 | -124.4                    | -124.4 0.65 (1) | 3.55                 | D-N   | 0 / 738                   | 0.17 (1)               |
| E-F    | -2592 / 0                 | -124.4                    | -124.4 0.65 (1) | 3.55                 | N-E   | -890 / 0                  | 0.80 (1)               |
| F-G    | -2573 / 0                 | -124.4                    | -124.4 0.37 (1) | 3.97                 | N-F   | 0 / 738                   | 0.17 (1)               |
| G-H    | -2714 / 0                 | -124.4                    | -124.4 0.39 (1) | 3.87                 | L-F   | 0 / 388                   | 0.09 (2)               |
| H-I    | 0 / 47                    | -124.4                    | -124.4 0.17 (1) | 10.00                | L-G   | -243 / 0                  | 0.15 (1)               |
| Q-B    | -2468 / 0                 | 0.0                       | 0.0 0.25 (1)    | 5.46                 | K-G   | -384 / 0                  | 0.11 (1)               |
| J-H    | -2468 / 0                 | 0.0                       | 0.0 0.25 (1)    | 5.46                 | B-P   | 0 / 2353                  | 0.53 (1)               |
|        |                           |                           |                 |                      | K-H   | 0 / 2353                  | 0.53 (1)               |
| Q-P    | 0 / 0                     | -39.2                     | -39.2 0.13 (3)  | 10.00                |       |                           |                        |
| P-O    | 0 / 2286                  | -39.2                     | -39.2 0.48 (1)  | 10.00                |       |                           |                        |
| O-N    | 0 / 2114                  | -39.2                     | -39.2 0.48 (1)  | 10.00                |       |                           |                        |
| N-M    | 0 / 2114                  | -39.2                     | -39.2 0.48 (1)  | 10.00                |       |                           |                        |
| M-L    | 0 / 2114                  | -39.2                     | -39.2 0.48 (1)  | 10.00                |       |                           |                        |
| L-K    | 0 / 2286                  | -39.2                     | -39.2 0.48 (1)  | 10.00                |       |                           |                        |
| K-J    | 0 / 0                     | -39.2                     | -39.2 0.13 (3)  | 10.00                |       |                           |                        |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.11")  
ALLOWABLE DEFL.(TL) = L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.19")

CSI: TC=0.65/1.00 (D-E-1), BC=0.48/1.00 (O-P-1), WB=0.80/1.00 (E-N-1), SSI=0.35/1.00 (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.

**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 = 0.63 (M) (INPUT = 1.00)



**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

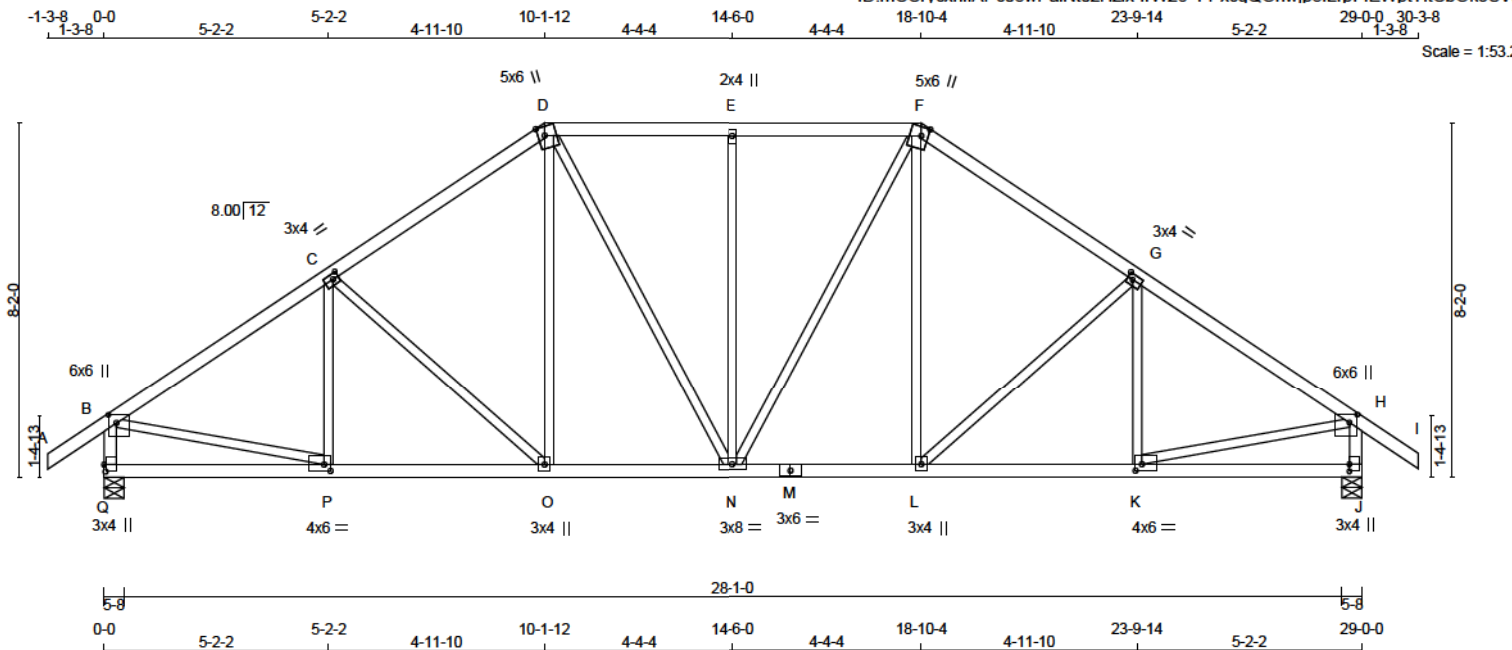


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline     | Reviewer  | BCIN  | Date       |
|----------------|-----------|-------|------------|
| Building Code  | H. Author | 43236 | 2021-02-04 |
| Seepage System |           |       |            |
| Zoning         |           |       |            |







TOTAL WEIGHT = 2 X 135 = 270 lb

| LUMBER            |        |      |        | DESCR. |  |
|-------------------|--------|------|--------|--------|--|
| N. L. G. A. RULES | CHORDS | SIZE | LUMBER |        |  |
| A - D             | 2x4    | DRY  | No.2   | SPF    |  |
| D - F             | 2x4    | DRY  | No.2   | SPF    |  |
| F - I             | 2x4    | DRY  | No.2   | SPF    |  |
| Q - B             | 2x4    | DRY  | No.2   | SPF    |  |
| J - H             | 2x4    | DRY  | No.2   | SPF    |  |
| Q - M             | 2x4    | DRY  | No.2   | SPF    |  |
| M - J             | 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   | 6.0 | 4.0 | 2.25 | 2.25 |
| C  | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D  | TTWW+m | MT20   | 5.0 | 6.0 | Edge | 1.75 |
| E  | TMVW+w | MT20   | 2.0 | 4.0 |      |      |
| F  | TTWW+m | MT20   | 5.0 | 6.0 | Edge | 1.75 |
| G  | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| H  | TMVW+p | MT20   | 6.0 | 6.0 | 2.25 | 2.25 |
| J  | BMV1+p | MT20   | 3.0 | 4.0 | 2.00 |      |
| K  | BMVW-t | MT20   | 4.0 | 6.0 | 1.75 | 1.75 |
| L  | BMVW+t | MT20   | 3.0 | 4.0 |      |      |
| M  | BS-t   | MT20   | 3.0 | 6.0 |      |      |
| N  | BMVW-w | MT20   | 3.0 | 8.0 |      |      |
| O  | BMVW+t | MT20   | 3.0 | 4.0 |      |      |
| P  | BMVW-t | MT20   | 4.0 | 6.0 | 1.75 | 1.75 |
| Q  | BMV1+p | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |       | REQRD BRG |  |
|----|-------------------------|------|---------------------------------|------|-----------|-------|-----------|--|
|    | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX | IN-SX     |  |
| Q  | 2544                    | 0    | 2544                            | 0    | 0         | 5-8   | 4-12      |  |
| J  | 2544                    | 0    | 2544                            | 0    | 0         | 5-8   | 4-12      |  |

**UNFACTORED REACTIONS**

| 1ST LCASE |          | MAX/MIN COMPONENT REACTIONS |         |           |       |         |       |
|-----------|----------|-----------------------------|---------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                        | LIVE    | PERM.LIVE | WIND  | DEAD    | SOIL  |
| Q         | 1875     | 1105 / 0                    | 304 / 0 | 0 / 0     | 0 / 0 | 486 / 0 | 0 / 0 |
| J         | 1875     | 1105 / 0                    | 305 / 0 | 0 / 0     | 0 / 0 | 486 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.67 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) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. FACTORED FORCE (LBS) | MAX. FACTORED FORCE (LBS) |
| FR-TO  |                           | FROM                      | TO               | LENGTH   | FR-TO                     |                           |                           |
| A-B    | 0 / 47                    | -124.4                    | -124.4           | 0.17 (1) | 10.00                     | P-C                       | -264 / 83                 |
| B-C    | -2760 / 0                 | -124.4                    | -124.4           | 0.54 (1) | 3.67                      | C-O                       | -449 / 0                  |
| C-D    | -2444 / 0                 | -124.4                    | -124.4           | 0.50 (1) | 3.91                      | O-D                       | 0 / 483                   |
| D-E    | -2225 / 0                 | -124.4                    | -124.4           | 0.35 (1) | 4.24                      | D-N                       | 0 / 462                   |
| E-F    | -2225 / 0                 | -124.4                    | -124.4           | 0.35 (1) | 4.24                      | N-E                       | -852 / 0                  |
| F-G    | -2444 / 0                 | -124.4                    | -124.4           | 0.50 (1) | 3.91                      | N-F                       | 0 / 482                   |
| G-H    | -2760 / 0                 | -124.4                    | -124.4           | 0.54 (1) | 3.67                      | L-F                       | 0 / 483                   |
| H-I    | 0 / 47                    | -124.4                    | -124.4           | 0.17 (1) | 10.00                     | L-G                       | -449 / 0                  |
| Q-B    | -2459 / 0                 | 0.0                       | 0.0              | 0.25 (1) | 5.46                      | K-G                       | -264 / 83                 |
| J-H    | -2459 / 0                 | 0.0                       | 0.0              | 0.25 (1) | 5.46                      | B-P                       | 0 / 2380                  |
|        |                           |                           |                  |          |                           | K-H                       | 0 / 2380                  |
| Q-P    | 0 / 0                     | -39.2                     | -39.2            | 0.20 (3) | 10.00                     |                           |                           |
| P-O    | 0 / 2330                  | -39.2                     | -39.2            | 0.49 (1) | 10.00                     |                           |                           |
| O-N    | 0 / 2002                  | -39.2                     | -39.2            | 0.41 (1) | 10.00                     |                           |                           |
| N-M    | 0 / 2002                  | -39.2                     | -39.2            | 0.41 (1) | 10.00                     |                           |                           |
| M-L    | 0 / 2002                  | -39.2                     | -39.2            | 0.41 (1) | 10.00                     |                           |                           |
| L-K    | 0 / 2330                  | -39.2                     | -39.2            | 0.49 (1) | 10.00                     |                           |                           |
| K-J    | 0 / 0                     | -39.2                     | -39.2            | 0.20 (3) | 10.00                     |                           |                           |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |    |   |      |     |
|------------|----|---|------|-----|
| TOP CH.    | LL | = | 34.8 | PSF |
|            | DL | = | 8.0  | PSF |
| BOT CH.    | LL | = | 10.5 | PSF |
|            | DL | = | 7.3  | PSF |
| TOTAL LOAD |    | = | 60.6 | 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.10")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.16")

CSI: TC=0.54/1.00 (B-C-1) , BC=0.49/1.00 (O-P-1) ,  
WB=0.84/1.00 (E-N-1) , SSI=0.26/1.00 (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    |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (B) (INPUT = 0.90 )  
JSI METAL = 0.62 (M) (INPUT = 1.00 )

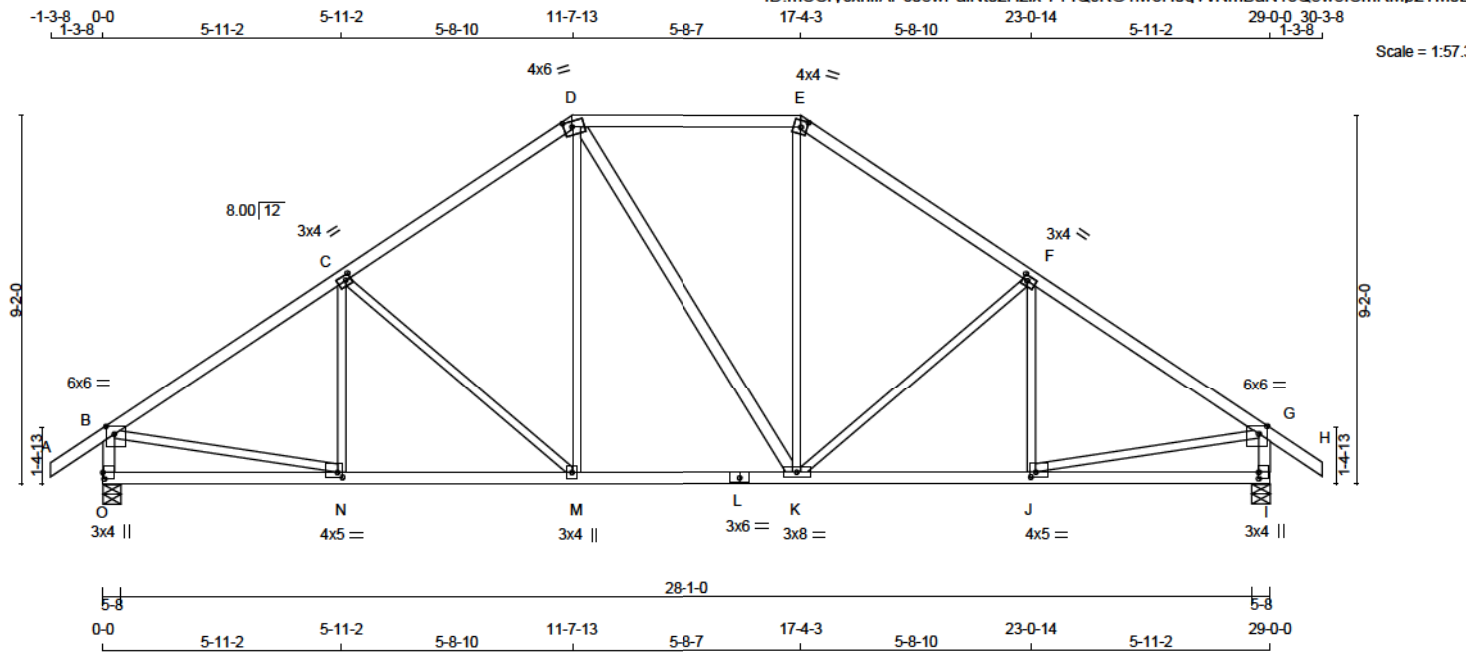


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| Discipline      | Reviewer  | BCIN  | Date       |
|-----------------|-----------|-------|------------|
| Building Code   | H. Author | 43236 | 2021-02-04 |
| Severage System |           |       |            |
| Zoning          |           |       |            |



**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**



TOTAL WEIGHT = 2 X 132 = 264 lb

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

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT TYPE  | PLATES | W   | LEN | Y    | X    |
|----------|--------|-----|-----|------|------|
| B TMVW-p | MT20   | 6.0 | 6.0 | 2.25 | 2.50 |
| C TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D TTW-m  | MT20   | 4.0 | 8.0 | 1.75 | 2.50 |
| E TTW-m  | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| F TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| G TMVW-p | MT20   | 6.0 | 6.0 | 2.25 | 2.50 |
| I BMV1+p | MT20   | 3.0 | 4.0 | 2.00 |      |
| J BMVW-t | MT20   | 4.0 | 5.0 | 1.50 | 1.50 |
| K BMVW-t | MT20   | 3.0 | 8.0 |      |      |
| L BS-t   | MT20   | 3.0 | 6.0 |      |      |
| M BMVW-t | MT20   | 3.0 | 4.0 |      |      |
| N BMVW-t | MT20   | 4.0 | 5.0 | 1.50 | 1.50 |
| O BMV1+p | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

**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 | 2544                    | 2544                            | 0         | 5-8       |
| O VERT  | 2544                    | 2544                            | 0         | 5-8       |
| I VERT  | 2544                    | 2544                            | 0         | 5-8       |

**UNFACTORED REACTIONS**

| 1ST LCASE   | MAX  | MIN      | COMPONENT REACTIONS |       |       |         |       |       |  |
|-------------|------|----------|---------------------|-------|-------|---------|-------|-------|--|
| JT COMBINED | 1875 | 1105 / 0 | 305 / 0             | PERM  | LIVE  | WIND    | DEAD  | SOIL  |  |
| O           | 1875 | 1105 / 0 | 305 / 0             | 0 / 0 | 0 / 0 | 466 / 0 | 0 / 0 | 0 / 0 |  |
| I           | 1875 | 1105 / 0 | 305 / 0             | 0 / 0 | 0 / 0 | 466 / 0 | 0 / 0 | 0 / 0 |  |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.41 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) | FACTORED LC1 MAX CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | FACTORED LC1 MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO                        | FR-TO |                           | FROM                      | TO                        |
| A-B    | 0 / 47                    | -124.4                    | -124.4 0.17 (1)           | 10.00 | N-C                       | -172 / 149                | 0.07 (1)                  |
| B-C    | -2776 / 0                 | -124.4                    | -124.4 0.72 (1)           | 3.41  | C-M                       | -632 / 0                  | 0.76 (1)                  |
| C-D    | -2301 / 0                 | -124.4                    | -124.4 0.65 (1)           | 3.78  | M-D                       | 0 / 629                   | 0.14 (1)                  |
| D-E    | -1860 / 0                 | -124.4                    | -124.4 0.57 (1)           | 4.20  | D-K                       | 0 / 2                     | 0.00 (1)                  |
| E-F    | -2302 / 0                 | -124.4                    | -124.4 0.65 (1)           | 3.78  | K-E                       | 0 / 631                   | 0.14 (1)                  |
| F-G    | -2776 / 0                 | -124.4                    | -124.4 0.72 (1)           | 3.41  | K-F                       | -630 / 0                  | 0.76 (1)                  |
| G-H    | 0 / 47                    | -124.4                    | -124.4 0.17 (1)           | 10.00 | J-F                       | -174 / 148                | 0.07 (1)                  |
| O-B    | -2448 / 0                 | 0.0                       | 0.0 0.25 (1)              | 5.47  | B-N                       | 0 / 2388                  | 0.54 (1)                  |
| I-G    | -2448 / 0                 | 0.0                       | 0.0 0.25 (1)              | 5.47  | J-G                       | 0 / 2388                  | 0.54 (1)                  |
| O-N    | 0 / 0                     | -39.2                     | -39.2 0.26 (3)            | 10.00 |                           |                           |                           |
| N-M    | 0 / 2349                  | -39.2                     | -39.2 0.54 (2)            | 10.00 |                           |                           |                           |
| M-L    | 0 / 1879                  | -39.2                     | -39.2 0.44 (1)            | 10.00 |                           |                           |                           |
| L-K    | 0 / 1879                  | -39.2                     | -39.2 0.44 (1)            | 10.00 |                           |                           |                           |
| K-J    | 0 / 2349                  | -39.2                     | -39.2 0.54 (2)            | 10.00 |                           |                           |                           |
| J-I    | 0 / 0                     | -39.2                     | -39.2 0.26 (3)            | 10.00 |                           |                           |                           |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 34.8 | PSF |
|            | DL | =    | 8.0  | PSF |
| BOT CH.    | LL | =    | 10.5 | PSF |
|            | DL | =    | 7.3  | PSF |
| TOTAL LOAD | =  | 60.6 | 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.10")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.17")

CSI: TC=0.72/1.00 (B-C-1), BC=0.54/1.00 (M-N-2),  
WB=0.76/1.00 (C-M-1), SSI=0.29/1.00 (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)                      |
| MAX MIN               | MAX MIN                    |
| MT20                  | 850 371 1747 768 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (K) (INPUT = 0.80 )  
JSI METAL = 0.67 (N) (INPUT = 1.00 )



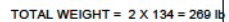
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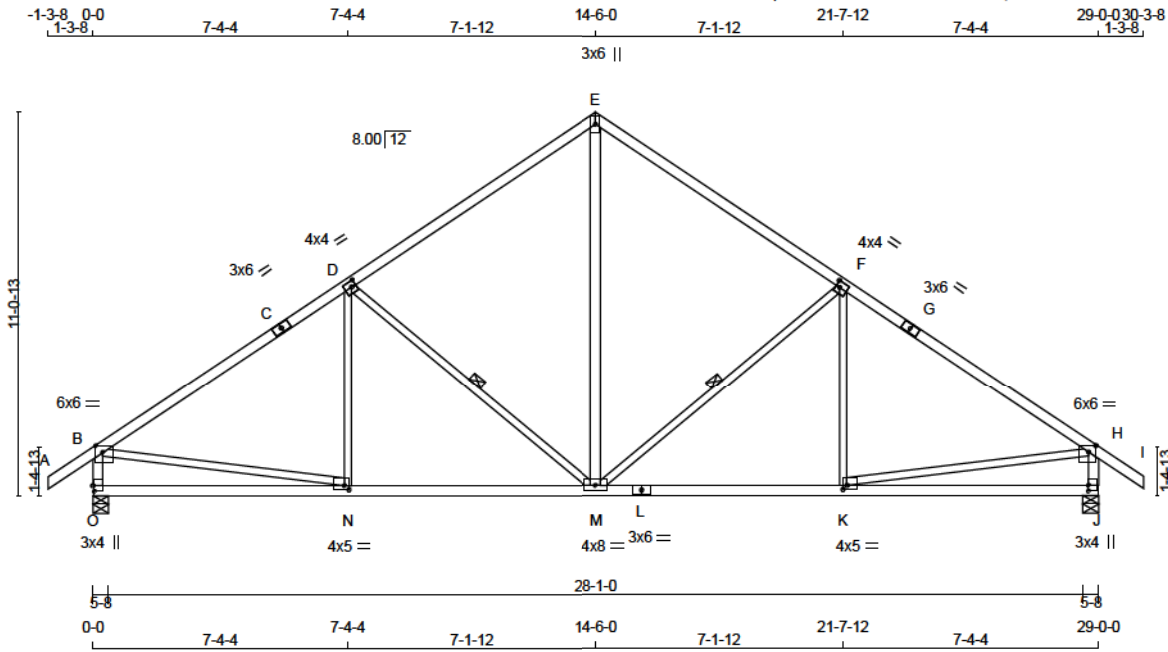
| Discipline     | Reviewer  | BCIN  | Date       |
|----------------|-----------|-------|------------|
| Building Code  | H. Author | 43236 | 2021-02-04 |
| Seepage System |           |       |            |
| Zoning         |           |       |            |







Version 8.420 S Oct 9 2020 MiTek Industries, Inc. Fri Dec 18 08:43:05 2020 Page 1  
ID: mCCrvcxnlAPc08wPaINT0zHzlx-4QCAK?IHEx27F8tIUBD2SStm0koeqlofHMVt5Ey7o



TOTAL WEIGHT = 6 X 126 = 757 lb

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

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT TYPE   | PLATES | W   | LEN | Y    | X    |
|-----------|--------|-----|-----|------|------|
| B TMVW-p  | MT20   | 6.0 | 6.0 | 2.25 | 2.50 |
| C TS-t    | MT20   | 3.0 | 6.0 |      |      |
| D TMVW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| E TTW+p   | MT20   | 3.0 | 6.0 |      |      |
| F TMVW-t  | MT20   | 4.0 | 4.0 | 2.00 | 1.50 |
| G TS-t    | MT20   | 3.0 | 6.0 |      |      |
| H TMVW-p  | MT20   | 6.0 | 6.0 | 2.25 | 2.50 |
| J BMV/t+p | MT20   | 3.0 | 4.0 | 2.00 |      |
| K BMVW-t  | MT20   | 4.0 | 5.0 | 1.50 | 1.50 |
| L BS-t    | MT20   | 3.0 | 6.0 |      |      |
| M BMVW-t  | MT20   | 4.0 | 8.0 |      |      |
| N BMVW-t  | MT20   | 4.0 | 5.0 | 1.50 | 1.50 |
| O BMV/t+p | MT20   | 3.0 | 4.0 | 2.00 | 0.50 |

**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 | 0                       | 0                               | 0         | 0         |
| O 2544  | 0                       | 2544                            | 0         | 5-8       |
| J 2544  | 0                       | 2544                            | 0         | 5-8       |

**UNFACTORED REACTIONS**

| 1ST LCASE   | MAX      | MIN     | COMPONENT REACTIONS |         |
|-------------|----------|---------|---------------------|---------|
| JT COMBINED | SNOW     | LIVE    | PERM. LIVE          | WIND    |
| O 1875      | 1105 / 0 | 305 / 0 | 0 / 0               | 0 / 0   |
| J 1875      | 1105 / 0 | 305 / 0 | 0 / 0               | 486 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.25 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 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF F-M, D-M, DBS = 20'-0" . CBF = 119 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE (PER BRACE). FASTEN LATERAL BRACE(S) USING (0.122"x3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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) | FACTORED LC1 MAX CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH (FT) | FACTORED FORCE MAX CSI (LC) |
| FR-TO  |                           |                           |                           | FR-TO |                           |                           |                             |
| A-B    | 0 / 47                    | -124.4                    | -124.4 0.11 (1)           | 10.00 | M-E                       | 0 / 1486                  | 0.24 (1)                    |
| B-C    | -2757 / 0                 | -124.4                    | -124.4 0.69 (1)           | 4.25  | M-F                       | -951 / 0                  | 0.58 (1)                    |
| C-D    | -2757 / 0                 | -124.4                    | -124.4 0.69 (1)           | 4.25  | K-F                       | -24 / 265                 | 0.07 (3)                    |
| D-E    | -2002 / 0                 | -124.4                    | -124.4 0.62 (1)           | 4.88  | D-M                       | -951 / 0                  | 0.58 (1)                    |
| E-F    | -2002 / 0                 | -124.4                    | -124.4 0.62 (1)           | 4.88  | N-D                       | -24 / 265                 | 0.07 (3)                    |
| F-G    | -2757 / 0                 | -124.4                    | -124.4 0.69 (1)           | 4.25  | B-N                       | 0 / 2369                  | 0.53 (1)                    |
| G-H    | -2757 / 0                 | -124.4                    | -124.4 0.69 (1)           | 4.25  | K-H                       | 0 / 2369                  | 0.53 (1)                    |
| H-I    | 0 / 47                    | -124.4                    | -124.4 0.11 (1)           | 10.00 |                           |                           |                             |
| O-B    | -2427 / 0                 | 0.0                       | 0.0 0.25 (1)              | 5.49  |                           |                           |                             |
| J-H    | -2427 / 0                 | 0.0                       | 0.0 0.25 (1)              | 5.49  |                           |                           |                             |
| O-N    | 0 / 0                     | -39.2                     | -39.2 0.41 (3)            | 10.00 |                           |                           |                             |
| N-M    | 0 / 2344                  | -39.2                     | -39.2 0.68 (2)            | 10.00 |                           |                           |                             |
| M-L    | 0 / 2344                  | -39.2                     | -39.2 0.68 (2)            | 10.00 |                           |                           |                             |
| L-K    | 0 / 2344                  | -39.2                     | -39.2 0.68 (2)            | 10.00 |                           |                           |                             |
| K-J    | 0 / 0                     | -39.2                     | -39.2 0.41 (3)            | 10.00 |                           |                           |                             |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |            |
|------------|------------|
| TOP CH. LL | = 34.8 PSF |
| DL         | = 8.0 PSF  |
| BOT CH. LL | = 10.5 PSF |
| DL         | = 7.3 PSF  |
| TOTAL LOAD | = 60.6 PSF |

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

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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (0.97")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.13")  
ALLOWABLE DEFL. (TL) = L/360 (0.97")  
CALCULATED VERT. DEFL. (TL) = L/999 (0.22")

CSI: TC=0.69/1.00 (B-D-1) , BC=0.68/1.00 (K-M-2) ,  
WB=0.58/1.00 (F-M-1) , SSI=0.37/1.00 (B-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 (PSI) | 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= 0.88 (O) (INPUT = 0.90 )  
JSI METAL = 0.87 (K) (INPUT = 1.00 )

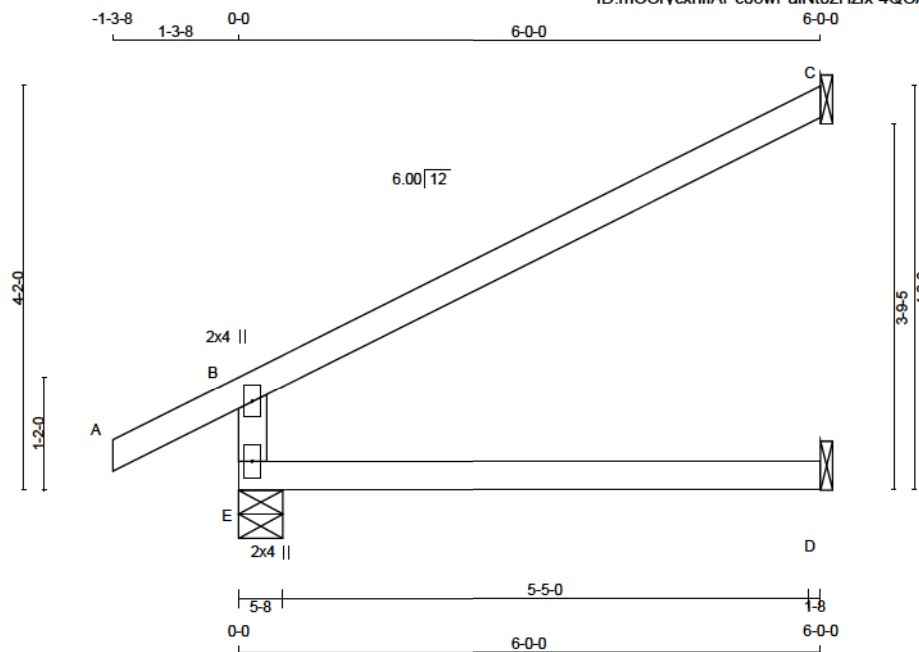


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer  | BCIN  | Date       |
|---------------|-----------|-------|------------|
| Building Code | H. Author | 43236 | 2021-02-04 |
| Sewage System |           |       |            |
| Zoning        |           |       |            |

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**





TOTAL WEIGHT =  $2 \times 17 = 34$  lb

| LUMBER         |      |          |        |
|----------------|------|----------|--------|
| 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.

DRY; SEASONED LUMBER.

| PLATES (table is in inches) |        |        |     |     |     |
|-----------------------------|--------|--------|-----|-----|-----|
| JT                          | TYPE   | PLATES | W   | LEN | Y X |
| B                           | TMV+p  | MT20   | 2.0 | 4.0 |     |
| E                           | 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 | REQRD<br>BRG |
|----|----------------------------|------|--|------------------------------------|------|--------|--------------|--------------|
|    | VERT                       | HORZ |  | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| JT |                            |      |  |                                    |      |        |              |              |
| E  | 774                        | 0    |  | 774                                | 0    | 0      | 5-8          | 1-8          |
| C  | 280                        | 0    |  | 280                                | 0    | 0      | 1-8          | 1-8          |
| D  | 97                         | 0    |  | 123                                | 0    | 0      | 1-8          | 1-8          |

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

### UNFACTORED REACTIONS

| MAX/MIN COMPONENT REACTIONS |          |         |        |           |       |         |       |
|-----------------------------|----------|---------|--------|-----------|-------|---------|-------|
| JT                          | COMBINED | SNOW    | LIVE   | PERM.LIVE | WIND  | DEAD    | SOIL  |
| E                           | 563      | 355 / 0 | 74 / 0 | 0 / 0     | 0 / 0 | 133 / 0 | 0 / 0 |
| C                           | 193      | 157 / 0 | 0 / 0  | 0 / 0     | 0 / 0 | 36 / 0  | 0 / 0 |
| D                           | 88       | 0 / 0   | 52 / 0 | 0 / 0     | 0 / 0 | 36 / 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 = 8.25 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 |                                 |                                 |                     | WEBBS                    |       |                                 |                 |
|--------|---------------------------------|---------------------------------|---------------------|--------------------------|-------|---------------------------------|-----------------|
| MEMB.  | MAX. FACTORED<br>FORCE<br>(LBS) | FACTORED<br>VERT. LOAD<br>(PLF) | LC1 MAX<br>CSI (LC) | MAX.<br>UNBRAD<br>LENGTH | MEMB. | MAX. FACTORED<br>FORCE<br>(LBS) | MAX<br>CSI (LC) |
| FR-TO  |                                 | FROM TO                         |                     | FR-TO                    |       |                                 |                 |
| E-B    | -635 / 0                        | 0.0                             | 0.0 0.24 (3)        | 7.81                     |       |                                 |                 |
| A-B    | 0 / 38                          | -124.4                          | -124.4 0.16 (1)     | 10.00                    |       |                                 |                 |
| B-C    | -42 / 0                         | -124.4                          | -124.4 0.76 (1)     | 6.25                     |       |                                 |                 |
| E-D    | 0 / 0                           | -39.2                           | -39.2 0.24 (3)      | 10.00                    |       |                                 |                 |

## DESIGN CRITERIA

**SPECIFIED LOADS:**

|       |     |             |     |
|-------|-----|-------------|-----|
| TOP   | CH. | LL = 34.8   | PSF |
|       |     | DL = 8.0    | PSF |
| BOT   | CH. | LL = 10.5   | PSF |
|       |     | DL = 7.3    | PSF |
| TOTAL |     | LOAD = 60.6 | PSF |

TOTAL LOAD = 60.6 PSE

## SPACING = 24.0 IN. C/C

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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/ 874 (0.08")

CSI: TC=0.76/1.00 (B-C:1) , BC=0.24/1.00 (D-E:3) ,  
WB=0.00/1.00 (n/a:0) , SSI=0.33/1.00 (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)<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= 0.36 (B) (INPUT = 0.00 )  
JSI METAL= 0.26 (B) (INPUT = 1.00 )

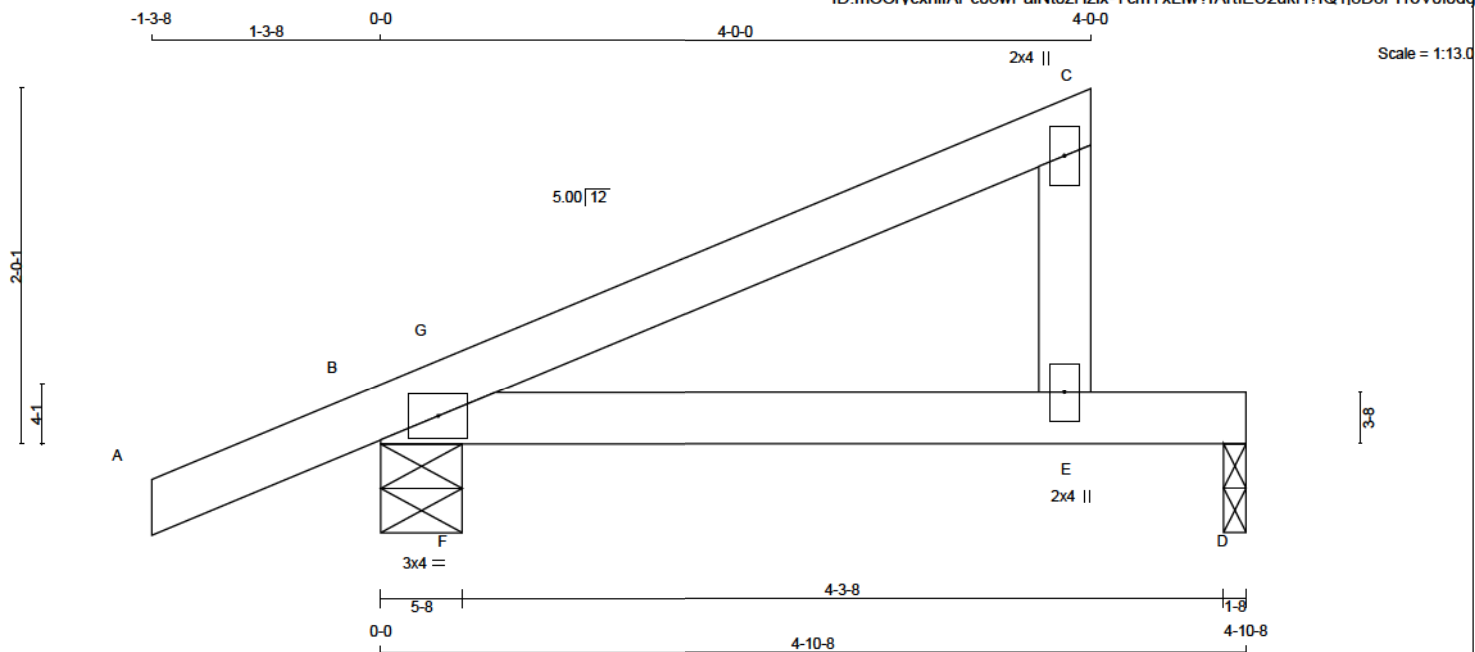


These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with the Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-06 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |



**READ ALL NOTES ON THIS PAGE AND ON  
ENGINEERING NOTE PAGE ENP-1. THIS  
NOTE PAGE IS AN INTEGRAL PART OF  
THIS DRAWING AS IT CONTAINS  
SPECIFICATIONS AND CRITERIA USED IN  
THE DESIGN OF THIS COMPONENT.**



TOTAL WEIGHT =  $9 \times 14 = 124 \text{ lb}$

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

DRY; SEASONED LUMBER.

| PLATES (table is in inches) |        |        |     |     |     |
|-----------------------------|--------|--------|-----|-----|-----|
| JT                          | TYPE   | PLATES | W   | LEN | Y X |
| B                           | TMB1-J | MT20   | 3.0 | 4.0 |     |
| C                           | TMV+p  | MT20   | 2.0 | 4.0 |     |
| E                           | BMV+p  | MT20   | 2.0 | 4.0 |     |

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

## BEARINGS

| JT | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      |        | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|--------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX        |
| B  | 557                        | 0    | 557                                | 0    | 0      | 5-8          | 1-8          |
| D  | 300                        | 0    | 300                                | 0    | 0      | 1-8          | 1-8          |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX/MIN. COMPONENT REACTIONS |        |           |       |        |       |
|-----------|----------|------------------------------|--------|-----------|-------|--------|-------|
| JT        | COMBINED | SNOW                         | LIVE   | PERM.LIVE | WIND  | DEAD   | SOIL  |
| B         | 404      | 258 / 0                      | 51 / 0 | 0 / 0     | 0 / 0 | 95 / 0 | 0 / 0 |
| D         | 227      | 114 / 0                      | 51 / 0 | 0 / 0     | 0 / 0 | 62 / 0 | 0 / 0 |

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

## 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<br>FORCE<br>(LBS) | FACTORED<br>VERT. LOAD<br>(PLF) | MAX<br>LC1<br>CSI (LC) | MAX.<br>UNBRAC | MEMB. | MAX. FACTORED<br>FORCE<br>(LBS) | MAX<br>CSI (LC) |  |
| FR-TO  |                                 | FROM TO                         |                        | LENGTHFR-TO    |       |                                 |                 |  |
| A-B    | 0 / 31                          | -124.4                          | -124.4                 | 0.16 (1)       | 10.00 | -83 / 142                       | 0.00 (1)        |  |
| B-G    | -76 / 0                         | -124.4                          | -124.4                 | 0.12 (3)       | 6.25  |                                 |                 |  |
| G-C    | 0 / 9                           | -124.4                          | -124.4                 | 0.31 (1)       | 10.00 |                                 |                 |  |
| E-C    | -239 / 0                        | 0.0                             | 0.0                    | 0.03 (1)       | 7.81  |                                 |                 |  |
|        |                                 |                                 |                        |                |       |                                 |                 |  |
| B-F    | 0 / 0                           | -39.2                           | -39.2                  | 0.13 (1)       | 10.00 |                                 |                 |  |
| F-E    | 0 / 0                           | -39.2                           | -39.2                  | 0.35 (1)       | 10.00 |                                 |                 |  |
| E-D    | 0 / 0                           | -39.2                           | -39.2                  | 0.34 (1)       | 10.00 |                                 |                 |  |

## DESIGN CRITERIA

**SPECIFIED LOADS:**

|            |     |           |     |
|------------|-----|-----------|-----|
| TOP        | CH. | LL = 34.8 | PSF |
|            |     | DL = 8.0  | PSF |
| BOT        | CH. | LL = 10.5 | PSF |
|            |     | DL = 7.3  | PSF |
| TOTAL LOAD |     | = 60.6    | PSF |

SPACING = 24.0 IN. C/C

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 086-1
- TPIC 2014

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)=  $L/360$  (0.19")  
CALCULATED VERT. DEFL.(LL) =  $L/833$  (0.07")  
ALLOWABLE DEFL.(TL)=  $L/360$  (0.19")  
CALCULATED VERT. DEFL.(TL) =  $L/485$  (0.12")

CSI: TC=0.31/1.00 (C-G:1) , BC=0.35/1.00 (E-F:1) ,  
WB=0.00/1.00 (F-G:1) , SSI=0.23/1.00 (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= 0.31 (B) (INPUT = 0.90 )  
JSI METAL= 0.09 (C) (INPUT = 1.00 )



**READ ALL NOTES ON THIS PAGE AND ON  
ENGINEERING NOTE PAGE ENP-1. THIS  
NOTE PAGE IS AN INTEGRAL PART OF  
THIS DRAWING AS IT CONTAINS  
SPECIFICATIONS AND CRITERIA USED IN  
THE DESIGN OF THIS COMPONENT.**

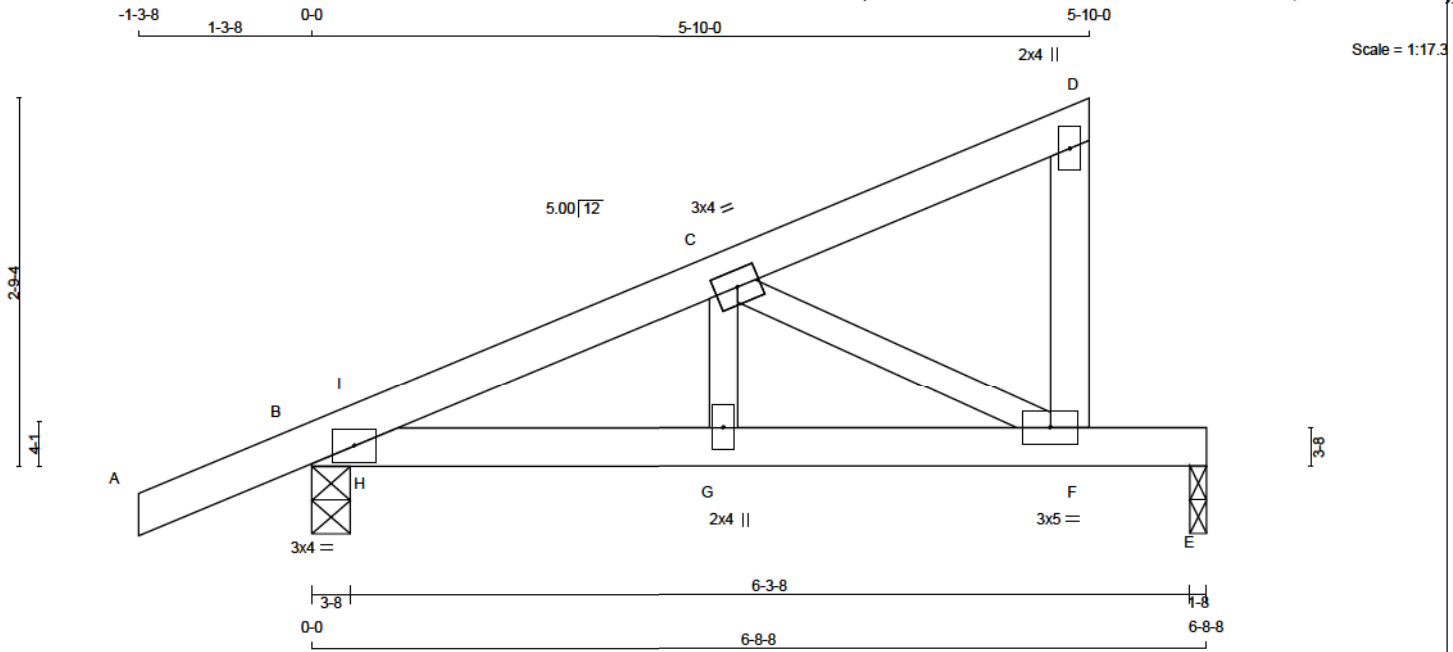


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| Discipline    | Reviewer   | BCIN  | Date      |
|---------------|------------|-------|-----------|
| Building Code | H. Authier | 43236 | 2021-02-0 |
| Sewage System |            |       |           |
| Zoning        |            |       |           |







TOTAL WEIGHT = 2 X 22 = 44 lb

| LUMBER                    |        |      |        |        |
|---------------------------|--------|------|--------|--------|
| N. L. G. A. RULES         | CHORDS | SIZE | LUMBER | DESCR. |
| A - D                     | 2x4    | DRY  | No.2   | SPF    |
| F - D                     | 2x4    | DRY  | No.2   | SPF    |
| B - E                     | 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                           | TM81-I | MT20   | 3.0 | 4.0 |     |
| C                           | TMWW-I | MT20   | 3.0 | 4.0 |     |
| D                           | TMV+p  | MT20   | 2.0 | 4.0 |     |
| F                           | BMV-w  | MT20   | 3.0 | 5.0 |     |
| G                           | BMW+w  | 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 BRG |        | REQRD BRG |       |
| JT                      | VERT | HORZ                            | DOWN | HORZ      | UPLIFT | IN-SX     | IN-SX |
| B                       | 710  | 0                               | 710  | 0         | 0      | 3-8       | 1-8   |
| E                       | 447  | 0                               | 447  | 0         | 0      | 1-8       | 1-8   |

| UNFACTORED REACTIONS                  |          |         |        |           |       |         |       |
|---------------------------------------|----------|---------|--------|-----------|-------|---------|-------|
| 1ST LCASE MAX/MIN COMPONENT REACTIONS |          |         |        |           |       |         |       |
| JT                                    | COMBINED | SNOW    | LIVE   | PERM.LIVE | WIND  | DEAD    | SOIL  |
| B                                     | 517      | 323 / 0 | 70 / 0 | 0 / 0     | 0 / 0 | 123 / 0 | 0 / 0 |
| E                                     | 337      | 177 / 0 | 70 / 0 | 0 / 0     | 0 / 0 | 90 / 0  | 0 / 0 |

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

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

| CHORDS |                                 |                                 |                     |                            | WEBS  |                                 |                 |  |  |
|--------|---------------------------------|---------------------------------|---------------------|----------------------------|-------|---------------------------------|-----------------|--|--|
| MEMB.  | MAX. FACTORED<br>FORCE<br>(LBS) | FACTORED<br>VERT. LOAD<br>(PLF) | LC1 MAX<br>CSI (LC) | MAX.<br>UNBRACED<br>LENGTH | MEMB. | MAX. FACTORED<br>FORCE<br>(LBS) | MAX<br>CSI (LC) |  |  |
| FR-TO  |                                 | FROM TO                         |                     |                            | FR-TO |                                 |                 |  |  |
| A-B    | 0 / 31                          | -124.4 -124.4                   | 0.16 (1)            | 10.00                      | G-C   | 0 / 353                         | 0.08 (2)        |  |  |
| B-I    | -900 / 0                        | -124.4 -124.4                   | 0.02 (1)            | 6.25                       | C-F   | -911 / 0                        | 0.17 (1)        |  |  |
| I-C    | -879 / 0                        | -124.4 -124.4                   | 0.06 (1)            | 6.25                       | H-I   | -137 / 12                       | 0.00 (1)        |  |  |
| C-D    | -11 / 0                         | -124.4 -124.4                   | 0.10 (1)            | 6.25                       |       |                                 |                 |  |  |
| F-D    | -141 / 0                        | 0.0 0.0                         | 0.02 (1)            | 7.81                       |       |                                 |                 |  |  |
| B-H    | 0 / 820                         | -39.2 -39.2                     | 0.22 (1)            | 10.00                      |       |                                 |                 |  |  |
| H-G    | 0 / 820                         | -39.2 -39.2                     | 0.29 (1)            | 10.00                      |       |                                 |                 |  |  |
| G-F    | 0 / 820                         | -39.2 -39.2                     | 0.84 (1)            | 10.00                      |       |                                 |                 |  |  |
| F-E    | 0 / 0                           | -39.2 -39.2                     | 0.51 (1)            | 10.00                      |       |                                 |                 |  |  |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 PSF

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

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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.22")  
CALCULATED VERT. DEFL.(TL) = L/867 (0.09")

CSI: TC=0.16/1.00 (A-B:1), BC=0.64/1.00 (F-G:1),  
WB=0.17/1.00 (C-F:1), SSI=0.35/1.00 (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 .

**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 (F) (INPUT = 0.90 )  
JSI METAL = 0.29 (B) (INPUT = 1.00 )



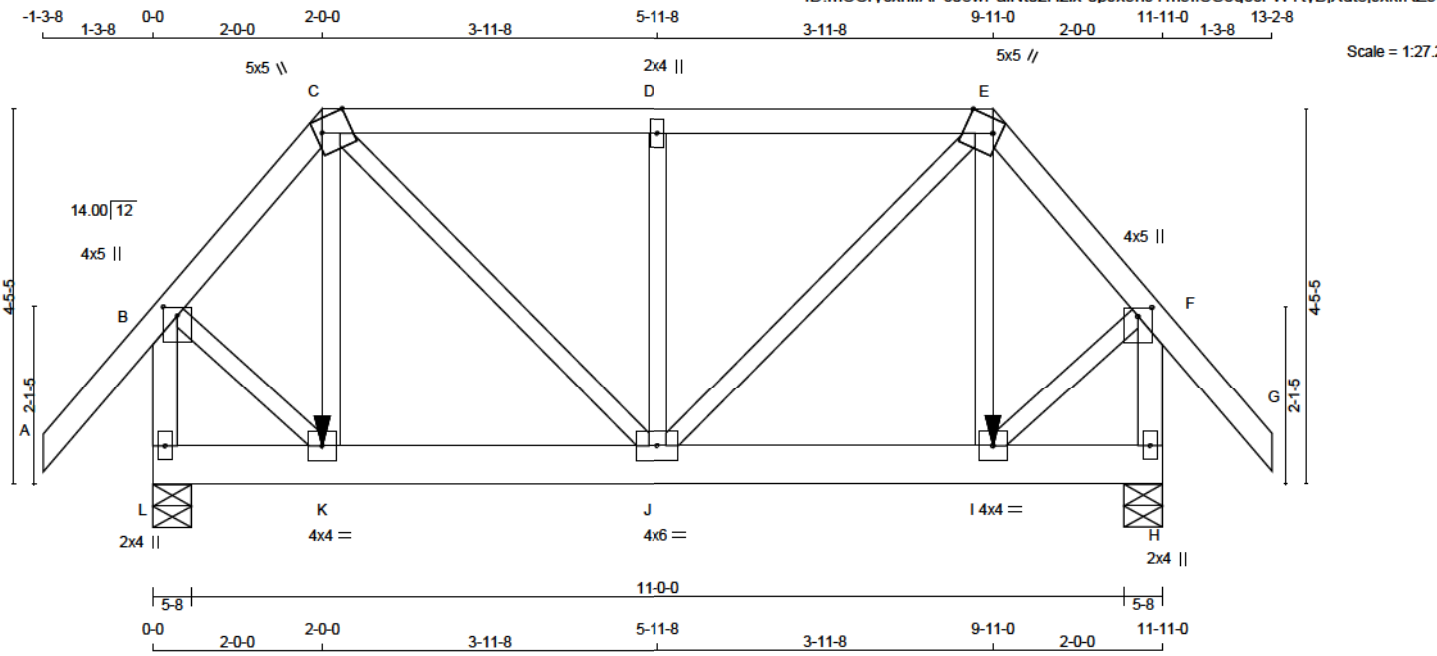
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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**



Version 8.420 S Oct 9 2020 MiTek Industries, Inc. Fri Dec 18 08:43:07 2020 Page 1  
ID: mCCrycxnlfAPc08wPaInT0zHzlx-0pJx9hJYm9IiUSoqccFWYtyBjXdt8JxkfrZ96y70



TOTAL WEIGHT = 2 X 67 = 135 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    |
| L - B  | 2x4  | DRY No.2 | SPF    |
| H - F  | 2x4  | DRY No.2 | SPF    |
| L - H  | 2x6  | 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 | 5.0 | 1.25 | 2.00 |
| C  | TTWW+m | MT20   | 5.0 | 5.0 | Edge | 4.00 |
| D  | TMVW+w | MT20   | 2.0 | 4.0 |      |      |
| E  | TTWW+m | MT20   | 5.0 | 5.0 | Edge | 4.00 |
| F  | TMVW+p | MT20   | 4.0 | 5.0 | 1.25 | 2.00 |
| H  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |
| I  | BMWW-t | MT20   | 4.0 | 4.0 |      |      |
| J  | BMWW-t | MT20   | 4.0 | 6.0 |      |      |
| K  | BMWW-t | MT20   | 4.0 | 4.0 |      |      |
| L  | 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      |
| L  | 1521                    | 0                               | 1521      | 0         |
| H  | 1521                    | 0                               | 1521      | 0         |

**UNFACTORED REACTIONS**

| 1ST CASE | MAX      | MIN     | COMPONENT REACTIONS |
|----------|----------|---------|---------------------|
| JT       | COMBINED | SNOW    | LIVE                |
| L        | 1117     | 670 / 0 | 173 / 0             |
| H        | 1117     | 670 / 0 | 173 / 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 = 5.79 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) | FACTORED HORZ. LOAD (LC1 MAX) | MAX. UNBRACED LENGTH (FT) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH (FT) |
| FR-TO  |                           |                           |                               |                           | HR-TO |                           |                           |
| A-B    | 0 / 86                    | -124.4                    | -124.4                        | 0.19 (1)                  | 10.00 | K-C                       | 0 / 110                   |
| B-C    | -936 / 0                  | -124.4                    | -124.4                        | 0.11 (1)                  | 6.25  | C-J                       | 0 / 515                   |
| C-D    | -964 / 0                  | -124.4                    | -124.4                        | 0.36 (1)                  | 5.79  | J-D                       | -588 / 0                  |
| D-E    | -964 / 0                  | -124.4                    | -124.4                        | 0.36 (1)                  | 5.79  | J-E                       | 0 / 515                   |
| E-F    | -936 / 0                  | -124.4                    | -124.4                        | 0.11 (1)                  | 6.25  | I-E                       | 0 / 110                   |
| F-G    | 0 / 86                    | -124.4                    | -124.4                        | 0.19 (1)                  | 10.00 | B-K                       | 0 / 768                   |
| L-B    | -1490 / 0                 | 0.0                       | 0.0                           | 0.18 (1)                  | 6.68  | I-F                       | 0 / 768                   |
| H-F    | -1490 / 0                 | 0.0                       | 0.0                           | 0.18 (1)                  | 6.68  |                           |                           |
| L-K    | 0 / 0                     | -39.2                     | -39.2                         | 0.03 (3)                  | 10.00 |                           |                           |
| K-J    | 0 / 804                   | -39.2                     | -39.2                         | 0.12 (1)                  | 10.00 |                           |                           |
| J-I    | 0 / 804                   | -39.2                     | -39.2                         | 0.12 (1)                  | 10.00 |                           |                           |
| I-H    | 0 / 0                     | -39.2                     | -39.2                         | 0.03 (3)                  | 10.00 |                           |                           |

**FACTORED CONCENTRATED LOADS (LBS)**

| JT | LOC.   | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE | HEEL | CONN. |
|----|--------|------|------|------|-------|------|------|------|-------|
| I  | 9-11-0 | -86  | -97  | ---  | FRONT | VERT | DEAD | ---  | C1    |
| I  | 9-11-0 | -48  | -72  | ---  | FRONT | VERT | LIVE | ---  | C1    |
| I  | 9-11-0 | -237 | -237 | ---  | FRONT | VERT | SNOW | ---  | C1    |
| K  | 2-0-0  | -86  | -97  | ---  | FRONT | VERT | DEAD | ---  | C1    |
| K  | 2-0-0  | -48  | -72  | ---  | FRONT | VERT | LIVE | ---  | C1    |
| K  | 2-0-0  | -237 | -237 | ---  | FRONT | VERT | SNOW | ---  | 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 = 34.8 PSF

DL = 8.0 PSF

BOT CH. LL = 10.5 PSF

DL = 7.3 PSF

TOTAL LOAD = 60.6 PSF

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

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

\*\*\* 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

(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL (LL) = L/360 (0.40")

CALCULATED VERT. DEFL (LL) = L/999 (0.02")

ALLOWABLE DEFL (TL) = L/360 (0.40")

CALCULATED VERT. DEFL (TL) = L/999 (0.03")

CSI: TC=0.19/1.00 (C-D-1), BC=0.12/1.00 (J-K-1), WB=0.19/1.00 (B-K-1), SSI=0.26/1.00 (D-E-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)

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 = 0.80 )

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

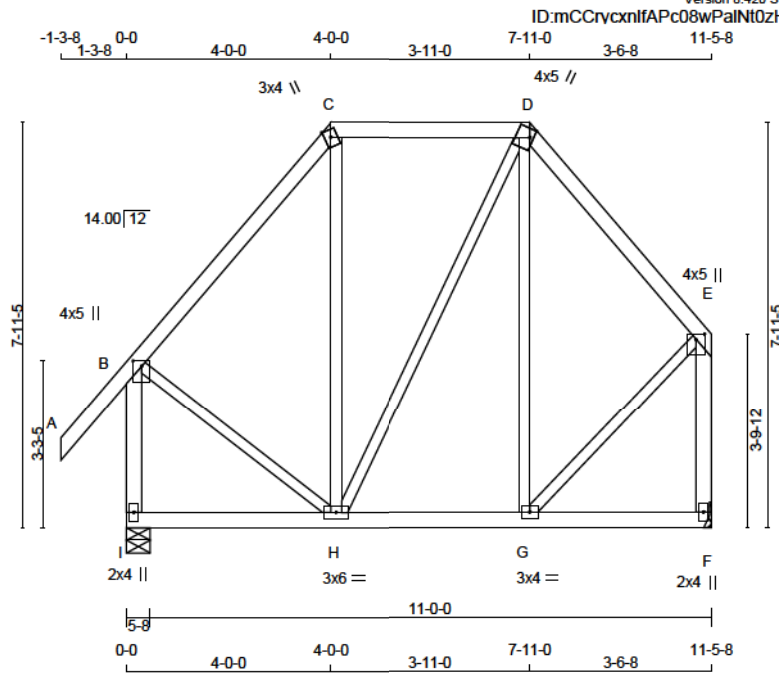


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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | H. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**





TOTAL WEIGHT = 2 X 67 = 135 lb

| LUMBER            |        |      |        |  | DESCR. |
|-------------------|--------|------|--------|--|--------|
| N. L. G. A. RULES | CHORDS | SIZE | LUMBER |  |        |
| 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             | 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 | 5.0 | 1.25 | 2.00 |
| C  | TTW+m   | MT20   | 3.0 | 4.0 | Edge |      |
| D  | TTWW+m  | MT20   | 4.0 | 5.0 | 2.00 | 0.75 |
| E  | TMVW+p  | MT20   | 4.0 | 5.0 | 1.25 | 2.00 |
| F  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| G  | BMWW-l  | MT20   | 3.0 | 4.0 |      |      |
| H  | BMWWW-l | MT20   | 3.0 | 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 BRG | REQRD BRG |
|----|-------------------------|---------------------------------|-----------|-----------|
| JT | VERT                    | HORZ                            | DOWN      | HORZ      |
| I  | 1112                    | 0                               | 1112      | 0         |
| F  | 938                     | 0                               | 938       | 0         |

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 |
| I         | 815      | 496 / 0 | 120 / 0             | 0 / 0     |
| F         | 694      | 399 / 0 | 120 / 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 = 8.25 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) | FACTORED L1 MAX. CSI (LC) | MEMB.    | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | FACTORED L1 MAX. CSI (LC) |
| FR-TO  |                           | FROM TO                   |                           | FR-TO    |                           | FROM TO                   |                           |
| A-B    | 0 / 88                    | -124.4 -124.4             | 0.18 (1)                  | 10.00    | H-C                       | -164 / 94                 | 0.12 (1)                  |
| B-C    | -510 / 0                  | -124.4 -124.4             | 0.28 (1)                  | 6.25     | H-D                       | 0 / 45                    | 0.01 (1)                  |
| C-D    | -329 / 0                  | -124.4 -124.4             | 0.24 (1)                  | 6.25     | G-D                       | -138 / 86                 | 0.17 (1)                  |
| D-E    | -480 / 0                  | -124.4 -124.4             | 0.20 (1)                  | 6.25     | B-H                       | 0 / 405                   | 0.09 (1)                  |
| I-B    | -1046 / 0                 | 0.0                       | 0.0                       | 0.20 (1) | 7.69                      | G-E                       | 0 / 427                   |
| F-E    | -879 / 0                  | 0.0                       | 0.0                       | 0.22 (1) | 7.81                      |                           |                           |
| I-H    | 0 / 0                     | -39.2                     | -39.2                     | 0.12 (3) | 10.00                     |                           |                           |
| H-G    | 0 / 309                   | -39.2                     | -39.2                     | 0.15 (2) | 10.00                     |                           |                           |
| G-F    | 0 / 0                     | -39.2                     | -39.2                     | 0.09 (3) | 10.00                     |                           |                           |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 34.8 PSF  
DL = 8.0 PSF  
BOT CH. LL = 10.5 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 60.6 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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.38")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.38")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.26/1.00 (B-C:1) , BC=0.15/1.00 (G-H:2) ,  
WB=0.17/1.00 (D-G:1) , SSI=0.19/1.00 (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 768 1987 1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (C) (INPUT = 0.80 )  
JSI METAL = 0.32 (B) (INPUT = 1.00 )



**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

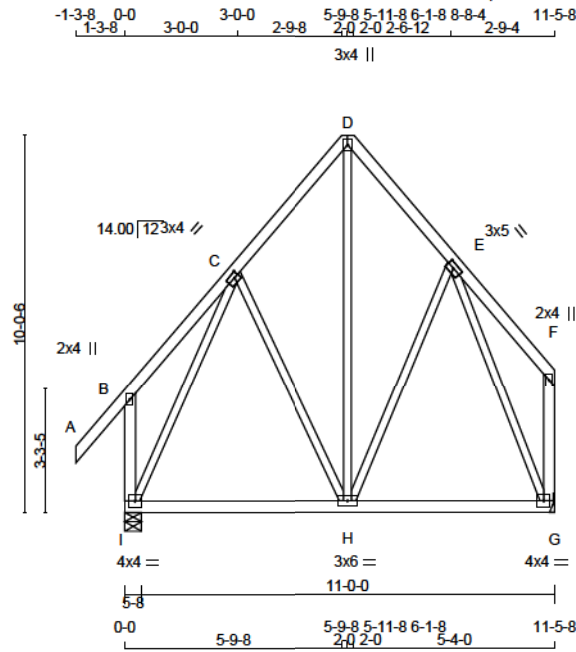


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| Discipline      | Reviewer  | BCIN  | Date       |
|-----------------|-----------|-------|------------|
| Building Code   | H. Author | 43236 | 2021-02-04 |
| Severage System |           |       |            |
| Zoning          |           |       |            |







Scale = 1:61.3

TOTAL WEIGHT = 2 X 73 = 145 lb

| LUMBER            |     |      |        |  |        |
|-------------------|-----|------|--------|--|--------|
| N. L. G. A. RULES |     |      |        |  |        |
| CHORDS            |     | SIZE | LUMBER |  | DESCR. |
| A - D             | 2x4 | DRY  | No.2   |  | SPF    |
| D - F             | 2x4 | DRY  | No.2   |  | SPF    |
| I - B             | 2x4 | DRY  | No.2   |  | SPF    |
| G - F             | 2x4 | DRY  | No.2   |  | SPF    |
| I - G             | 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  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| C  | TMWW-I  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D  | TTW+p   | MT20   | 3.0 | 4.0 |      |      |
| E  | TMWW-I  | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| F  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| G  | BMVW1-I | MT20   | 4.0 | 4.0 |      |      |
| H  | BMWW-I  | MT20   | 3.0 | 6.0 |      |      |
| I  | BMVW1-I | MT20   | 4.0 | 4.0 |      |      |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION | MAXIMUM FACTORED GROSS REACTION | INPUT BRG | REQRD BRG  |
|----|-------------------------|---------------------------------|-----------|------------|
| I  | 1112                    | 1112                            | 0         | 5-8        |
| G  | 938                     | 938                             | 0         | MECHANICAL |

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

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | MAX | MIN     | COMPONENT REACTIONS |
|----|-----------|-----|---------|---------------------|
| I  | COMBINED  | 815 | 496 / 0 | 120 / 0             |
| G  | SNOW      | 694 | 399 / 0 | 120 / 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) | FACTORED L1 MAX (LC) | MAX. UNBRACED LENGTH (FT) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED FORCE (LC) |
| FR-TO  |                           |                           |                      |                           | FR-TO |                           |                          |
| A-B    | 0 / 88                    | -124.4                    | -124.4 0.18 (1)      | 10.00                     | C-H   | -93 / 35                  | 0.09 (1)                 |
| B-C    | 0 / 32                    | -124.4                    | -124.4 0.18 (1)      | 10.00                     | H-E   | -28 / 58                  | 0.03 (1)                 |
| C-D    | -473 / 0                  | -124.4                    | -124.4 0.13 (1)      | 6.25                      | I-C   | -779 / 0                  | 0.68 (1)                 |
| D-E    | -470 / 0                  | -124.4                    | -124.4 0.11 (1)      | 6.25                      | E-G   | -788 / 0                  | 0.73 (1)                 |
| E-F    | 0 / 29                    | -124.4                    | -124.4 0.14 (1)      | 10.00                     | H-D   | 0 / 387                   | 0.09 (1)                 |
| I-B    | -314 / 0                  | 0.0                       | 0.0 0.06 (1)         | 7.81                      |       |                           |                          |
| G-F    | -130 / 0                  | 0.0                       | 0.0 0.03 (1)         | 7.81                      |       |                           |                          |
| I-H    | 0 / 327                   | -39.2                     | -39.2 0.32 (3)       | 10.00                     |       |                           |                          |
| H-G    | 0 / 298                   | -39.2                     | -39.2 0.32 (3)       | 10.00                     |       |                           |                          |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |           |     |
|------------|-----------|-----|
| TOP CH.    | LL = 34.8 | PSF |
|            | DL = 8.0  | PSF |
| BOT CH.    | LL = 10.5 | PSF |
|            | DL = 7.3  | PSF |
| TOTAL LOAD | = 60.6    | PSF |

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

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 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)  
EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (0.38")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.04")  
ALLOWABLE DEFL. (TL) = L/360 (0.38")  
CALCULATED VERT. DEFL. (TL) = L/999 (0.07")

CSI: TC=0.18/1.00 (A-B-1), BC=0.32/1.00 (H-I-3),  
WB=0.73/1.00 (E-G-1), SSI=0.16/1.00 (H-I-3)

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 (C) (INPUT = 0.90 )  
JSI METAL = 0.27 (C) (INPUT = 1.00 )



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| Discipline      | Reviewer  | BCIN  | Date       |
|-----------------|-----------|-------|------------|
| Building Code   | H. Author | 43236 | 2021-02-04 |
| Severage System |           |       |            |
| Zoning          |           |       |            |



**READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-1. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.**

1) ENSURE TRUSS HAS BEEN DESIGNED WITH ADDITIONAL TOP CHORD DEAD LOAD EQUAL TO OR GREATER THAN WEIGHT OF SOLAR PANELS BEING INSTALLED

2) ATTACH SOLAR PANELS TO EACH TRUSS LOCATED UNDER THE SOLAR PANELS (I.E. @ 24" C/C PERPENDICULAR TO THE TRUSS DIRECTION)

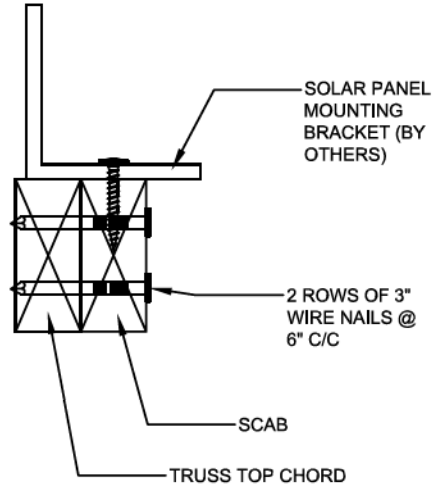
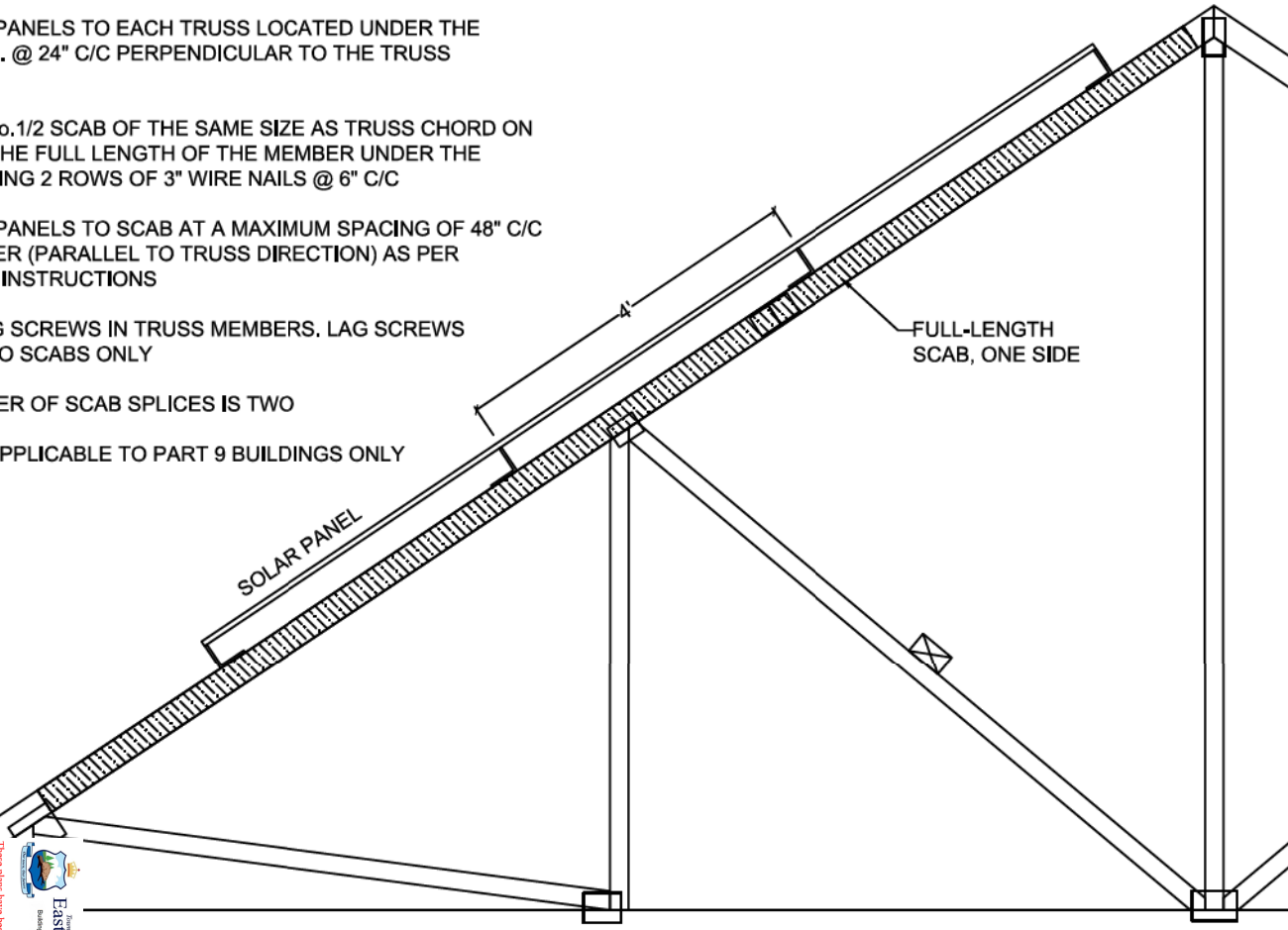
3) ATTACH A SPF No.1/2 SCAB OF THE SAME SIZE AS TRUSS CHORD ON ONE SIDE ALONG THE FULL LENGTH OF THE MEMBER UNDER THE SOLAR PANELS USING 2 ROWS OF 3" WIRE NAILS @ 6" C/C

4) ATTACH SOLAR PANELS TO SCAB AT A MAXIMUM SPACING OF 48" C/C ALONG THE MEMBER (PARALLEL TO TRUSS DIRECTION) AS PER MANUFACTURER'S INSTRUCTIONS

5) DO NOT USE LAG SCREWS IN TRUSS MEMBERS. LAG SCREWS SHOULD ATTACH TO SCABS ONLY

6) MAXIMUM NUMBER OF SCAB SPLICES IS TWO

7) THIS DETAIL IS APPLICABLE TO PART 9 BUILDINGS ONLY



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East Gwillimbury  
Building Department Review Stamp

|          |             |          |
|----------|-------------|----------|
| Drawn By | Reviewed By | Date     |
| 11/11/20 | 11/11/20    | 11/11/20 |

NE1220-126  
GREENPARK - TRINAR HALL  
- BRENTWOOD 2 EL 1 -

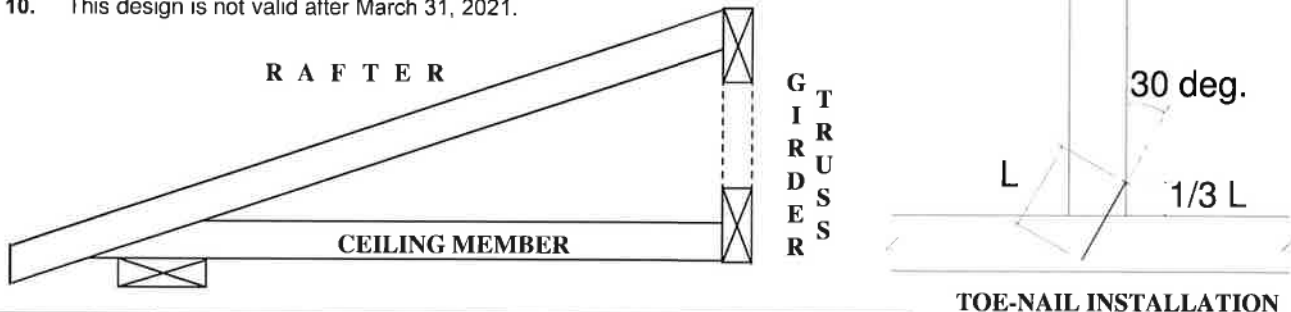
## Detail for Installation of Solar Panels - Scab Method



B97791H1

| NAIL TYPE        | LENGTH<br>(IN) | DIAMETER<br>(IN) | NAIL LATERAL CAPACITY (LB) |        |
|------------------|----------------|------------------|----------------------------|--------|
|                  |                |                  | S-P-F                      | D. FIR |
| COMMON<br>WIRE   | 3.00           | 0.144            | 132                        | 147    |
|                  | 3.25           | 0.144            | 132                        | 147    |
|                  | 3.50           | 0.160            | 159                        | 177    |
| COMMON<br>SPIRAL | 3.00           | 0.122            | 97                         | 108    |
|                  | 3.25           | 0.122            | 97                         | 108    |
|                  | 3.50           | 0.152            | 145                        | 162    |

1. Rafter and ceiling members may be anchored to top and bottom chords of girder truss by toe-nailing rafter and ceiling members to girder chords provided the reaction does not exceed the lateral capacities in the table. Hangers (specified by others) are required for reactions higher than the maximum toe-nail capacity. Reactions are based on factored loads.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor  $J_A$  in CSA O86-14, section 12.9.4.1.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in tables below.
5. Nail values in table are based on the following relative lumber densities: G = 0.42 (SPF), G = 0.49 (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See next page for nailing on bearing plate).
7. For loads due to **wind** the nail lateral capacity in this table may be multiplied by 1.15 ( $K_D$  factor).
8. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
9. Nail values in this table comply with CSA O86-14, section 12.9.4
10. This design is not valid after March 31, 2021.



|                    |                                    |               |                       |               |
|--------------------|------------------------------------|---------------|-----------------------|---------------|
| Nail type          | Common wire                        | Common spiral | Common wire           | Common spiral |
| Nail dia. (in)     | 0.160                              | 0.152         | 0.144                 | 0.122         |
|                    | ( 3.5" nail )                      |               | ( 3" and 3.25" nail ) |               |
| <b>LUMBER SIZE</b> | <b>MAXIMUM NUMBER OF TOE-NAILS</b> |               |                       |               |
| <b>2X4 SPF</b>     | 2                                  | 2             | 3                     | 3             |
| <b>2X4 D. Fir</b>  | 2                                  | 2             | 2                     | 2             |
| <b>2X6 SPF</b>     | 4                                  | 4             | 4                     | 5             |
| <b>2X6 D. Fir</b>  | 3                                  | 3             | 3                     | 4             |

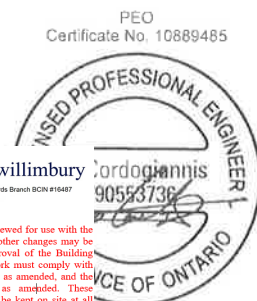
**MiTek®** MiTek Canada Inc  
100 Industrial Rd.  
Bradford, Ontario L3Z 3G7

December 2.



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|               |            |       |         |
|---------------|------------|-------|---------|
| Discipline    | Reviewer   | BCIN  | Date    |
| Building Code | H. Authier | 43236 | 2021-02 |
| Sewage System |            |       |         |
| Zoning        |            |       |         |



# BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B97791H2

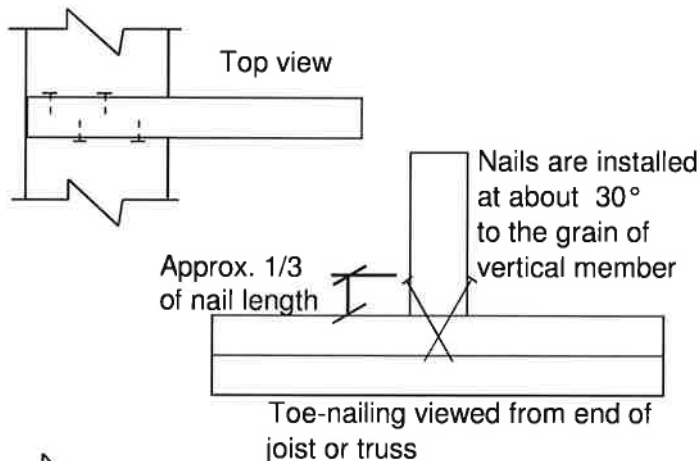
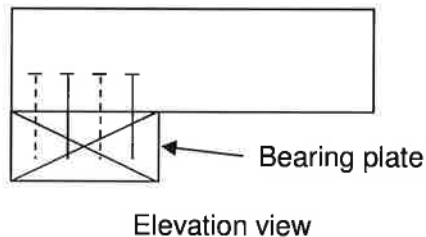
| NAIL TYPE        | LENGTH<br>(IN) | DIAMETER<br>(IN) | NAIL WITHDRAWAL CAPACITY (LB) |        |
|------------------|----------------|------------------|-------------------------------|--------|
|                  |                |                  | S-P-F                         | D. FIR |
| COMMON<br>WIRE   | 3.00           | 0.144            | 30                            | 42     |
|                  | 3.25           | 0.144            | 32                            | 45     |
|                  | 3.50           | 0.160            | 38                            | 52     |
| COMMON<br>SPIRAL | 3.00           | 0.122            | 26                            | 36     |
|                  | 3.25           | 0.122            | 28                            | 40     |
|                  | 3.50           | 0.152            | 36                            | 50     |

**Note:** If using truss with D. Fir lumber and S-P-F bearing plate, use values in table for S-P-F.

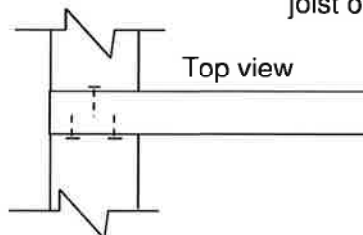
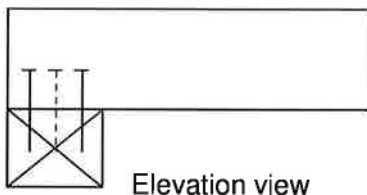
## NOTES:

1. Truss chord, rafter, or ceiling members may be anchored to bearing plate by toe-nails, provided that the actual factored uplift force due to **wind** or **earthquake** load does not exceed the withdrawal capacities in the table. Hangers (specified by others) are required for uplift forces that are higher than the maximum toe-nail withdrawal capacity.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor  $J_A$  in CSA O86-14, section 12.9.5.2.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in table above.
5. Nail values in table are based on the following relative lumber densities:  $G = 0.42$ (SPF),  $G = 0.49$ (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See drawing on detail B37579H1).
7. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
8. Nail values in this table comply with CSA O86-14, section 12.9.5
9. This design is not valid after March 31, 2021.

## Toe-nailing on 2x6 Bearing Plate



## Toe-nailing on 2x4 Bearing Plate



**MiTek**

**MiTek Canada Inc**  
100 Industrial Rd.  
Bradford, Ontario L3Z 3G7



Town of  
**East Gwillimbury**  
Building Standards Branch BCN #16487

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| Discipline    | Reviewer   | BCIN  | Date       |
|---------------|------------|-------|------------|
| Building Code | M. Authier | 43236 | 2021-02-04 |
| Sewage System |            |       |            |
| Zoning        |            |       |            |

PEO  
Certificate No. 10889485

