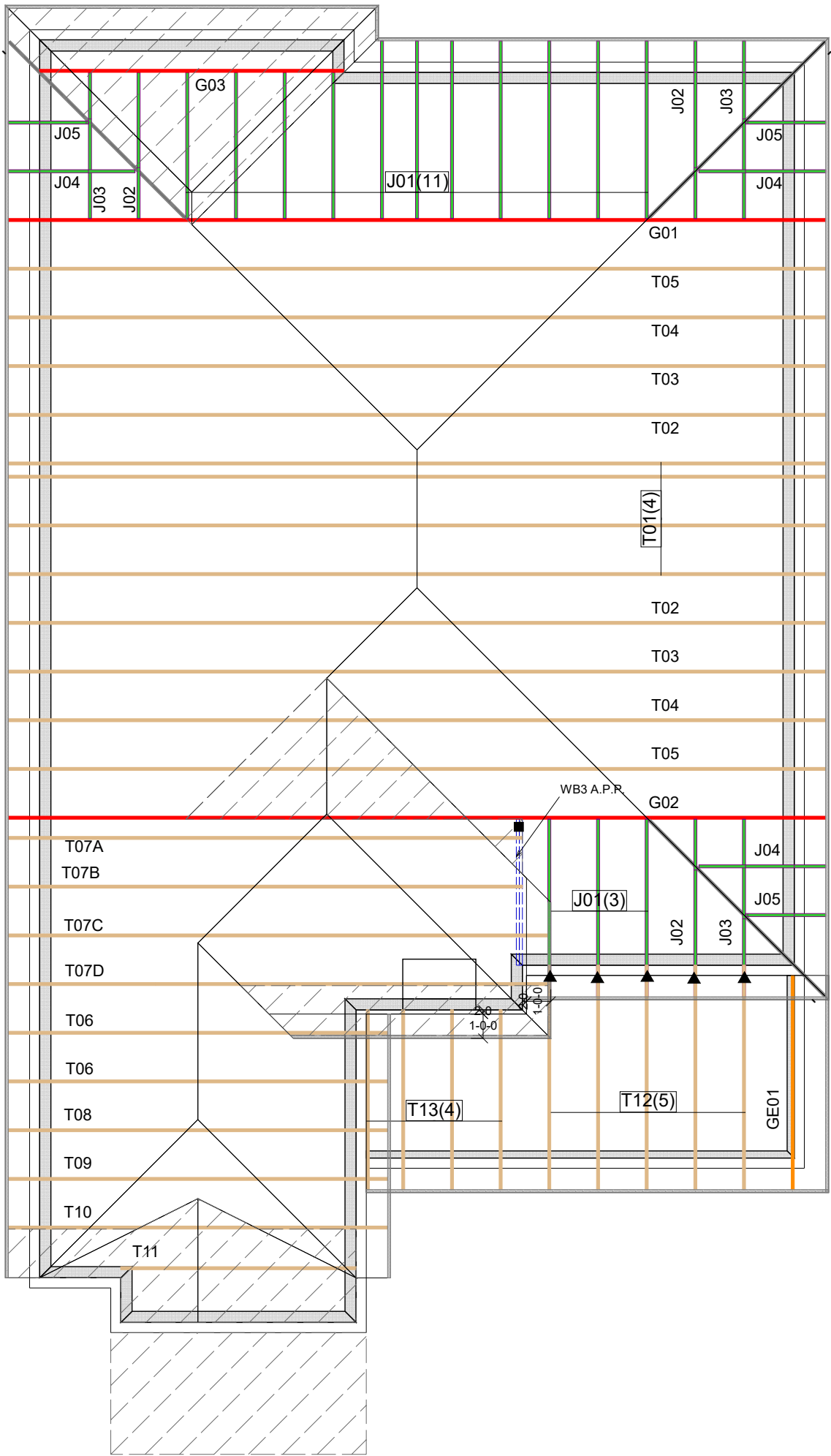




| Hanger Name | Symbol | QTY |
|-------------|--------|-----|
| LUS24       | ▲      | 5   |
| HGUS26-2    | ■      | 1   |



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 SPF @ 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  | ROUNDEL HOMES INC                                               |
| Job #     | 21-00084R0                                                      |
| Address   | PINETREE 2<br>RICHMOND HILL,ON                                  |
| Model     | 38-02 ELEV 3                                                    |
| Sales Rep | RALPH MIRIGELLO                                                 |
| Designer  | KR                                                              |
| Date      | 5/16/2022                                                       |
| Path      | C:\MITEK\CA\JOBS\GREENPARK GROUP\ROUNDEL HOMES INC\T-PT38-02-3\ |

DESIGN INFORMATION

|               |                                                       |
|---------------|-------------------------------------------------------|
| Code          | NBCC 2015                                             |
| Bldg          | Residential - HSB (NBCC Part 9)                       |
| TC LL         | 25.6 lb/ft²                                           |
| TC DL         | 3.0 lb/ft²                                            |
| BC LL         | 0.0 lb/ft²                                            |
| BC DL         | 7.3 lb/ft²                                            |
| 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

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## **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.



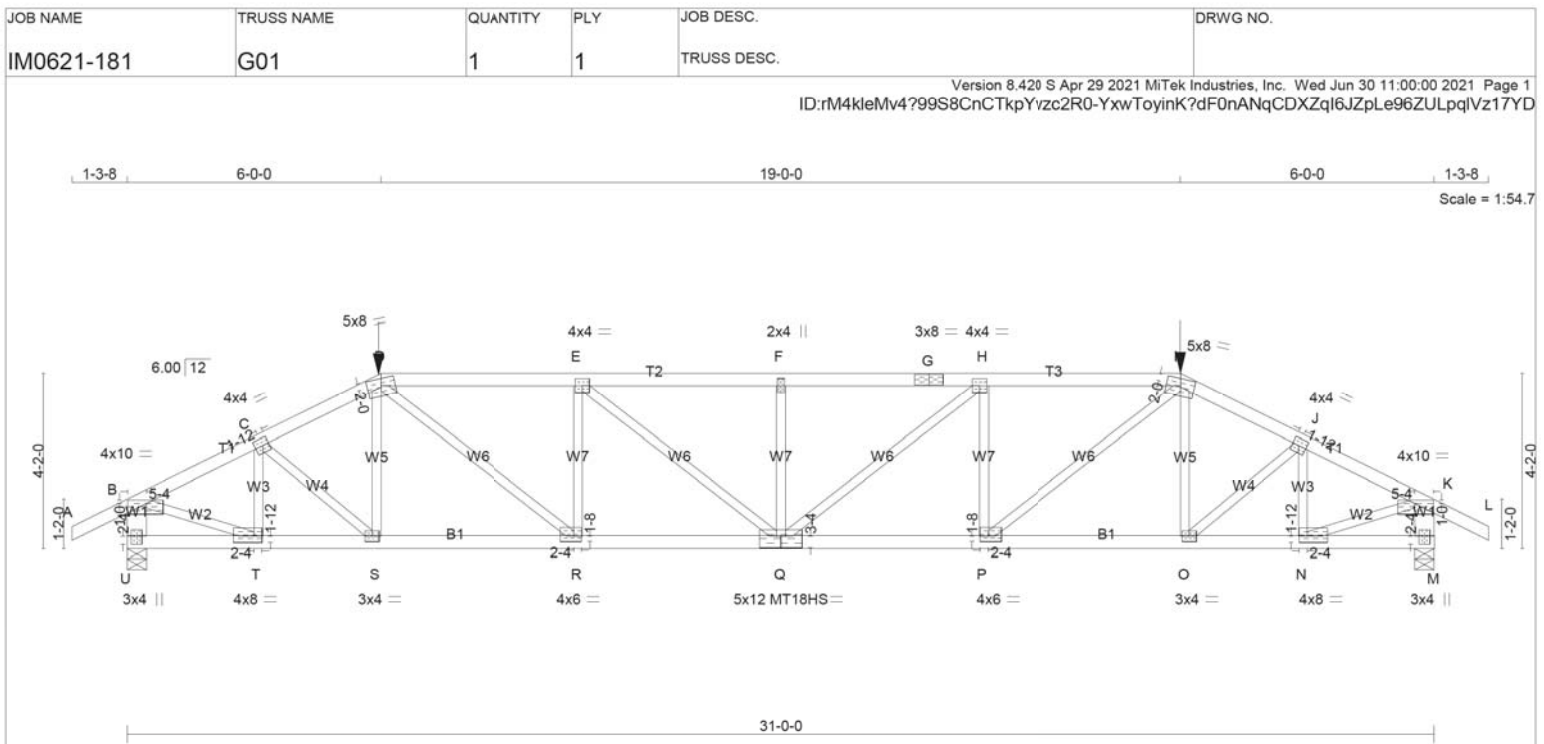
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**LUMBER**

N. L. G. A. RULES

CHORDS SIZE

A - D 2x4 DRY No.2

D - G 2x4 DRY 2100F 1.8E

G - I 2x4 DRY 2100F 1.8E

I - L 2x4 DRY No.2

U - B 2x6 DRY No.2

M - K 2x6 DRY No.2

U - Q 2x4 DRY 2100F 1.8E

Q - M 2x4 DRY 2100F 1.8E

ALL WEBS 2x3 DRY No.2

EXCEPT

DRY: SEASONED LUMBER.

DESCR.

SPF

SPF

SPF

SPF

SPF

SPF

SPF

SPF

**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      | UP        |
| U  | 3041                    | 0                               | 3041      | 0         |
| M  | 3041                    | 0                               | 3041      | 0         |

**UNFACTORED REACTIONS**

| 1ST LCASE | MAX/MIN. COMPONENT REACTIONS |          |       |            |       |         |       |
|-----------|------------------------------|----------|-------|------------|-------|---------|-------|
| JT        | COMBINED                     | SNOW     | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| U         | 2128                         | 1523 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 605 / 0 | 0 / 0 |
| M         | 2128                         | 1523 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 605 / 0 | 0 / 0 |

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

**BRACING**TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.98 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |               | WEBS  |                           |               |          |
|--------|---------------------------|---------------------------|---------------|-------|---------------------------|---------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |          |
| FR-T0  |                           | FROM TO                   | LENGTH        | FR-T0 |                           |               |          |
| A-B    | 0 / 26                    | -84.3 -84.3               | 0.12 (1)      | 10.00 | T-C                       | -923 / 0      | 0.17 (1) |
| B-C    | -3947 / 0                 | -84.3 -84.3               | 0.34 (1)      | 3.25  | C-S                       | 0 / 608       | 0.15 (1) |
| C-D    | -4480 / 0                 | -84.3 -84.3               | 0.37 (1)      | 3.02  | S-D                       | -230 / 62     | 0.06 (1) |
| D-E    | -5756 / 0                 | -158.9 -158.9             | 0.59 (1)      | 3.16  | D-R                       | 0 / 2272      | 0.56 (1) |
| E-F    | -6293 / 0                 | -158.9 -158.9             | 0.64 (1)      | 2.98  | R-E                       | -1272 / 0     | 0.35 (1) |
| F-G    | -6293 / 0                 | -158.9 -158.9             | 0.64 (1)      | 2.98  | E-Q                       | 0 / 689       | 0.17 (1) |
| G-H    | -6293 / 0                 | -158.9 -158.9             | 0.64 (1)      | 2.98  | Q-F                       | -719 / 0      | 0.20 (1) |
| H-I    | -5756 / 0                 | -158.9 -158.9             | 0.59 (1)      | 3.16  | Q-H                       | 0 / 689       | 0.17 (1) |
| I-J    | -4480 / 0                 | -84.3 -84.3               | 0.37 (1)      | 3.02  | H-P                       | -1272 / 0     | 0.35 (1) |
| J-K    | -3947 / 0                 | -84.3 -84.3               | 0.34 (1)      | 3.25  | P-I                       | 0 / 2272      | 0.56 (1) |
| K-L    | 0 / 26                    | -84.3 -84.3               | 0.12 (1)      | 10.00 | O-I                       | -230 / 62     | 0.06 (1) |
| U-B    | -2975 / 0                 | 0.0 0.0                   | 0.21 (1)      | 6.06  | O-J                       | 0 / 608       | 0.15 (1) |
| M-K    | -2975 / 0                 | 0.0 0.0                   | 0.21 (1)      | 6.06  | N-J                       | -923 / 0      | 0.17 (1) |
|        |                           |                           |               |       | B-T                       | 0 / 3669      | 0.91 (1) |
| U-T    | 0 / 0                     | -34.4 -34.4               | 0.06 (1)      | 10.00 | N-K                       | 0 / 3669      | 0.91 (1) |
| T-S    | 0 / 3536                  | -34.4 -34.4               | 0.35 (1)      | 10.00 |                           |               |          |
| S-R    | 0 / 4002                  | -34.4 -34.4               | 0.39 (1)      | 10.00 |                           |               |          |
| R-Q    | 0 / 5756                  | -34.4 -34.4               | 0.55 (1)      | 10.00 |                           |               |          |
| Q-P    | 0 / 5756                  | -34.4 -34.4               | 0.55 (1)      | 10.00 |                           |               |          |
| P-O    | 0 / 4002                  | -34.4 -34.4               | 0.39 (1)      | 10.00 |                           |               |          |
| O-N    | 0 / 3536                  | -34.4 -34.4               | 0.35 (1)      | 10.00 |                           |               |          |
| N-M    | 0 / 0                     | -34.4 -34.4               | 0.06 (1)      | 10.00 |                           |               |          |

**FACTORED CONCENTRATED LOADS (LBS)**

| JT | LOC.   | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  | HEEL | CONN. |
|----|--------|------|------|------|-------|------|-------|------|-------|
| D  | 6-0-0  | -379 | -379 | ---  | FRONT | VERT | TOTAL | ---  | C1    |
| I  | 25-0-0 | -379 | -379 | ---  | FRONT | VERT | TOTAL | ---  | C1    |

**CONNECTION REQUIREMENTS**

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

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

GIRDER TYPE: CPrimeHip  
SIDE SETBACK = 6-0-0  
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, NBC 2015

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (LL) = L/999 (0.30")  
ALLOWABLE DEFL. (TL) = L/360 (1.03")  
CALCULATED VERT. DEFL. (TL) = L/717 (0.52")

CSI: TC=0.64/1.00 (E-F:1), BC=0.55/1.00 (P-Q:1), WB=0.91/1.00 (B-T:1), SSI=0.38/1.00 (H-I:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)

MT20 650 371 1747 788 1987 1873

CONTINUED ON PAGE 2

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June 30, 2021

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

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | G01        | 1        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:00:00 2021 Page 2  
ID:rM4kleMv4?99S8CnCTkpYvzc2R0-YxwToyinK?dF0nANqCDXZql6JZpLe96ZULpqIVz17YD

MT18HS 586 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (O) (INPUT = 0.90 )

JSI METAL= 0.79 (Q) (INPUT = 1.00 )



June 30, 2021

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

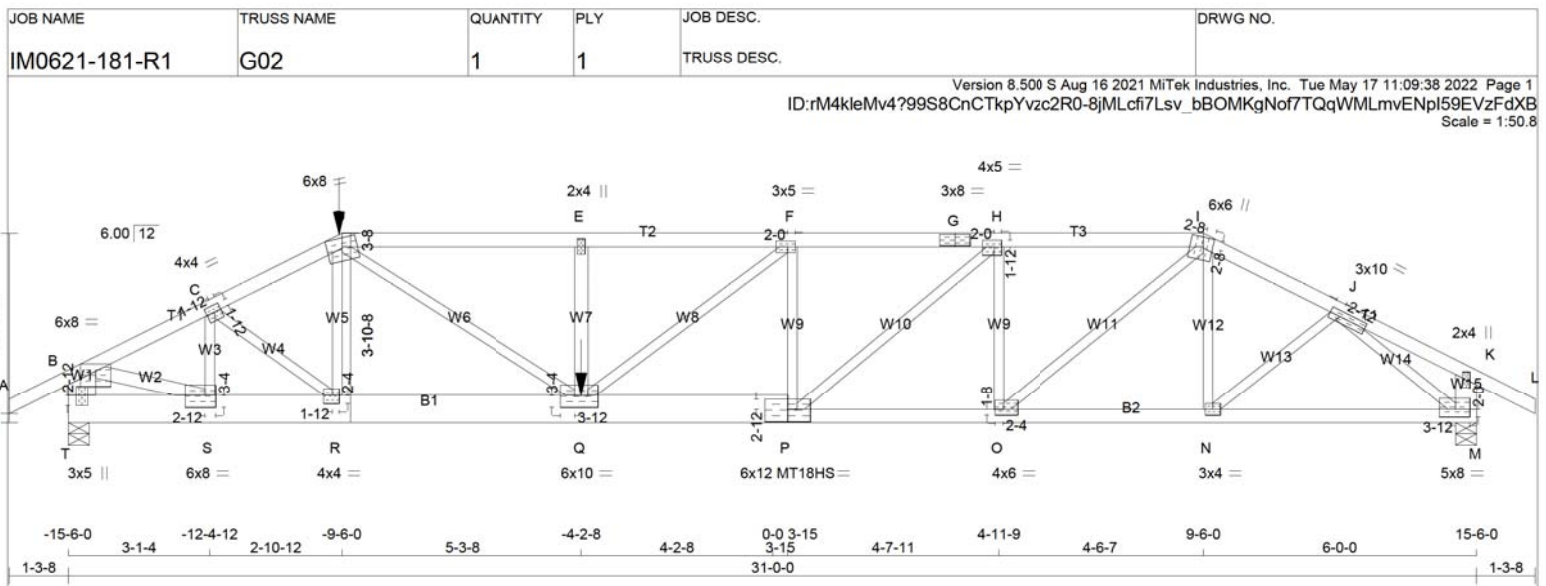
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BUILDING DIVISION

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| JOB NAME      | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|---------------|------------|----------|-----|-------------|----------|
| IM0621-181-R1 | G02        | 1        | 1   | TRUSS DESC. |          |

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Tue May 17 11:09:38 2022 Page 2  
 ID:rM4kleMv4?99S8CnCTkpYvzc2R0-8jMLcf7Lsv\_bBOMKgNof7TQqWMLmvENpl59EVzFdXB

NAIL VALUES  
 PLATE GRIP(DRY) SHEAR SECTION  
 (PSI) (PLI) (PLI)  
 MAX MIN MAX MIN MAX MIN  
 MT20 650 371 1747 788 1987 1873  
 MT18HS 586 403 2455 1382 3163 3004

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (D) (INPUT = 0.90 )  
 JSI METAL= 0.78 (P) (INPUT = 1.00 )



May 17, 2022

READ ALL NOTES ON THIS PAGE AND ON THE  
 ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE  
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 IN THE DESIGN OF THIS COMPONENT.

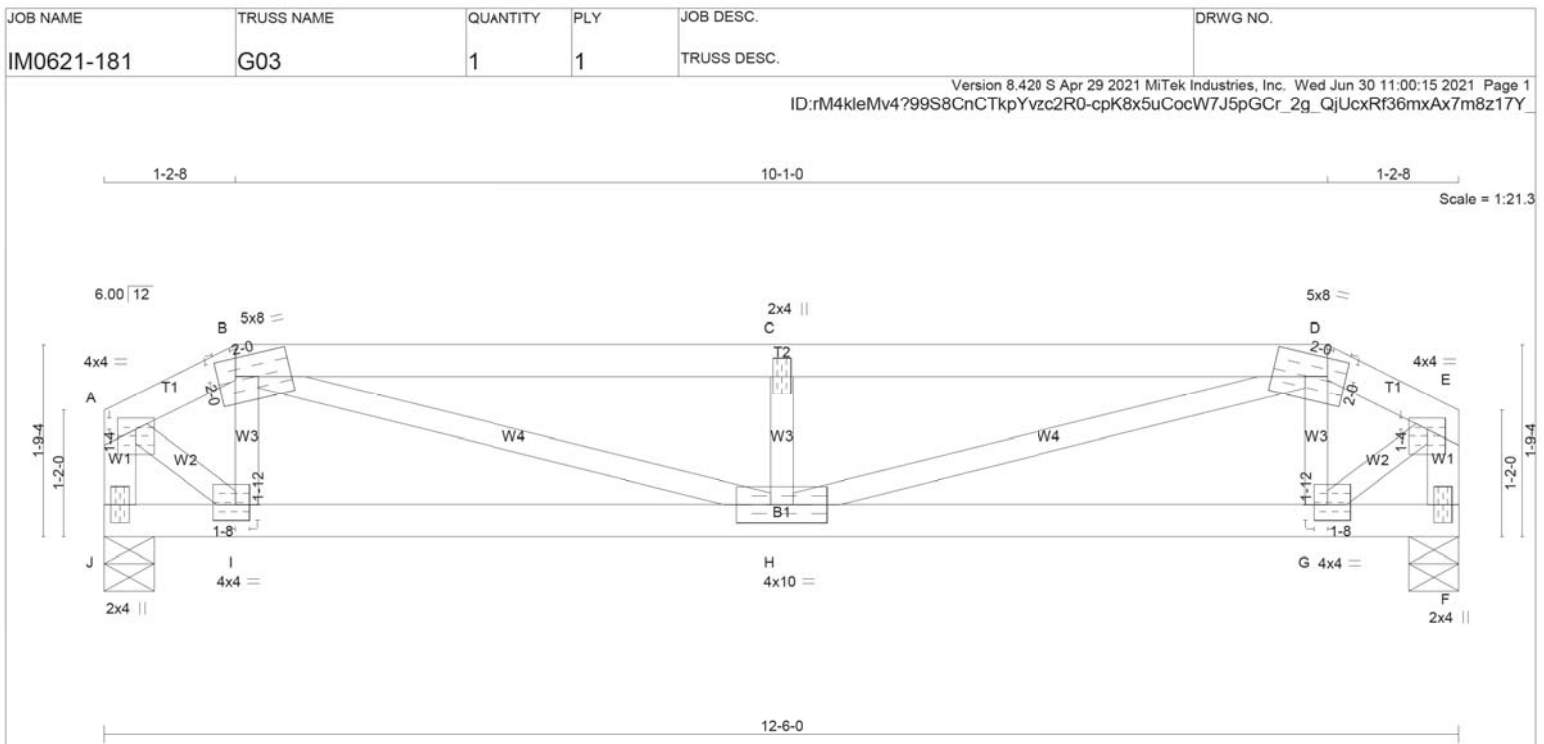
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TOTAL WEIGHT = 43 lb [M]

**LUMBER**

| N. L. G. A. RULES |      |
|-------------------|------|
| CHORDS            | SIZE |
| A - B             | 2x4  |
| B - D             | 2x4  |
| D - E             | 2x4  |
| J - A             | 2x4  |
| F - E             | 2x4  |
| J - F             | 2x4  |

|                 |     |     |      |     |
|-----------------|-----|-----|------|-----|
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
|-----------------|-----|-----|------|-----|

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN  | Y    | X    |
|----|--------|--------|-----|------|------|------|
| A  | TMVW-p | MT20   | 4.0 | 4.0  | 1.25 | 2.00 |
| B  | TTWW-m | MT20   | 5.0 | 8.0  | 2.00 | 2.00 |
| C  | TMW-w  | MT20   | 2.0 | 4.0  |      |      |
| D  | TTWW-m | MT20   | 5.0 | 8.0  | 2.00 | 2.00 |
| E  | TMVW-p | MT20   | 4.0 | 4.0  | 1.25 | 2.00 |
| F  | BMV1+p | MT20   | 2.0 | 4.0  |      |      |
| G  | BMWW-t | MT20   | 4.0 | 4.0  | 1.75 | 1.50 |
| H  | BMWW-t | MT20   | 4.0 | 10.0 |      |      |
| I  | BMWW-t | MT20   | 4.0 | 4.0  | 1.75 | 1.50 |
| J  | 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      |
| J  | 1208                    | 0                               | 1208      | 0         |
| F  | 1208                    | 0                               | 1208      | 0         |

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | MAX/MIN. COMPONENT REACTIONS | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|----|-----------|------------------------------|---------|-------|------------|-------|---------|-------|
| J  | COMBINED  | 846                          | 603 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 243 / 0 | 0 / 0 |
| F  | COMBINED  | 846                          | 603 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 243 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.72 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS | MEMB.     | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED HORIZ. LOAD (PLF) | MAX. FACTORED UNBRACED LENGTH (FT) | WEBS  | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. FACTORED HORIZ. LOAD (PLF) |
|--------|-----------|---------------------------|---------------------------|---------------------------------|------------------------------------|-------|----------|---------------------------|---------------------------------|
| FR-TO  |           |                           |                           |                                 |                                    | FR-TO |          |                           |                                 |
| A-B    | -1208 / 0 | -84.3                     | -84.3                     | 0.04 (1)                        | 5.77                               | I-B   | -184 / 1 | 0.03 (1)                  |                                 |
| B-C    | -2775 / 0 | -84.3                     | -84.3                     | 0.45 (1)                        | 3.72                               | B-H   | 0 / 1782 | 0.44 (1)                  |                                 |
| C-D    | -2775 / 0 | -84.3                     | -84.3                     | 0.45 (1)                        | 3.72                               | H-C   | -490 / 0 | 0.08 (1)                  |                                 |
| D-E    | -1208 / 0 | -84.3                     | -84.3                     | 0.04 (1)                        | 5.77                               | H-D   | 0 / 1782 | 0.44 (1)                  |                                 |
| J-A    | -1302 / 0 | 0.0                       | 0.0                       | 0.14 (1)                        | 7.04                               | G-D   | -184 / 1 | 0.03 (1)                  |                                 |
| F-E    | -1302 / 0 | 0.0                       | 0.0                       | 0.14 (1)                        | 7.04                               | A-I   | 0 / 1287 | 0.32 (1)                  |                                 |
|        |           |                           |                           |                                 |                                    | G-E   | 0 / 1287 | 0.32 (1)                  |                                 |
| J-I    | 0 / 0     | -109.0                    | -109.0                    | 0.32 (1)                        | 10.00                              |       |          |                           |                                 |
| I-H    | 0 / 1065  | -109.0                    | -109.0                    | 0.51 (1)                        | 10.00                              |       |          |                           |                                 |
| H-G    | 0 / 1065  | -109.0                    | -109.0                    | 0.51 (1)                        | 10.00                              |       |          |                           |                                 |
| G-F    | 0 / 0     | -109.0                    | -109.0                    | 0.32 (1)                        | 10.00                              |       |          |                           |                                 |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

GIRDER TYPE: CStdGirder  
START DISTANCE = 0-0  
START SPAN CARRIED = 6-0-0  
END DISTANCE = 12-6-0  
END SPAN CARRIED = 6-0-0  
END WALL WIDTH = 5-8  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADDTL LOADS BASED ON 55 % OF GSL.

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

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) =  $L/360$  (0.42")  
CALCULATED VERT. DEFL. (LL) =  $L/999$  (0.10")  
ALLOWABLE DEFL. (TL) =  $L/360$  (0.42")  
CALCULATED VERT. DEFL. (TL) =  $L/861$  (0.17")

CSI: TC=0.45/1.00 (B-C:1), BC=0.51/1.00 (H-I:1), WB=0.44/1.00 (D-H:1), SSI=0.24/1.00 (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)

|      |     |     |      |     |      |      |
|------|-----|-----|------|-----|------|------|
| MT20 | 650 | 371 | 1747 | 788 | 1987 | 1873 |
|------|-----|-----|------|-----|------|------|

CONTINUED ON PAGE 2



June 30, 2021

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE 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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| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | G03        | 1        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:00:15 2021 Page 2  
 ID: rM4kleMv4?99S8CnCTkpYvzc2R0-cpK8x5uCocW7J5pGCr\_2g\_QjUcxRf36mxAx7m8z17Y

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

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



June 30, 2021

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

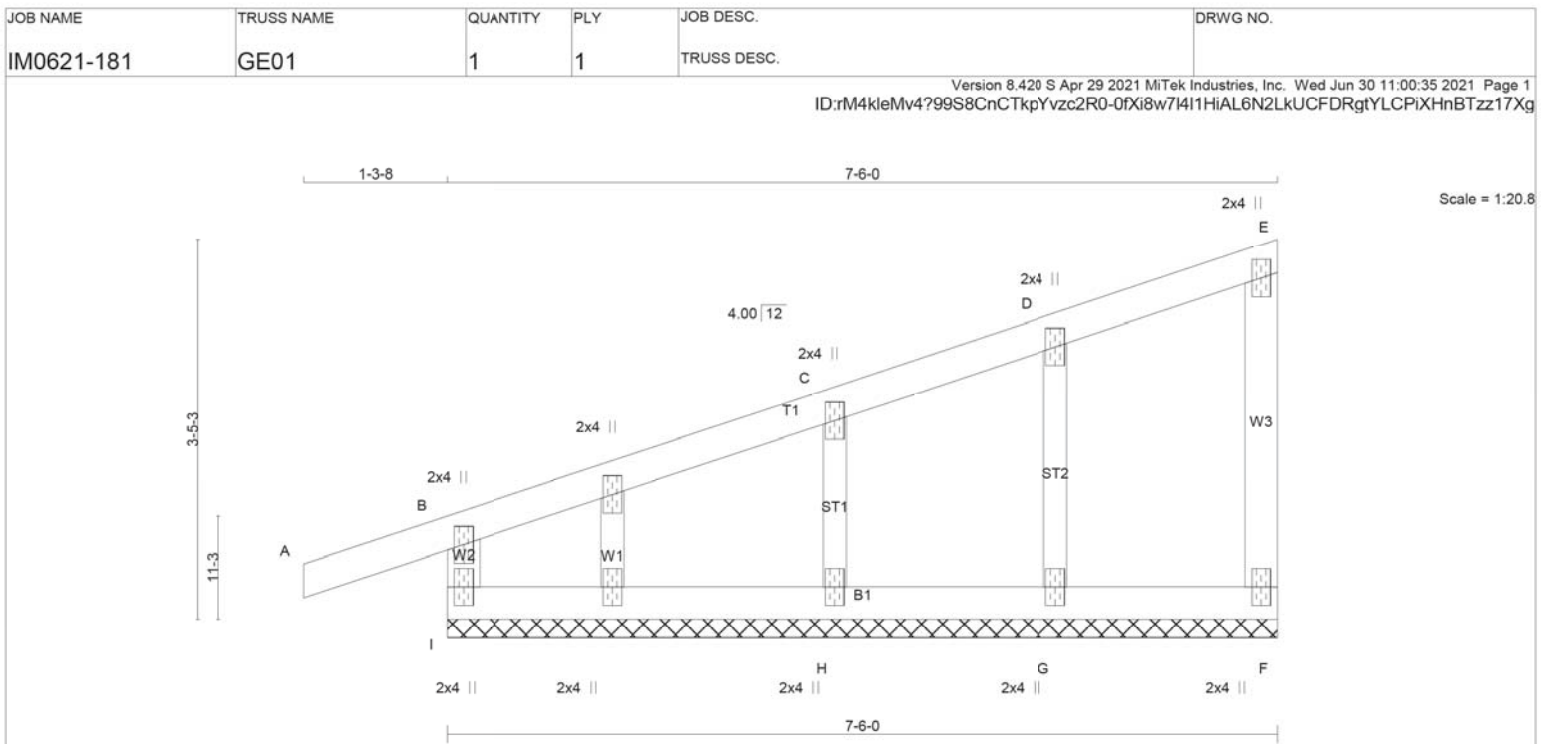
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 BUILDING DIVISION

09/22/2022



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Per: joshua.nabua

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | LUMBER | DESCR. |
|--------|------|--------|--------|
| I - B  | 2x4  | DRY    | No.2   |
| A - E  | 2x4  | DRY    | No.2   |
| F - E  | 2x4  | DRY    | No.2   |
| I - F  | 2x4  | DRY    | No.2   |

|                |     |     |      |
|----------------|-----|-----|------|
| ALL WEBS       | 2x3 | DRY | No.2 |
| ALL GABLE WEBS | 2x3 | DRY | No.2 |

SPF

GABLE STUDS SPACED AT 2'-0" OC.

**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN | Y | X |
|----|--------|--------|-----|-----|---|---|
| B  | TMV+p  | MT20   | 2.0 | 4.0 |   |   |
| C  | TMW+w  | MT20   | 2.0 | 4.0 |   |   |
| D  | TMW+w  | MT20   | 2.0 | 4.0 |   |   |
| E  | TMV+p  | MT20   | 2.0 | 4.0 |   |   |
| F  | BMV1+p | MT20   | 2.0 | 4.0 |   |   |
| G  | BMV1+w | MT20   | 2.0 | 4.0 |   |   |
| H  | BMV1+w | MT20   | 2.0 | 4.0 |   |   |
| I  | BMV1+p | MT20   | 2.0 | 4.0 |   |   |
| J  | NP+w   | MT20   | 2.0 | 4.0 |   |   |
| K  | NP+w   | MT20   | 2.0 | 4.0 |   |   |

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

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

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

**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 FITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |             |                           |                | WEBS  |             |                        |                 |
|--------|-------------|---------------------------|----------------|-------|-------------|------------------------|-----------------|
| MEMB.  | FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC)  | MEMB. | FORCE (LBS) | FACTORED MAX. CSI (LC) | UNBRACED LENGTH |
| FR-TO  |             | FROM                      | TO             | FR-TO |             |                        |                 |
| I-B    | -274 / 0    | 0.0                       | 0.03 (4)       | 7.81  | G-D         | -155 / 0               | 0.03 (1)        |
| A-B    | 0 / 18      | -84.3                     | -84.3 0.11 (1) | 10.00 | H-C         | -235 / 0               | 0.04 (1)        |
| B-C    | -21 / 0     | -84.3                     | -84.3 0.13 (1) | 6.25  |             |                        |                 |
| C-D    | -17 / 0     | -84.3                     | -84.3 0.08 (1) | 6.25  |             |                        |                 |
| D-E    | -9 / 0      | -84.3                     | -84.3 0.03 (1) | 10.00 |             |                        |                 |
| F-E    | -80 / 0     | 0.0                       | 0.02 (1)       | 7.81  |             |                        |                 |
| I-H    | 0 / 17      | -18.2                     | -18.2 0.04 (4) | 10.00 |             |                        |                 |
| H-G    | 0 / 11      | -18.2                     | -18.2 0.04 (4) | 10.00 |             |                        |                 |
| G-F    | 0 / 8       | -18.2                     | -18.2 0.01 (4) | 10.00 |             |                        |                 |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
|            | DL | =    | 3.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.3  | PSF |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

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

**THIS DESIGN COMPLIES WITH:**

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

**DESIGN ASSUMPTIONS**

- OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55% OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.13/1.00 (B-C:1), BC=0.04/1.00 (H-I:4), WB=0.04/1.00 (C-H:1), SSI=0.12/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

| PLATE   | GRIP(DRY) | SHEAR    | SECTION   |
|---------|-----------|----------|-----------|
| (PSI)   | (PLI)     | (PLI)    | (PLI)     |
| MAX MIN | 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= 0.15 (B) (INPUT = 0.90 )  
JSI METAL= 0.10 (B) (INPUT = 1.00 )



June 30, 2021

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

CITY OF RICHMOND HILL  
BUILDING DIVISION

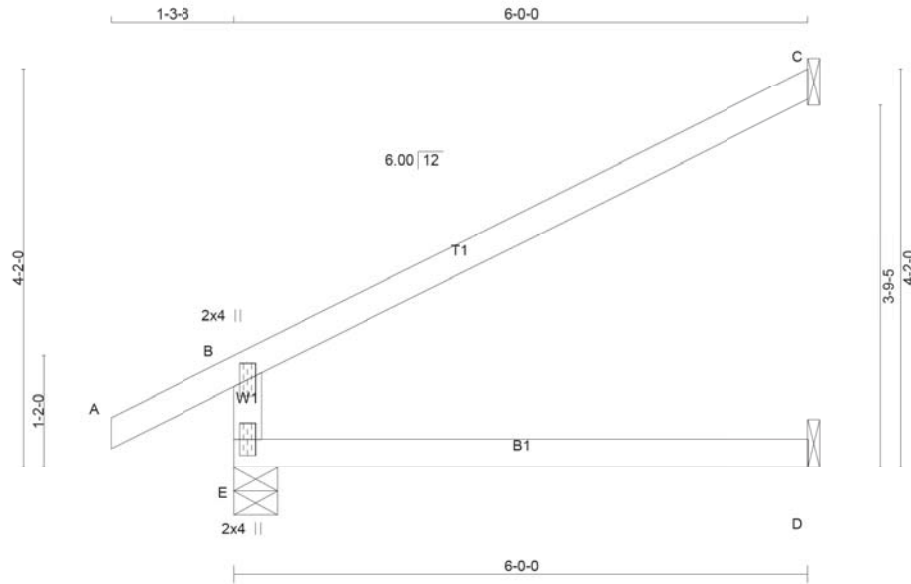
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Per: joshua.nabua

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | J01        | 14       | 1   | TRUSS DESC. |          |

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ID:rM4kleMv4?99S8CnCTkpYvzc2R0-rpvzP\_CVgboRQ5oGjJS8jTV8v5vRlwRbvDEVgdz17Xa



Scale: 1/2"=1'

TOTAL WEIGHT = 14 X 17 = 239 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | DRY | 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.

**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      |
| E  | 495                     | 0                               | 495       | 0         |
| C  | 190                     | 0                               | 190       | 0         |
| D  | 45                      | 0                               | 45        | 0         |

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
|----|-----------|---------|-------|-----------|-------|--------|-------|
| E  | 343       | 261 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 82 / 0 | 0 / 0 |
| C  | 129       | 115 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 14 / 0 | 0 / 0 |
| D  | 36        | 0 / 0   | 0 / 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 = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. VERT. LOAD (LC) | MAX. UNBRACED LENGTH | MEMB. | WEBS | MAX. FACTORED FORCE (LBS) | MAX. VERT. LOAD (LC) |
|-------|--------|---------------------------|---------------------------|----------------------|----------------------|-------|------|---------------------------|----------------------|
| FR-TO |        |                           |                           |                      |                      | FR-TO |      |                           |                      |
| E-B   |        | -430 / 0                  | 0.0                       | 0.0                  | 0.13 (4)             | 7.81  |      |                           |                      |
| A-B   |        | 0 / 26                    | -84.3                     | -84.3                | 0.11 (1)             | 10.00 |      |                           |                      |
| B-C   |        | -28 / 0                   | -84.3                     | -84.3                | 0.52 (1)             | 6.25  |      |                           |                      |
| E-D   |        | 0 / 0                     | -18.2                     | -18.2                | 0.13 (4)             | 10.00 |      |                           |                      |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.00")  
ALLOWABLE DEFL.(TL) = L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.03")

CSI: TC=0.52/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.22/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.24 (B) (INPUT = 0.90)

JSI METAL= 0.18 (B) (INPUT = 1.00)

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BUILDING DIVISION

09/22/2022

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Per: joshua.nabua

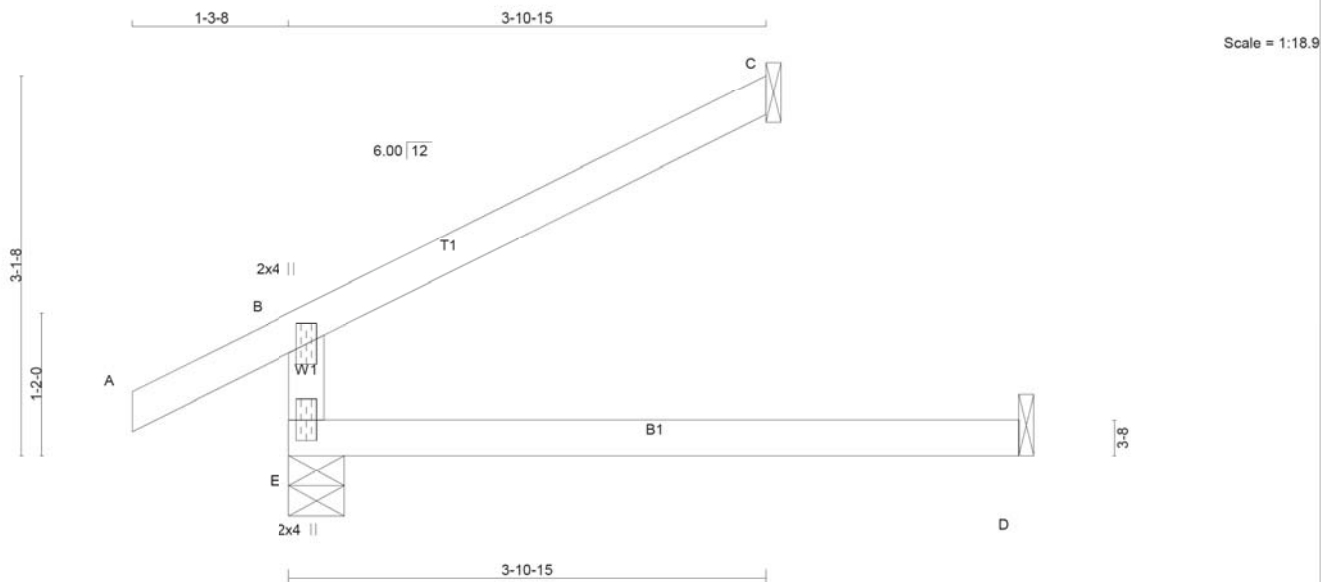


June 30, 2021

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| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | J02        | 3        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:00:57 2021 Page 1  
ID:rM4kleMv4?99S8CnCTkpYzC2R0-Nus0mSOYvWp9LY1LfgluNr9yXYMBV9Pybi6LEiz17XK



TOTAL WEIGHT = 3 X 14 = 43 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | DRY | 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.

**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      |
| E  | 385                     | 0                               | 385       | 0         |
| C  | 124                     | 0                               | 124       | 0         |
| D  | 45                      | 0                               | 51        | 0         |

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
|----|-----------|---------|-------|-----------|-------|--------|-------|
| E  | 269       | 194 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 74 / 0 | 0 / 0 |
| C  | 84        | 75 / 0  | 0 / 0 | 0 / 0     | 0 / 0 | 9 / 0  | 0 / 0 |
| D  | 36        | 0 / 0   | 0 / 0 | 0 / 0     | 0 / 0 | 36 / 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 = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. VERT. LOAD LC1 | MAX. UNBRACED LENGTH | MEMB. | WEBS | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH |
|-------|--------|---------------------------|---------------------------|---------------------|----------------------|-------|------|---------------------------|----------------------|
| FR-TO |        |                           |                           |                     |                      | FR-TO |      |                           |                      |
| E-B   |        | -320 / 0                  | 0.0                       | 0.0                 | 0.13 (4)             | 7.81  |      |                           |                      |
| A-B   |        | 0 / 26                    | -84.3                     | -84.3               | 0.11 (1)             | 10.00 |      |                           |                      |
| B-C   |        | -18 / 0                   | -84.3                     | -84.3               | 0.22 (1)             | 6.25  |      |                           |                      |
| E-D   |        | 0 / 0                     | -18.2                     | -18.2               | 0.13 (4)             | 10.00 |      |                           |                      |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) =  $L/360$  (0.20")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.00")  
ALLOWABLE DEFL.(TL) =  $L/360$  (0.20")  
CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.03")

CSI: TC=0.22/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.14/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (B) (INPUT = 0.90)

JSI METAL= 0.13 (B) (INPUT = 1.00)

CITY OF RICHMOND HILL  
BUILDING DIVISION

09/22/2022



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Per: joshua.nabua



June 30, 2021

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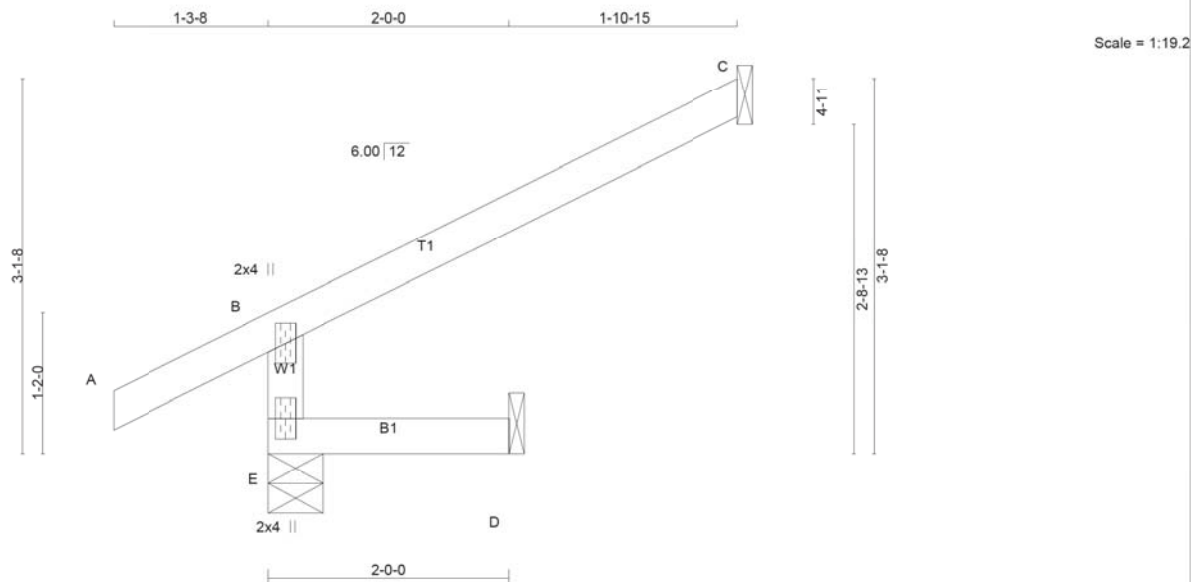
Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:03 2021 Page 1  
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CONTAINS SPECIFICATIONS AND CRITERIA USED  
IN THE DESIGN OF THIS COMPONENT.**

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | J04        | 3        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:09 2021 Page 1  
ID: rM4kleMv4799S8CnCTkpYvzc2R0-0CbZHYX34CJSnOxeMBYisNf0VOurlaNjMa0 q?z17X8



Scale = 1:19.2

TOTAL WEIGHT = 3 X 10 = 30 lb [M]

**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 |

DRY: SEASONED LUMBER.

DESCR.  
SPF  
SPF  
SPF**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      |
| E  | 340                     | 0                               | 340       | 0         |
| C  | 124                     | 0                               | 124       | 0         |
| D  | 16                      | 0                               | 16        | 0         |

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

**UNFACTORED REACTIONS**

| JT | 1ST LCASE | MAX / MIN | COMPONENT REACTIONS | WIND       | DEAD   | SOIL  |
|----|-----------|-----------|---------------------|------------|--------|-------|
|    | COMBINED  | SNOW      | LIVE                | PERM. LIVE |        |       |
| E  | 233       | 194 / 0   | 0 / 0               | 0 / 0      | 39 / 0 | 0 / 0 |
| C  | 84        | 75 / 0    | 0 / 0               | 0 / 0      | 9 / 0  | 0 / 0 |
| D  | 13        | 0 / 0     | 0 / 0               | 0 / 0      | 13 / 0 | 0 / 0 |

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

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

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

**LOADING**

TOTAL LOAD CASES: (5)

| CHORDS |                           |                           |                  | WEBS  |                           |              |  |
|--------|---------------------------|---------------------------|------------------|-------|---------------------------|--------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |  |
| FR-TO  |                           | FROM                      | TO               | FR-TO |                           |              |  |
| E-B    | -320 / 0                  | 0.0                       | 0.0 0.01 (4)     | 7.81  |                           |              |  |
| A-B    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)   | 10.00 |                           |              |  |
| B-C    | -18 / 0                   | -84.3                     | -84.3 0.22 (1)   | 6.25  |                           |              |  |
| E-D    | 0 / 0                     | -18.2                     | -18.2 0.02 (4)   | 10.00 |                           |              |  |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 25.6 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.19")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.00")  
ALLOWABLE DEFL.(TL) = L/360 (0.19")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.00")CSI: TC=0.22/1.00 (B-C:1), BC=0.02/1.00 (D-E:4),  
WB=0.00/1.00 (n/a:0), SSI=0.14/1.00 (B-C:1)DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10  
COMP=1.10 SHEAR=1.10 TENS=1.10

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.18 (B) (INPUT = 0.90)

JSI METAL= 0.13 (B) (INPUT = 1.00)

CITY OF RICHMOND HILL  
BUILDING DIVISION

09/22/2022

KOTT

RECEIVED

Per: joshua.nabua

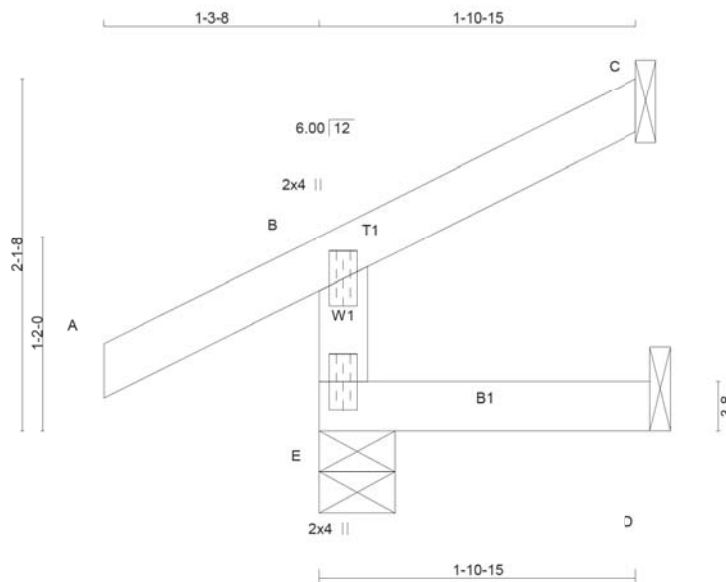


June 30, 2021

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

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | J05        | 3        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:16 2021 Page 1  
ID:rM4kleMv4?99S8CnCTkpYvzc2R0-JYWCixdSQMCT7T\_\_G9aLesSERCTrI6lZADsP5z17X1



TOTAL WEIGHT = 3 X 7 = 22 lb [M]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | LUMBER | DESCR. |
|--------|------|--------|--------|
| E - B  | 2x4  | DRY    | No.2   |
| A - C  | 2x4  | DRY    | No.2   |
| E - D  | 2x4  | DRY    | No.2   |

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**

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG IN-SX | REQRD BRG IN-SX |
|----|-------------------------|------|---------------------------------|------|-----------------|-----------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |                 |                 |
| E  | 235                     | 0    | 235                             | 0    | 5-8             | 1-8             |
| C  | 61                      | 0    | 61                              | 0    | 1-8             | 1-8             |
| D  | 16                      | 0    | 18                              | 0    | 1-8             | 1-8             |

SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C, D

**UNFACTORED REACTIONS**

| JT | 1ST LCASE |         | MAX /MIN |           | COMPONENT REACTIONS |           | WIND   | DEAD  | SOIL  |
|----|-----------|---------|----------|-----------|---------------------|-----------|--------|-------|-------|
|    | COMBINED  | SNOW    | LIVE     | PERM.LIVE | LIVE                | PERM.LIVE |        |       |       |
| E  | 162       | 130 / 0 | 0 / 0    | 0 / 0     | 0 / 0               | 0 / 0     | 31 / 0 | 0 / 0 | 0 / 0 |
| C  | 41        | 37 / 0  | 0 / 0    | 0 / 0     | 0 / 0               | 0 / 0     | 4 / 0  | 0 / 0 | 0 / 0 |
| D  | 13        | 0 / 0   | 0 / 0    | 0 / 0     | 0 / 0               | 0 / 0     | 13 / 0 | 0 / 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 = 10.00 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (5)

| CHORDS |                           |                           |                                 | WEBS  |                           |                                      |                       |
|--------|---------------------------|---------------------------|---------------------------------|-------|---------------------------|--------------------------------------|-----------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | FACTORED LIVE LOAD LC1 MAX (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED LIVE LOAD LC1 MAX (LC) | UNBRACED LENGTH FR-TO |
| FR-TO  |                           |                           |                                 | FR-TO |                           |                                      |                       |
| E-B    | -214 / 0                  | 0.0                       | 0.0 0.01 (4)                    | 7.81  |                           |                                      |                       |
| A-B    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)                  | 10.00 |                           |                                      |                       |
| B-C    | -9 / 0                    | -84.3                     | -84.3 0.05 (1)                  | 10.00 |                           |                                      |                       |
| E-D    | 0 / 0                     | -18.2                     | -18.2 0.02 (4)                  | 10.00 |                           |                                      |                       |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
|            | DL | =    | 3.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.3  | PSF |
| TOTAL LOAD | =  | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) =  $L/360$  (0.19")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.00")  
ALLOWABLE DEFL.(TL) =  $L/360$  (0.19")  
CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.00")

CSI: TC=0.11/1.00 (A-B:1), BC=0.02/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.08/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (B) (INPUT = 0.90)

JSI METAL= 0.09 (B) (INPUT = 1.00)

CITY OF RICHMOND HILL  
BUILDING DIVISION

09/22/2022  
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Per: joshua.nabua



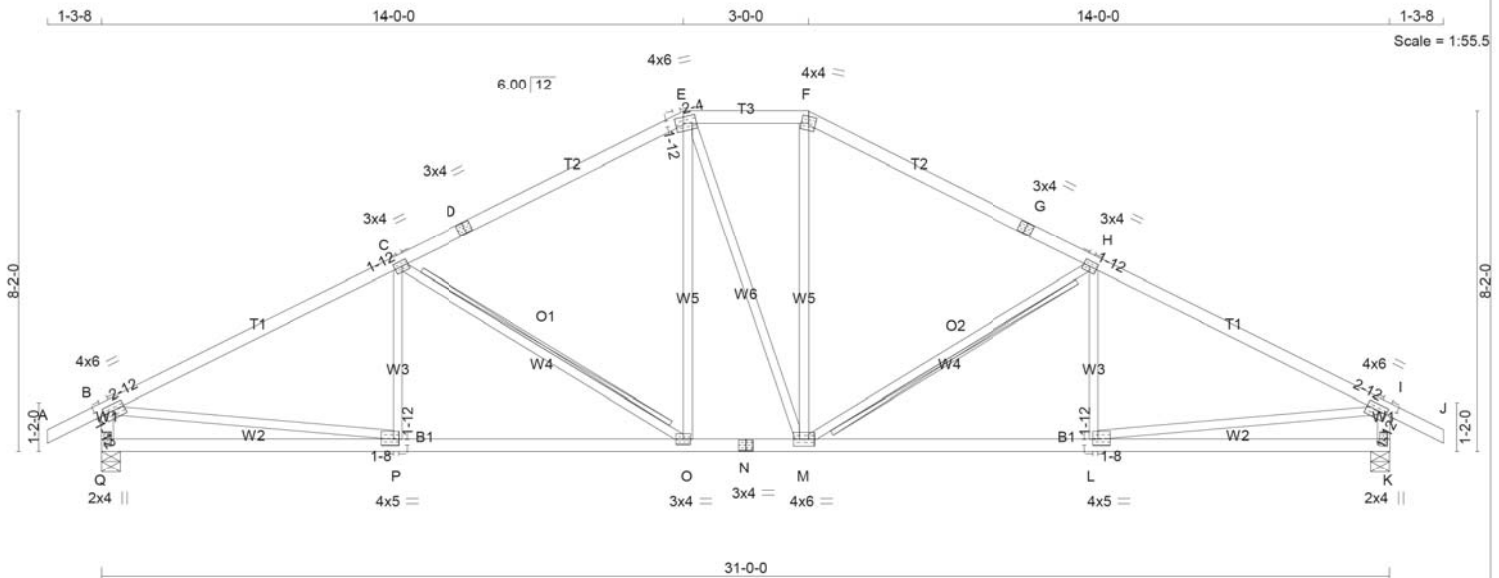
June 30, 2021

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



| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | T02        | 2        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:30 2021 Page 1  
ID:rM4kleMv4?99S8CnCTkpYvzc2R0-vFMVhkoE7fzUpd2g55qeCp1TbrZ0jz8oBLcbuHz17Wp



TOTAL WEIGHT = 2 X 129 = 259 lb  
[M][F]

| LUMBER  |       |        |       |
|---------|-------|--------|-------|
| N L G A | RULES |        |       |
| CHORDS  | SIZE  | LUMBER | DESCR |
| A - D   | 2x4   | DRY    | No.2  |
| D - E   | 2x4   | DRY    | No.2  |
| E - F   | 2x4   | DRY    | No.2  |
| F - G   | 2x4   | DRY    | No.2  |
| G - J   | 2x4   | DRY    | No.2  |
| Q - B   | 2x4   | DRY    | No.2  |
| K - I   | 2x4   | DRY    | No.2  |
| Q - N   | 2x4   | DRY    | No.2  |
| N - K   | 2x4   | DRY    | No.2  |

|                    |     |     |
|--------------------|-----|-----|
| ALL WEBS<br>EXCEPT | 2x3 | DRY |
|--------------------|-----|-----|

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        | W   | LEN | Y    | X    |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES |     |     |      |      |
| B                           | TMWV-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| C                           | MMWV-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| D                           | TS-t    | MT20   | 3.0 | 4.0 |      |      |
| E                           | TTWV-m  | MT20   | 4.0 | 6.0 | 1.75 | 2.25 |
| F                           | TTW-m   | MT20   | 4.0 | 4.0 |      |      |
| G                           | TS-t    | MT20   | 3.0 | 4.0 |      |      |
| H                           | MMWV-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| I                           | TMWV-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| K                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| L                           | BMWV-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| M                           | MMWVW-t | MT20   | 4.0 | 6.0 |      |      |
| N                           | BS-t    | MT20   | 3.0 | 4.0 |      |      |
| O                           | MMWV-t  | MT20   | 3.0 | 4.0 |      |      |
| P                           | BMWV-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| Q                           | BMV1+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        |
| Q  | 1703                       | 0    | 1703                               | 0    | 0      | 5-8          | 2-1          |
| K  | 1703                       | 0    | 1703                               | 0    | 0      | 5-8          | 2-1          |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX/MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                         | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| K         | 1190     | 863 / 0                      | 0 / 0 | 0 / 0     | 0 / 0 | 327 / 0 | 0 / 0 |
| Q         | 1190     | 863 / 0                      | 0 / 0 | 0 / 0     | 0 / 0 | 327 / 0 | 0 / 0 |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.75 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY  
APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT C-O, H-M

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

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

### LOADING

TOTAL LOAD CASES: (4)

| C H O R D S   |           |            |       | W E B S       |        |       |                    |
|---------------|-----------|------------|-------|---------------|--------|-------|--------------------|
| MAX. FACTORED |           | FACTORED   |       | MAX. FACTORED |        |       |                    |
| MEMB.         | FORCE     | VERT. LOAD | MAX.  | MAX.          | MEMB.  | FORCE | MAX.               |
|               | (LBS)     | (PLF)      | LC1   | (LC)          | UNBRAC | (LBS) | (LC)               |
| FR-TO         |           | FROM       | TO    | CSI (LC)      | LENGTH | FR-TO |                    |
| A-B           | 0 / 26    | -84.3      | -84.3 | 0.11 (1)      | 10.00  | P-C   | -108 / 97 0.04 (1) |
| B-C           | -2321 / 0 | -84.3      | -84.3 | 0.71 (1)      | 3.75   | C-O   | -654 / 0 0.34 (1)  |
| C-D           | -1767 / 0 | -84.3      | -84.3 | 0.62 (1)      | 4.30   | O-E   | 0 / 429 0.10 (1)   |
| D-E           | -1767 / 0 | -84.3      | -84.3 | 0.62 (1)      | 4.30   | E-M   | 0 / 4 0.00 (1)     |
| E-F           | -1557 / 0 | -84.3      | -84.3 | 0.12 (1)      | 5.18   | M-F   | 0 / 433 0.10 (1)   |
| F-G           | -1768 / 0 | -84.3      | -84.3 | 0.62 (1)      | 4.29   | M-H   | -652 / 0 0.34 (1)  |
| G-H           | -1768 / 0 | -84.3      | -84.3 | 0.62 (1)      | 4.29   | L-H   | -110 / 96 0.04 (1) |
| H-I           | -2320 / 0 | -84.3      | -84.3 | 0.71 (1)      | 3.75   | B-P   | 0 / 2119 0.48 (1)  |
| I-J           | 0 / 26    | -84.3      | -84.3 | 0.11 (1)      | 10.00  | L-I   | 0 / 2119 0.48 (1)  |
| Q-B           | -1650 / 0 | 0.0        | 0.0   | 0.17 (1)      | 6.45   |       |                    |
| K-I           | -1649 / 0 | 0.0        | 0.0   | 0.17 (1)      | 6.45   |       |                    |
| Q-P           | 0 / 0     | -18.2      | -18.2 | 0.23 (4)      | 10.00  |       |                    |
| P-O           | 0 / 2104  | -18.2      | -18.2 | 0.45 (1)      | 10.00  |       |                    |
| O-N           | 0 / 1556  | -18.2      | -18.2 | 0.32 (1)      | 10.00  |       |                    |
| N-M           | 0 / 1556  | -18.2      | -18.2 | 0.32 (1)      | 10.00  |       |                    |
| M-L           | 0 / 2103  | -18.2      | -18.2 | 0.44 (1)      | 10.00  |       |                    |
| L-K           | 0 / 0     | -18.2      | -18.2 | 0.23 (4)      | 10.00  |       |                    |

## DESIGN CRITERIA

|                  |      |      |          |
|------------------|------|------|----------|
| SPECIFIED LOADS: |      |      |          |
| TOP CH.          | LL = | 25.6 | PSF      |
|                  | DL = | 3.0  | PSF      |
| BOT CH.          | LL = | 0.0  | PSF      |
|                  | DL = | 7.3  | PSF      |
| TOTAL LOAD       |      | =    | 35.9 PSF |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.03")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.11")  
ALLOWABLE DEFL.(TL)= L/360 (1.03")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.22")

CSI: TC=0.71/1.00 (B-C:1) , BC=0.45/1.00 (O-P:1)  
 , WB=0.48/1.00 (B-P:1) , SSI=0.26/1.00 (H-I: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.

[PLATE ROTATION TOL. = 5.0 Deg.]

**CITY OF RICHMOND HILL  
BUILDING DIVISION**

09/22/2022

A red and blue stamp from KUTV, featuring a house icon and the word "RECEIVED" in red.

Per: joshua.nabua

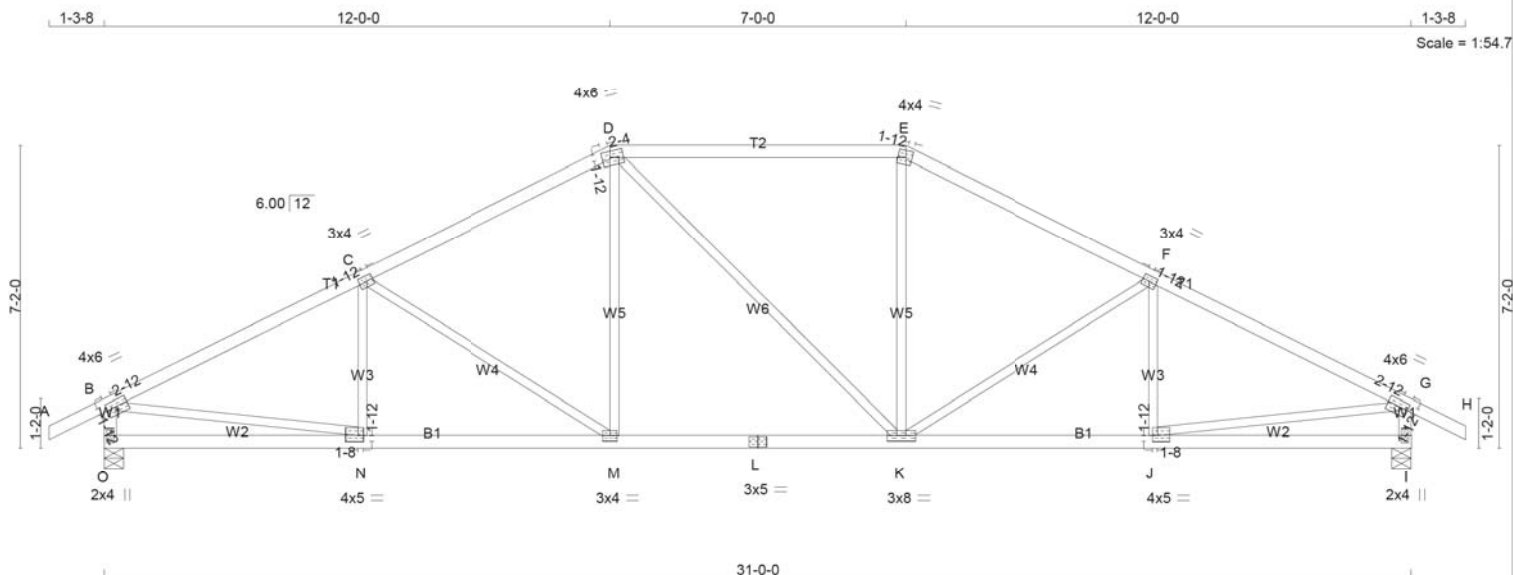


June 30, 2021

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

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | T03        | 2        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:37 2021 Page 1  
ID: rM4kleMv4?99S8CnCTkpYvzcR0-CbH897teUorU8i4174TH?Hpk5gy1s8uqoxoTeOz17Wf



TOTAL WEIGHT = 2 X 124 = 248 lb  
[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | LUMBER         | DESCR. |
|--------|------|----------------|--------|
| A - D  | 2x4  | DRY No.2       | SPF    |
| D - E  | 2x4  | DRY 2100F 1.8E | 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

DRY: SEASONED LUMBER.

**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                            | IN-SX     | IN-SX     |
| O  | 1703                    | 0                               | 5-8       | 2-1       |
| I  | 1703                    | 0                               | 5-8       | 2-1       |

**UNFACTORED REACTIONS**

| 1ST LCASE | MAX/MIN. COMPONENT REACTIONS |         |       |            |       |         |       |
|-----------|------------------------------|---------|-------|------------|-------|---------|-------|
| JT        | COMBINED                     | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| O         | 1190                         | 863 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 327 / 0 | 0 / 0 |
| I         | 1190                         | 863 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 327 / 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 = 4.03 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                                   | WEBS  |                           |                                   |          |
|--------|---------------------------|---------------------------|-----------------------------------|-------|---------------------------|-----------------------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED VERT. LOAD (LC) (1) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED VERT. LOAD (LC) (1) |          |
| FR-TO  |                           | FROM                      | TO                                | FR-TO |                           | FROM                              | TO       |
| A-B    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)                    | 10.00 | N-C                       | -179 / 53                         | 0.05 (1) |
| B-C    | -2316 / 0                 | -84.3                     | -84.3 0.50 (1)                    | 4.03  | C-M                       | -464 / 0                          | 0.46 (1) |
| C-D    | -1936 / 0                 | -84.3                     | -84.3 0.45 (1)                    | 4.38  | M-D                       | 0 / 372                           | 0.08 (1) |
| D-E    | -1712 / 0                 | -84.3                     | -84.3 0.37 (1)                    | 5.61  | D-K                       | 0 / 0                             | 0.00 (1) |
| E-F    | -1936 / 0                 | -84.3                     | -84.3 0.45 (1)                    | 4.38  | K-E                       | 0 / 373                           | 0.08 (1) |
| F-G    | -2315 / 0                 | -84.3                     | -84.3 0.50 (1)                    | 4.03  | K-F                       | -463 / 0                          | 0.46 (1) |
| G-H    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)                    | 10.00 | J-F                       | -180 / 52                         | 0.05 (1) |
| O-B    | -1655 / 0                 | 0.0                       | 0.0 0.17 (1)                      | 6.45  | B-N                       | 0 / 2115                          | 0.48 (1) |
| I-G    | -1655 / 0                 | 0.0                       | 0.0 0.17 (1)                      | 6.45  | J-G                       | 0 / 2115                          | 0.48 (1) |
| O-N    | 0 / 0                     | -18.2                     | -18.2 0.15 (4)                    | 10.00 |                           |                                   |          |
| N-M    | 0 / 2095                  | -18.2                     | -18.2 0.42 (1)                    | 10.00 |                           |                                   |          |
| M-L    | 0 / 1712                  | -18.2                     | -18.2 0.36 (1)                    | 10.00 |                           |                                   |          |
| L-K    | 0 / 1712                  | -18.2                     | -18.2 0.36 (1)                    | 10.00 |                           |                                   |          |
| K-J    | 0 / 2094                  | -18.2                     | -18.2 0.42 (1)                    | 10.00 |                           |                                   |          |
| J-I    | 0 / 0                     | -18.2                     | -18.2 0.14 (4)                    | 10.00 |                           |                                   |          |

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| C  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| D  | TTW-m   | MT20   | 4.0 | 6.0 | 1.75 | 2.25 |
| E  | TTW-m   | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| F  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| G  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| I  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| J  | BMVW-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| K  | BMVWW-t | MT20   | 3.0 | 8.0 |      |      |
| L  | BS-t    | MT20   | 3.0 | 5.0 |      |      |
| M  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| N  | BMVW-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| O  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |



June 30, 2021

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

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |   |      |     |
|------------|----|---|------|-----|
| TOP CH.    | LL | = | 25.6 | PSF |
|            | DL | = | 3.0  | PSF |
| BOT CH.    | LL | = | 0.0  | PSF |
|            | DL | = | 7.3  | PSF |
| TOTAL LOAD |    | = | 35.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL. (LL) =  $L/360$  (1.03")  
CALCULATED VERT. DEFL. (LL) =  $L/999$  (0.10")  
ALLOWABLE DEFL. (TL) =  $L/360$  (1.03")  
CALCULATED VERT. DEFL. (TL) =  $L/999$  (0.20")

CSI: TC=0.50/1.00 (B-C:1), BC=0.42/1.00 (J-K:1), WB=0.48/1.00 (B-N: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 (PSI) | SECTION (PLI) |
|-------|-----------|-------------|---------------|
| MT20  | 650       | 371         | 1747          |
|       | 788       | 1987        | 1873          |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (B) (INPUT = 0.90)

JSI METAL= 0.59 (L) (INPUT = 1.00)

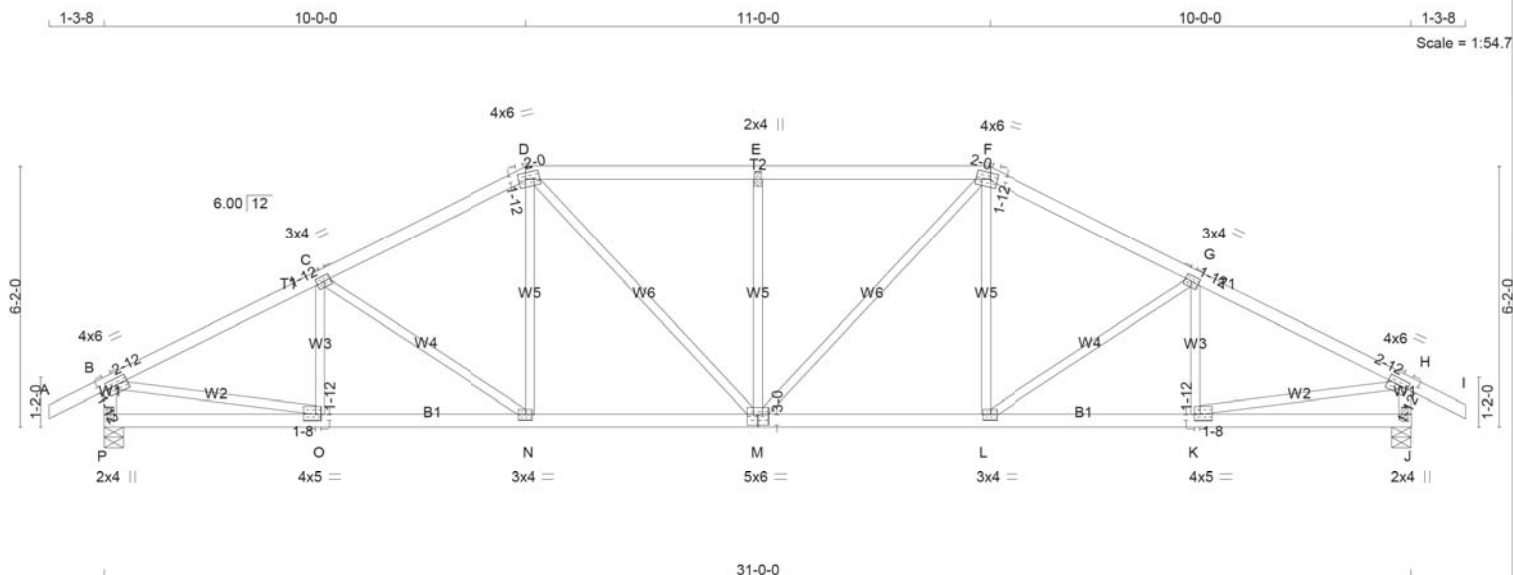
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BUILDING DIVISION

09/22/2022  
KOTT  
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Per: joshua.nabua

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | T04        | 2        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:01:44 2021 Page 1  
ID:rM4kleMv4799S8CnCTkpYvzcR0-VxCodWy1qyKVUm7Nv25wnlcy0VL07lhsPW7KOUz17Wb



TOTAL WEIGHT = 2 X 127 = 254 lb  
[M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | LUMBER | DESCR. |
|--------|------|--------|--------|
| A - D  | 2x4  | DRY    | No.2   |
| D - F  | 2x4  | DRY    | No.2   |
| F - I  | 2x4  | DRY    | No.2   |
| P - B  | 2x4  | DRY    | No.2   |
| J - H  | 2x4  | DRY    | No.2   |
| P - M  | 2x4  | DRY    | No.2   |
| M - J  | 2x4  | DRY    | No.2   |

ALL WEBS 2x3 DRY No.2 SPF  
EXCEPT

DRY: SEASONED LUMBER.

**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      |
| P  | 1703                    | 0                               | 1703      | 0         |
| J  | 1703                    | 0                               | 1703      | 0         |

**UNFACTORED REACTIONS**

| 1ST LCASE | MAX/MIN. COMPONENT REACTIONS |         |       |           |       |         |       |
|-----------|------------------------------|---------|-------|-----------|-------|---------|-------|
| JT        | COMBINED                     | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| P         | 1190                         | 863 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 327 / 0 | 0 / 0 |
| J         | 1190                         | 863 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 327 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.24 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                           | WEBS  |                           |                           |          |
|--------|---------------------------|---------------------------|---------------------------|-------|---------------------------|---------------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. UNBRACED LENGTH (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH (LC) |          |
| FR-TO  |                           | FROM TO                   |                           | FR-TO |                           |                           |          |
| A-B    | 0 / 26                    | -84.3 -84.3               | 0.11 (1)                  | 10.00 | O-C                       | -257 / 12                 | 0.06 (1) |
| B-C    | -2285 / 0                 | -84.3 -84.3               | 0.34 (1)                  | 4.24  | C-N                       | -269 / 0                  | 0.17 (1) |
| C-D    | -2080 / 0                 | -84.3 -84.3               | 0.32 (1)                  | 4.42  | N-D                       | 0 / 263                   | 0.06 (1) |
| D-E    | -2147 / 0                 | -84.3 -84.3               | 0.39 (1)                  | 4.27  | D-M                       | 0 / 443                   | 0.10 (1) |
| E-F    | -2147 / 0                 | -84.3 -84.3               | 0.39 (1)                  | 4.27  | M-E                       | -567 / 0                  | 0.34 (1) |
| F-G    | -2080 / 0                 | -84.3 -84.3               | 0.32 (1)                  | 4.42  | M-F                       | 0 / 443                   | 0.10 (1) |
| G-H    | -2285 / 0                 | -84.3 -84.3               | 0.34 (1)                  | 4.24  | L-F                       | 0 / 263                   | 0.06 (1) |
| H-I    | 0 / 26                    | -84.3 -84.3               | 0.11 (1)                  | 10.00 | L-G                       | -269 / 0                  | 0.17 (1) |
| P-B    | -1660 / 0                 | 0.0 0.0                   | 0.17 (1)                  | 6.44  | K-G                       | -257 / 12                 | 0.06 (1) |
| J-H    | -1660 / 0                 | 0.0 0.0                   | 0.17 (1)                  | 6.44  | B-O                       | 0 / 2091                  | 0.47 (1) |
|        |                           |                           |                           |       | K-H                       | 0 / 2091                  | 0.47 (1) |
| P-O    | 0 / 0                     | -18.2 -18.2               | 0.10 (4)                  | 10.00 |                           |                           |          |
| O-N    | 0 / 2062                  | -18.2 -18.2               | 0.40 (1)                  | 10.00 |                           |                           |          |
| N-M    | 0 / 1844                  | -18.2 -18.2               | 0.37 (1)                  | 10.00 |                           |                           |          |
| M-L    | 0 / 1844                  | -18.2 -18.2               | 0.37 (1)                  | 10.00 |                           |                           |          |
| L-K    | 0 / 2062                  | -18.2 -18.2               | 0.40 (1)                  | 10.00 |                           |                           |          |
| K-J    | 0 / 0                     | -18.2 -18.2               | 0.10 (4)                  | 10.00 |                           |                           |          |

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| C  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| D  | TTWW-m  | MT20   | 4.0 | 6.0 | 1.75 | 2.00 |
| E  | TMVW-t  | MT20   | 2.0 | 4.0 |      |      |
| F  | TTWW-m  | MT20   | 4.0 | 6.0 | 1.75 | 2.00 |
| G  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| H  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 2.75 |
| J  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| K  | BMVW-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| L  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| M  | BSWWW-t | MT20   | 5.0 | 6.0 | 3.00 | 3.00 |
| N  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| O  | BMVW-t  | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| P  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |



June 30, 2021

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

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.03")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.11")  
ALLOWABLE DEFL.(TL) = L/360 (1.03")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.21")

CSI: TC=0.39/1.00 (E-F:1), BC=0.40/1.00 (N-O:1), WB=0.47/1.00 (B-O:1), SSI=0.22/1.00 (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 (PSI) | SECTION (PLI) |
|-------|-----------|-------------|---------------|
| MT20  | 650       | 371         | 1747          |
|       | 788       | 1987        | 1873          |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

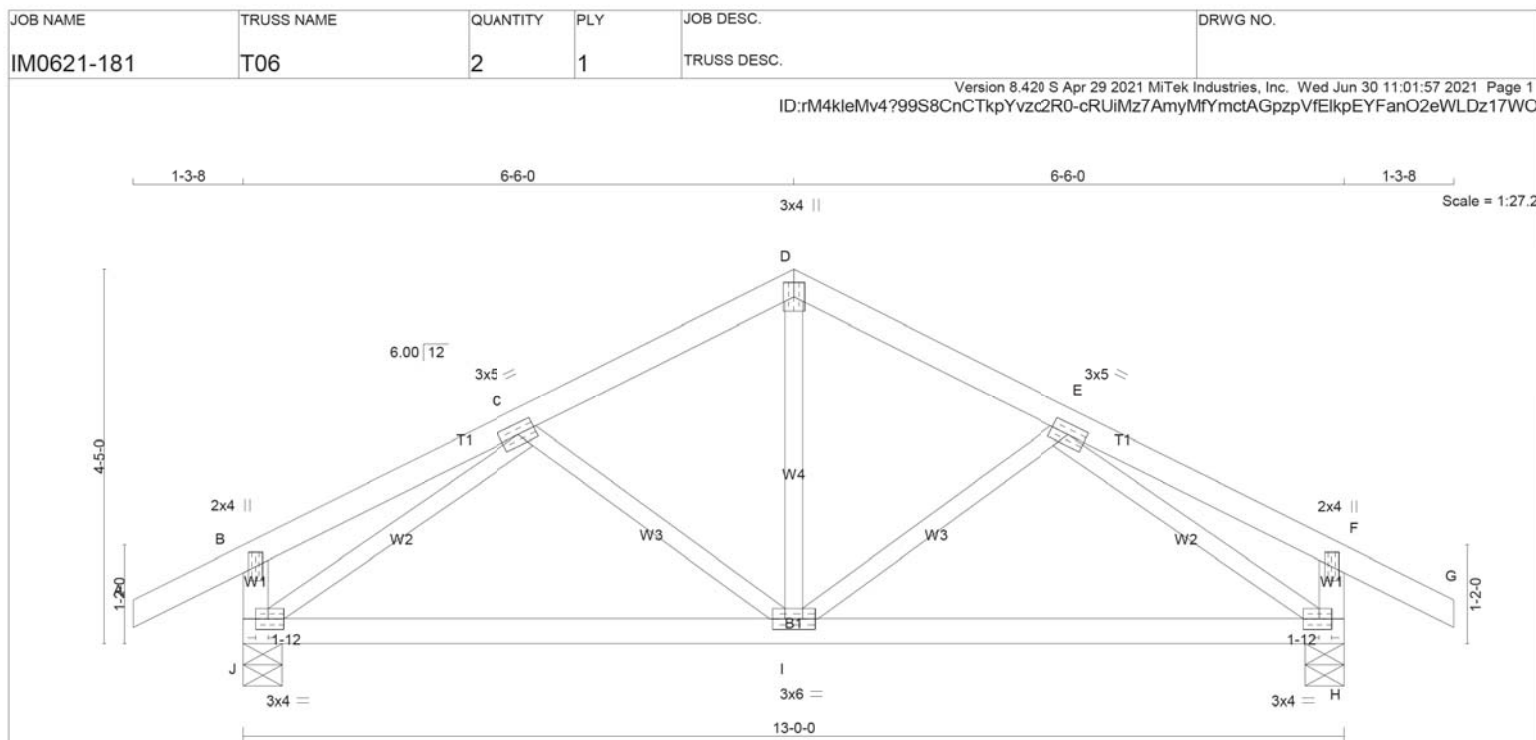
JSI METAL= 0.58 (H) (INPUT = 1.00)

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09/22/2022  
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Per: joshua.nabua





TOTAL WEIGHT = 2 X 52 = 104 lb [M][F]

**LUMBER**

N. L. G. A. RULES

| CHORDS          | SIZE | LUMBER | DESCR. |
|-----------------|------|--------|--------|
| A - D           | 2x4  | DRY    | No.2   |
| D - G           | 2x4  | DRY    | No.2   |
| J - B           | 2x4  | DRY    | No.2   |
| H - F           | 2x4  | DRY    | No.2   |
| J - H           | 2x4  | DRY    | No.2   |
| ALL WEBS EXCEPT | 2x3  | DRY    | No.2   |

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 | 5.0 |      |      |
| D  | TTW+p   | MT20   | 3.0 | 4.0 |      |      |
| E  | TMWW-t  | MT20   | 3.0 | 5.0 |      |      |
| F  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| H  | BMVW1-t | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| I  | BMVW1-t | MT20   | 3.0 | 6.0 |      |      |
| J  | BMVW1-t | MT20   | 3.0 | 4.0 | 1.50 | 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                    | DOWN                            | UP        | IN-SX     |
| J  | 781                     | 0                               | 781       | 0         |
| H  | 781                     | 0                               | 781       | 0         |

**UNFACTORED REACTIONS**

| JT | COMBINED | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|------------|-------|---------|-------|
| J  | 544      | 402 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 142 / 0 | 0 / 0 |
| H  | 544      | 402 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 142 / 0 | 0 / 0 |

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

**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 FITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS                    |                  | FACTORED |                     | MAX. UNBRACED LENGTH | WEBS                      |                     | MAX. UNBRACED LENGTH |
|-------|---------------------------|------------------|----------|---------------------|----------------------|---------------------------|---------------------|----------------------|
|       | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1      | MAX. FACTORED (PLF) |                      | MAX. FACTORED FORCE (LBS) | MAX. FACTORED (PLF) |                      |
| FR-TO |                           | FROM TO          |          |                     |                      | FR-TO                     |                     |                      |
| A-B   | 0 / 26                    | -84.3 -84.3      | 0.11 (1) | 10.00               | I-D                  | 0 / 334                   | 0.08 (1)            |                      |
| B-C   | 0 / 13                    | -84.3 -84.3      | 0.13 (1) | 10.00               | I-E                  | -155 / 12                 | 0.04 (1)            |                      |
| C-D   | -626 / 0                  | -84.3 -84.3      | 0.10 (1) | 6.25                | C-I                  | -155 / 12                 | 0.04 (1)            |                      |
| D-E   | -626 / 0                  | -84.3 -84.3      | 0.10 (1) | 6.25                | J-C                  | -844 / 0                  | 0.24 (1)            |                      |
| E-F   | 0 / 13                    | -84.3 -84.3      | 0.13 (1) | 10.00               | E-H                  | -844 / 0                  | 0.24 (1)            |                      |
| F-G   | 0 / 26                    | -84.3 -84.3      | 0.11 (1) | 10.00               |                      |                           |                     |                      |
| J-B   | -223 / 0                  | 0.0 0.0          | 0.02 (1) | 7.81                |                      |                           |                     |                      |
| H-F   | -223 / 0                  | 0.0 0.0          | 0.02 (1) | 7.81                |                      |                           |                     |                      |
| J-I   | 0 / 671                   | -18.2 -18.2      | 0.26 (4) | 10.00               |                      |                           |                     |                      |
| I-H   | 0 / 671                   | -18.2 -18.2      | 0.26 (4) | 10.00               |                      |                           |                     |                      |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
|            | DL | =    | 3.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.3  | PSF |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.02")  
ALLOWABLE DEFL.(TL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.05")

CSI: TC=0.13/1.00 (B-C:1), BC=0.26/1.00 (I-J:4), WB=0.24/1.00 (C-J:1), SSI=0.12/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (H) (INPUT = 0.90 )  
JSI METAL= 0.23 (H) (INPUT = 1.00 )



June 30, 2021

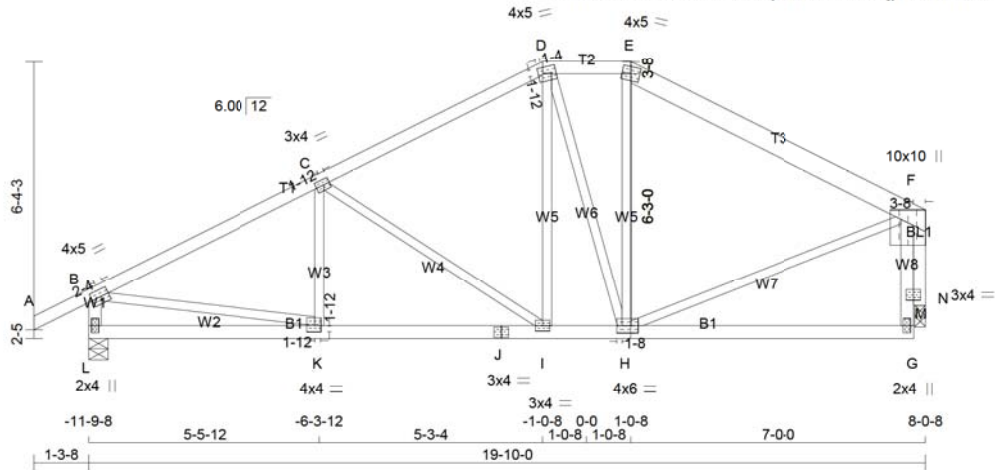
READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

CITY OF RICHMOND HILL  
BUILDING DIVISION09/22/2022  
KOTT  
RECEIVED

Per: joshua.nabua

| JOB NAME      | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|---------------|------------|----------|-----|-------------|----------|
| IM0621-181-R1 | T07A       | 1        | 1   | TRUSS DESC. |          |

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Tue May 17 11:09:39 2022 Page 1  
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Scale = 1:54.5



TOTAL WEIGHT = 93 lb  
[M][F]

#### LUMBER

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

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

DRY: SEASONED LUMBER.

BEARING NOTE: GAP BETWEEN INSIDE OF TOP CHORD BEARING AND FIRST DIAGONAL OR VERTICAL WEB SHALL NOT EXCEED 0.5 INCHES.

#### PLATES (table is in inches)

| JT | TYPE     | PLATES | W    | LEN  | Y    | X    |
|----|----------|--------|------|------|------|------|
| B  | TMVW-t   | MT20   | 4.0  | 5.0  | 2.00 | 2.25 |
| C  | TMVW-t   | MT20   | 3.0  | 4.0  | 1.50 | 1.75 |
| D  | TTWW-m   | MT20   | 4.0  | 5.0  | 1.75 | 1.25 |
| E  | TTW-m    | MT20   | 4.0  | 5.0  |      |      |
| F  | TMVWK1+w | MT20   | 10.0 | 10.0 | Edge | 3.50 |
| G  | BMV-p    | MT20   | 2.0  | 4.0  |      |      |
| H  | BMVWW-t  | MT20   | 4.0  | 6.0  | 2.00 | 1.50 |
| I  | BMVWW-t  | MT20   | 3.0  | 4.0  |      |      |
| J  | BS-t     | MT20   | 3.0  | 4.0  |      |      |
| K  | BMVWW-t  | MT20   | 4.0  | 4.0  | 1.75 | 1.75 |
| L  | BMV1+p   | MT20   | 2.0  | 4.0  |      |      |
| M  | KP-p     | MT20   | 3.0  | 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       | N(F) | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX | IN-SX     |                            |
| JT       | 993  | 0                       | 0    | 993                             | 0    | 0         | 3-0   | 3-0       |                            |
| L        | 1124 | 0                       | 0    | 1124                            | 0    | 0         | 5-8   | 1-8       | (** SEE "BEARING NOTE" **) |

#### UNFACTORED REACTIONS

| JT | 1ST LCASE | MAX     | MIN   | COMPONENT REACTIONS | SNOW  | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|-----------|---------|-------|---------------------|-------|-------|-----------|-------|---------|-------|
| JT | 695       | 496 / 0 | 0 / 0 | 0 / 0               | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 200 / 0 | 0 / 0 |
| L  | 785       | 574 / 0 | 0 / 0 | 0 / 0               | 0 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 211 / 0 | 0 / 0 |

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

#### BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |             | FACTORED         |         | MEMB.       |       | WEBS        |               | MAX. FACTORED |  |
|--------|-------------|------------------|---------|-------------|-------|-------------|---------------|---------------|--|
| MEMB.  | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX | MAX. UNBRAC | MEMB. | FORCE (LBS) | MAX. FACTORED | CSI (LC)      |  |
| FR-TO  |             | FROM             | TO      | LENGTH      | FR-TO |             |               |               |  |
| A-B    | 0 / 26      | -84.3            | -84.3   | 0.11 (1)    | 10.00 | K-C         | -75 / 79      | 0.03 (4)      |  |
| B-C    | -1323 / 0   | -84.3            | -84.3   | 0.33 (1)    | 5.25  | C-I         | -501 / 0      | 0.38 (1)      |  |
| C-D    | -906 / 0    | -84.3            | -84.3   | 0.32 (1)    | 6.07  | I-D         | 0 / 302       | 0.07 (1)      |  |
| D-E    | -747 / 0    | -84.3            | -84.3   | 0.05 (1)    | 6.25  | D-H         | -153 / 0      | 0.12 (1)      |  |
| E-F    | -838 / 0    | -84.3            | -84.3   | 0.24 (1)    | 6.25  | H-E         | -8 / 70       | 0.02 (4)      |  |
| L-B    | -1083 / 0   | 0.0              | 0.0     | 0.11 (1)    | 7.58  | B-K         | 0 / 1219      | 0.27 (1)      |  |
| G-M    | 0 / 56      | 0.0              | 0.0     | 0.06 (1)    | 10.00 | H-F         | 0 / 743       | 0.17 (1)      |  |
| M-F    | 0 / 56      | 0.0              | 0.0     | 0.06 (1)    | 10.00 | F-N         | -996 / 0      | 0.14 (1)      |  |
|        |             |                  |         |             |       | M-N         | 0 / 77        | 0.00 (1)      |  |
| L-K    | 0 / 0       | -18.2            | -18.2   | 0.14 (4)    | 10.00 |             |               |               |  |
| K-J    | 0 / 1204    | -18.2            | -18.2   | 0.26 (1)    | 10.00 |             |               |               |  |
| J-I    | 0 / 1204    | -18.2            | -18.2   | 0.26 (1)    | 10.00 |             |               |               |  |
| I-H    | 0 / 793     | -18.2            | -18.2   | 0.25 (4)    | 10.00 |             |               |               |  |
| H-G    | 0 / 59      | -18.2            | -18.2   | 0.20 (4)    | 10.00 |             |               |               |  |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 25.6 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.65")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.04")  
ALLOWABLE DEFL.(TL) = L/360 (0.65")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.07")

CSI: TC=0.33/1.00 (B-C:1), BC=0.26/1.00 (I-K:1), WB=0.38/1.00 (C-I:1), SSI=0.20/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

AUTOSOLVE LEFT HEEL ONLY

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

#### NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.88 (B) (INPUT = 0.90)  
JSI METAL= 0.41 (K) (INPUT = 1.00)



May 17, 2022

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

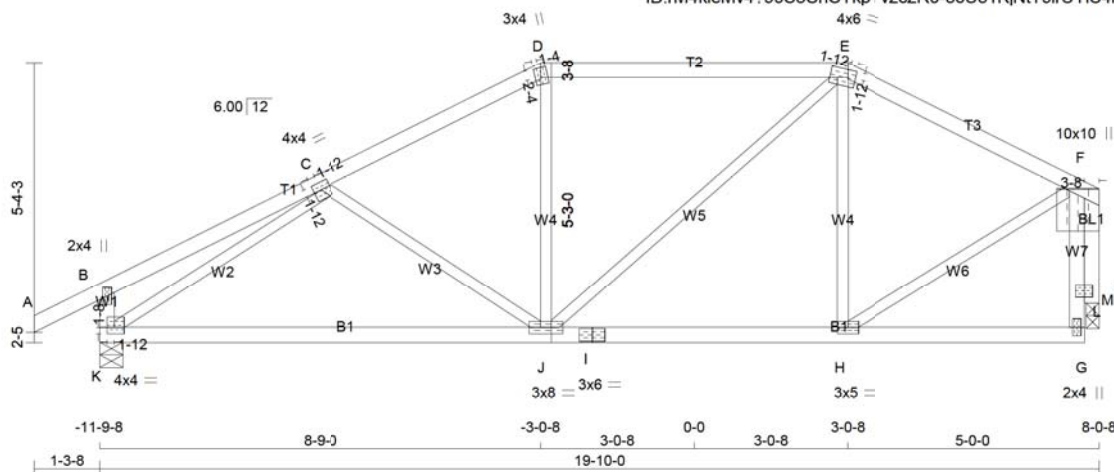
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BUILDING DIVISION

09/22/2022  
KOTT  
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Per: joshua.nabua

| JOB NAME      | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|---------------|------------|----------|-----|-------------|----------|
| IM0621-181-R1 | T07B       | 1        | 1   | TRUSS DESC. |          |

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Tue May 17 11:09:40 2022 Page 1  
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Scale = 1:45.7



TOTAL WEIGHT = 82 lb

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

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

DRY: SEASONED LUMBER.

BEARING NOTE: GAP BETWEEN INSIDE OF TOP CHORD BEARING AND FIRST DIAGONAL OR VERTICAL WEB SHALL NOT EXCEED 0.5 INCHES.

#### PLATES (table is in inches)

| JT | TYPE     | PLATES | W    | LEN  | Y    | X    |
|----|----------|--------|------|------|------|------|
| B  | TMV+p    | MT20   | 2.0  | 4.0  |      |      |
| C  | TMWW-t   | MT20   | 4.0  | 4.0  | 1.75 | 1.75 |
| D  | TTW+m    | MT20   | 3.0  | 4.0  | 2.25 | 1.25 |
| E  | TTWW-m   | MT20   | 4.0  | 6.0  | 1.75 | 1.75 |
| F  | TMVWK1+w | MT20   | 10.0 | 10.0 | Edge | 3.50 |
| G  | BMV+p    | MT20   | 2.0  | 4.0  |      |      |
| H  | BMWW-t   | MT20   | 3.0  | 5.0  |      |      |
| I  | BS-t     | MT20   | 3.0  | 6.0  |      |      |
| J  | BMVWW-t  | MT20   | 3.0  | 8.0  |      |      |
| K  | BMVW1-t  | MT20   | 4.0  | 4.0  | 1.50 | 1.75 |
| L  | KP-p     | MT20   | 3.0  | 4.0  |      |      |

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

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

| BEARINGS |      | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |        | INPUT BRG |       | REQRD BRG |       |
|----------|------|-------------------------|------|---------------------------------|--------|-----------|-------|-----------|-------|
| JT       | VERT | HORZ                    | DOWN | HORZ                            | UPLIFT | IN-SX     | IN-SX | IN-SX     | IN-SX |
| M(F)     | 993  | 0                       | 993  | 0                               | 0      | 3-0       | 3-0   |           |       |
| K        | 1124 | 0                       | 1124 | 0                               | 0      | 5-8       | 1-8   |           |       |

#### UNFACTORED REACTIONS

| JT   | 1ST LCASE | MAX / MIN | SNOW  | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|------|-----------|-----------|-------|-------|------------|-------|---------|-------|
| M(F) | 695       | 496 / 0   | 0 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 200 / 0 | 0 / 0 |
| K    | 785       | 574 / 0   | 0 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 211 / 0 | 0 / 0 |

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

#### 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 FITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |             | FACTORED         |         | MAX. FACTORED |        | WEBS        |             | MAX. FACTORED |             |
|--------|-------------|------------------|---------|---------------|--------|-------------|-------------|---------------|-------------|
| MEMB.  | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX | MAX. UNBRAC   | MEMB.  | FORCE (LBS) | MAX. UNBRAC | MEMB.         | FORCE (LBS) |
| FR-TO  |             | FROM             | TO      | CS1 (LC)      | LENGTH | FR-TO       |             | FROM          | TO          |
| A-B    | 0 / 26      | -84.3            | -84.3   | 0.11 (1)      | 10.00  | C-J         | -234 / 11   | 0.12 (1)      |             |
| B-C    | 0 / 19      | -84.3            | -84.3   | 0.25 (1)      | 10.00  | J-D         | 0 / 105     | 0.04 (4)      |             |
| C-D    | -1089 / 0   | -84.3            | -84.3   | 0.21 (1)      | 5.82   | J-E         | 0 / 325     | 0.07 (1)      |             |
| D-E    | -958 / 0    | -84.3            | -84.3   | 0.41 (1)      | 5.79   | H-E         | -308 / 0    | 0.14 (1)      |             |
| E-F    | -805 / 0    | -84.3            | -84.3   | 0.25 (1)      | 6.25   | K-C         | -1401 / 0   | 0.86 (1)      |             |
| K-B    | -258 / 0    | 0.0              | 0.0     | 0.03 (1)      | 7.81   | H-F         | 0 / 772     | 0.17 (1)      |             |
| G-L    | 0 / 42      | 0.0              | 0.0     | 0.05 (1)      | 10.00  | F-M         | -996 / 0    | 0.14 (1)      |             |
| L-F    | 0 / 42      | 0.0              | 0.0     | 0.05 (1)      | 10.00  | L-M         | 0 / 73      | 0.00 (1)      |             |
| K-J    | 0 / 1150    | -18.2            | -18.2   | 0.37 (4)      | 10.00  |             |             |               |             |
| J-I    | 0 / 713     | -18.2            | -18.2   | 0.36 (4)      | 10.00  |             |             |               |             |
| I-H    | 0 / 713     | -18.2            | -18.2   | 0.36 (4)      | 10.00  |             |             |               |             |
| H-G    | 0 / 57      | -18.2            | -18.2   | 0.09 (4)      | 10.00  |             |             |               |             |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 25.6 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.65")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")  
ALLOWABLE DEFL.(TL) = L/360 (0.65")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.19")

CSI: TC=0.41/1.00 (D-E:1), BC=0.37/1.00 (J-K:4), WB=0.66/1.00 (C-K:1), SSI=0.20/1.00 (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

AUTOSOLVE LEFT HEEL ONLY

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.86 (K) (INPUT = 0.90 )  
JSI METAL= 0.43 (C) (INPUT = 1.00 )



May 17, 2022

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

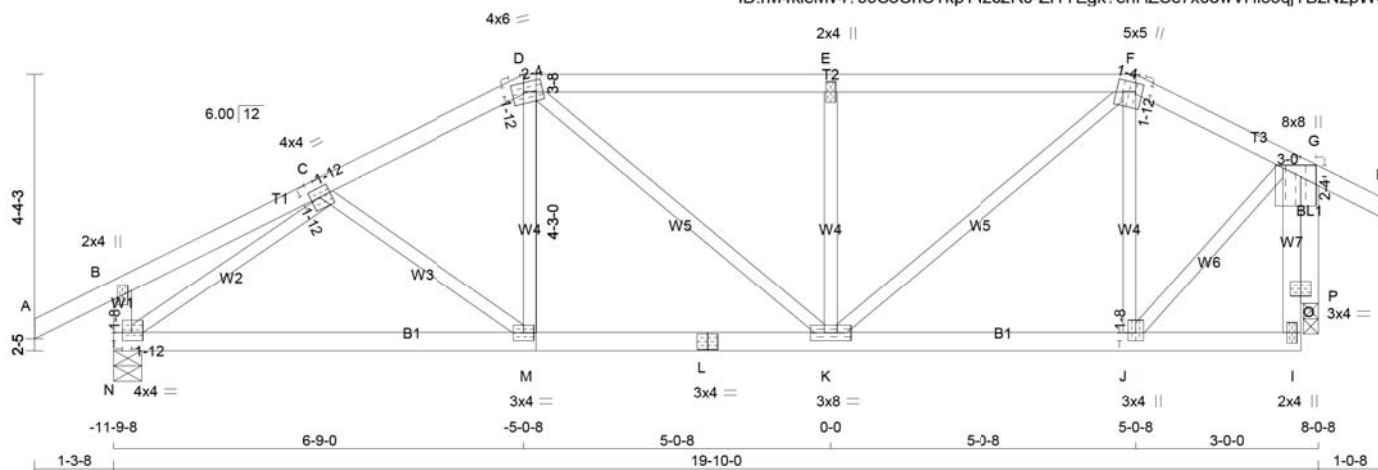
CITY OF RICHMOND HILL  
BUILDING DIVISION

09/22/2022  
KOTT  
RECEIVED

Per: joshua.nabua

| JOB NAME      | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|---------------|------------|----------|-----|-------------|----------|
| IM0621-181-R1 | T07C       | 1        | 1   | TRUSS DESC. |          |

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Tue May 17 11:09:41 2022 Page 1  
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 Scale = 1:37.9



TOTAL WEIGHT = 85 lb

**LUMBER**

## N. L. G. A. RULES

| CHORDS | SIZE | LUMBER | DESCR. |
|--------|------|--------|--------|
| A - D  | 2x4  | DRY    | No.2   |
| D - F  | 2x4  | DRY    | No.2   |
| F - H  | 2x4  | DRY    | No.2   |
| N - B  | 2x4  | DRY    | No.2   |
| I - G  | 2x4  | DRY    | No.2   |
| N - L  | 2x4  | DRY    | No.2   |
| L - I  | 2x4  | DRY    | No.2   |

## BEARING BLOCKS

|                 |     |     |      |     |
|-----------------|-----|-----|------|-----|
| BL1             | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

BEARING NOTE: GAP BETWEEN INSIDE OF TOP CHORD BEARING AND FIRST DIAGONAL OR VERTICAL WEB SHALL NOT EXCEED 0.5 INCHES.

**PLATES (table is in inches)**

| JT | TYPE     | PLATES | W   | LEN | Y    | X    |
|----|----------|--------|-----|-----|------|------|
| B  | TMV+p    | MT20   | 2.0 | 4.0 |      |      |
| C  | TMWW-t   | MT20   | 4.0 | 4.0 | 1.75 | 1.75 |
| D  | TTWW-m   | MT20   | 4.0 | 6.0 | 1.75 | 2.25 |
| E  | TMW+w    | MT20   | 2.0 | 4.0 |      |      |
| F  | TTWW+m   | MT20   | 5.0 | 5.0 | 1.75 | 1.25 |
| G  | TMVWK1+w | MT20   | 8.0 | 8.0 | 2.25 | 3.00 |
| I  | BMV+p    | MT20   | 2.0 | 4.0 |      |      |
| J  | BMWW+t   | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| K  | BMWW-t   | MT20   | 3.0 | 8.0 |      |      |
| L  | BS-t     | MT20   | 3.0 | 4.0 |      |      |
| M  | BMWW-t   | MT20   | 3.0 | 4.0 |      |      |
| N  | BMVW1-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.75 |
| O  | KP-p     | MT20   | 3.0 | 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                    | DOWN                            | UP        | IN-SX     |
| N    | 1125                    | 0                               | 0         | 5-8       |
| P(G) | 1110                    | 0                               | 0         | 3-0       |

(\*\* SEE "BEARING NOTE" \*\*)

**UNFACTORED REACTIONS**

| JT   | 1ST LCASE | MAX / MIN | COMPONENT REACTIONS | PERM. LIVE | WIND  | DEAD    | SOIL  |
|------|-----------|-----------|---------------------|------------|-------|---------|-------|
| N    | 785       | 574 / 0   | 0 / 0               | 0 / 0      | 0 / 0 | 211 / 0 | 0 / 0 |
| P(G) | 775       | 567 / 0   | 0 / 0               | 0 / 0      | 0 / 0 | 208 / 0 | 0 / 0 |

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.34 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| MEMB. | CHORDS    | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX  | MAX. UNBRACED LENGTH | MEMB. | WEBS      | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH |
|-------|-----------|---------------------------|------------------|----------|----------------------|-------|-----------|---------------------------|----------------------|
| FR-TO |           |                           |                  |          |                      | FR-TO |           |                           |                      |
| A-B   | 0 / 26    | -84.3                     | -84.3            | 0.11 (1) | 10.00                | C-M   | -61 / 39  | 0.02 (1)                  |                      |
| B-C   | 0 / 13    | -84.3                     | -84.3            | 0.13 (1) | 10.00                | M-D   | 0 / 166   | 0.04 (4)                  |                      |
| C-D   | -1214 / 0 | -84.3                     | -84.3            | 0.15 (1) | 5.64                 | D-K   | 0 / 150   | 0.03 (1)                  |                      |
| D-E   | -1192 / 0 | -84.3                     | -84.3            | 0.39 (1) | 5.34                 | K-E   | -521 / 0  | 0.16 (1)                  |                      |
| E-F   | -1192 / 0 | -84.3                     | -84.3            | 0.39 (1) | 5.34                 | F-F   | 0 / 775   | 0.17 (1)                  |                      |
| F-G   | -683 / 0  | -84.3                     | -84.3            | 0.11 (1) | 6.25                 | J-F   | -470 / 0  | 0.14 (1)                  |                      |
| G-H   | 0 / 26    | -84.3                     | -84.3            | 0.12 (1) | 10.00                | N-C   | -1404 / 0 | 0.41 (1)                  |                      |
| N-B   | -228 / 0  | 0.0                       | 0.0              | 0.02 (1) | 7.81                 | J-G   | 0 / 781   | 0.18 (1)                  |                      |
| I-O   | 0 / 15    | 0.0                       | 0.0              | 0.06 (1) | 10.00                | G-P   | -1113 / 0 | 0.16 (1)                  |                      |
| O-G   | 0 / 15    | 0.0                       | 0.0              | 0.06 (1) | 10.00                | O-P   | 0 / 82    | 0.00 (1)                  |                      |
| N-M   | 0 / 1122  | -18.2                     | -18.2            | 0.28 (1) | 10.00                |       |           |                           |                      |
| M-L   | 0 / 1077  | -18.2                     | -18.2            | 0.27 (1) | 10.00                |       |           |                           |                      |
| L-K   | 0 / 1077  | -18.2                     | -18.2            | 0.27 (1) | 10.00                |       |           |                           |                      |
| K-J   | 0 / 599   | -18.2                     | -18.2            | 0.15 (1) | 10.00                |       |           |                           |                      |
| J-I   | 0 / 64    | -18.2                     | -18.2            | 0.08 (4) | 10.00                |       |           |                           |                      |

**DESIGN CRITERIA**

## SPECIFIED LOADS:

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.65")  
 CALCULATED VERT. DEFL.(LL) = L/999 (0.04")  
 ALLOWABLE DEFL.(TL) = L/360 (0.65")  
 CALCULATED VERT. DEFL.(TL) = L/999 (0.09")

CSI: TC=0.39/1.00 (D-E:1), BC=0.28/1.00 (M-N:1), WB=0.41/1.00 (C-N:1), SSI=0.20/1.00 (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

AUTOSOLVE LEFT HEEL ONLY

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (J) (INPUT = 0.90 )  
 JSI METAL= 0.46 (C) (INPUT = 1.00 )



May 17, 2022

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

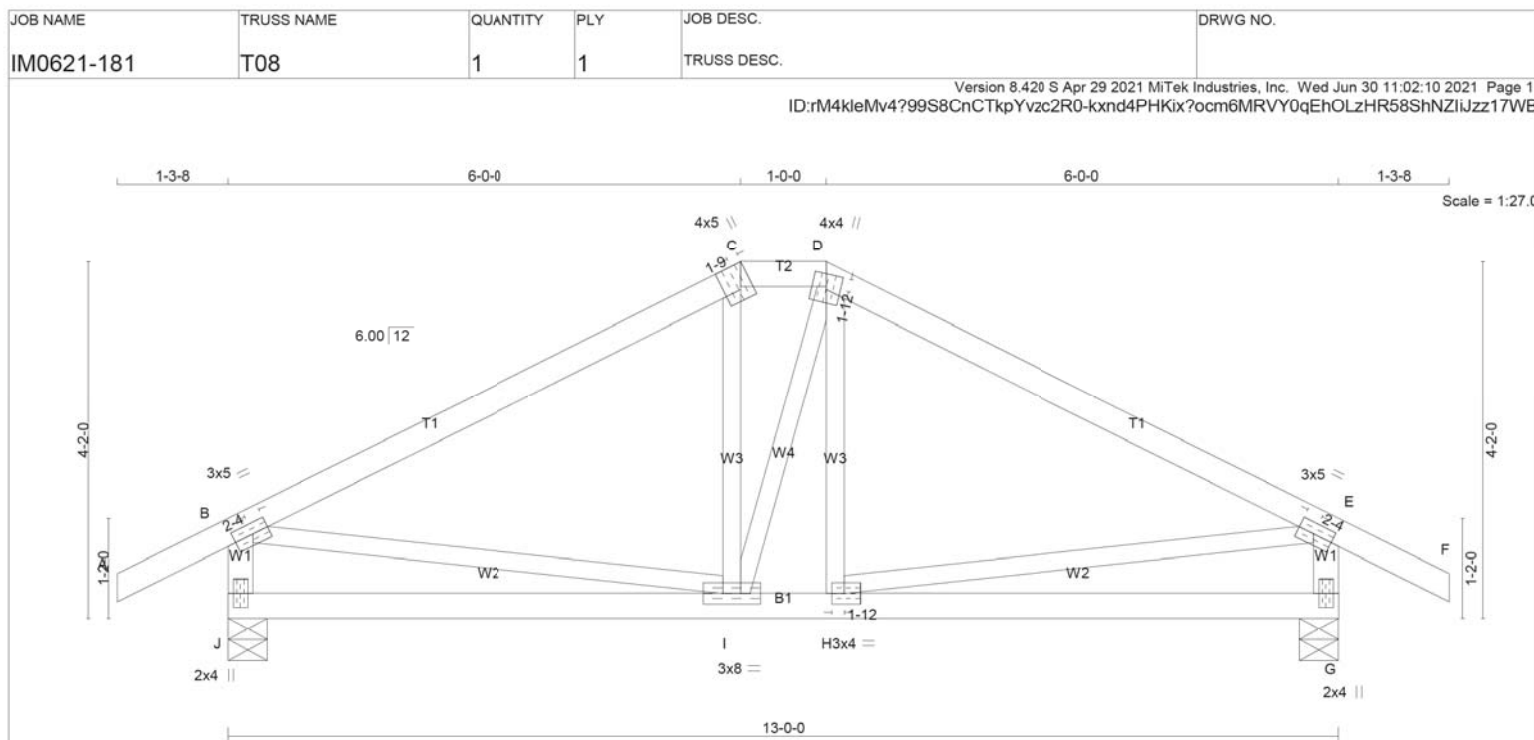
CITY OF RICHMOND HILL  
 BUILDING DIVISION

09/22/2022  
 RECEIVED  
 Per: joshua.nabua

Version 8.500 S Aug 16 2021 MiTek Industries, Inc. Tue May 17 11:09:42 2022 Page 1  
ID:rM4kleMv4?99S8CnCTkpYvzc2R0-1UbsS0ldP5PQ4oh7ZVRkpzeEp7vCir5zkw4MNHZFdX7  
Scale = 1:33.8



Per: joshua.nabua



TOTAL WEIGHT = 54 lb  
[M][F]

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

|          |     |     |      |
|----------|-----|-----|------|
| ALL WEBS | 2x3 | DRY | No.2 |
| EXCEPT   |     |     |      |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| B  | TMVW-t | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| C  | TTW+h  | MT20   | 4.0 | 5.0 | Edge | 1.50 |
| D  | TTWW+m | MT20   | 4.0 | 4.0 | 1.75 | 2.00 |
| E  | TMVW-t | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| G  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |
| H  | BMWW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| I  | BMWW-t | MT20   | 3.0 | 8.0 |      |      |
| J  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |

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

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

| FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |        | REQRD BRG |       |
|-------------------------|------|---------------------------------|------|-----------|--------|-----------|-------|
| JT                      | VERT | HORZ                            | DOWN | HORZ      | UPLIFT | IN-SX     | IN-SX |
| J                       | 781  | 0                               | 781  | 0         | 0      | 5-8       | 1-8   |
| G                       | 781  | 0                               | 781  | 0         | 0      | 5-8       | 1-8   |

**UNFACTORED REACTIONS**

| JT | COMBINED | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|-----------|-------|---------|-------|
| J  | 544      | 402 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 142 / 0 | 0 / 0 |
| G  | 544      | 402 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 142 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |               | WEBS  |                           |               |  |
|--------|---------------------------|---------------------------|---------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM TO                   |               | FR-TO |                           |               |  |
| A-B    | 0 / 26                    | -84.3 -84.3               | 0.11 (1)      | I-C   | -9 / 58                   | 0.02 (4)      |  |
| B-C    | -639 / 0                  | -84.3 -84.3               | 0.40 (1)      | I-D   | 0 / 3                     | 0.00 (4)      |  |
| C-D    | -571 / 0                  | -84.3 -84.3               | 0.01 (1)      | H-D   | -10 / 55                  | 0.02 (4)      |  |
| D-E    | -638 / 0                  | -84.3 -84.3               | 0.40 (1)      | B-I   | 0 / 577                   | 0.13 (1)      |  |
| E-F    | 0 / 26                    | -84.3 -84.3               | 0.11 (1)      | H-E   | 0 / 576                   | 0.13 (1)      |  |
| J-B    | -736 / 0                  | 0.0 0.0                   | 0.07 (1)      |       |                           |               |  |
| G-E    | -736 / 0                  | 0.0 0.0                   | 0.07 (1)      |       |                           |               |  |
| J-I    | 0 / 0                     | -18.2 -18.2               | 0.14 (4)      |       |                           |               |  |
| I-H    | 0 / 570                   | -18.2 -18.2               | 0.19 (4)      |       |                           |               |  |
| H-G    | 0 / 0                     | -18.2 -18.2               | 0.14 (4)      |       |                           |               |  |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
TOP CH. LL = 25.6 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 35.9 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(LL)= L/999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(TL)= L/999 (0.05")

CSI: TC=0.40/1.00 (B-C:1), BC=0.19/1.00 (H-I:4), WB=0.13/1.00 (B-I:1), SSI=0.18/1.00 (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= 0.83 (C) (INPUT = 0.90)

JSI METAL= 0.23 (B) (INPUT = 1.00)

CITY OF RICHMOND HILL  
BUILDING DIVISION

09/22/2022  
KOTT  
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Per: joshua.nabua

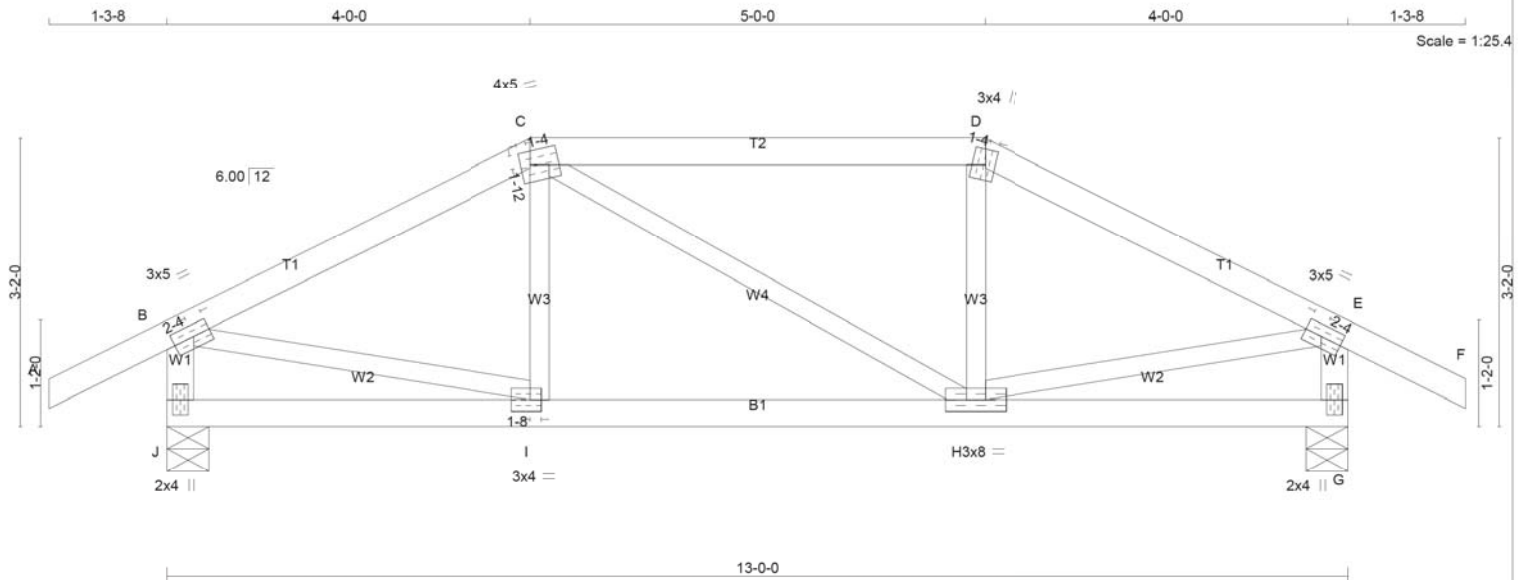


June 30, 2021

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

| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | DRWG NO. |
|------------|------------|----------|-----|-------------|----------|
| IM0621-181 | T09        | 1        | 1   | TRUSS DESC. |          |

Version 8.420 S Apr 29 2021 MiTek Industries, Inc. Wed Jun 30 11:02:17 2021 Page 1  
ID:rM4kleMv4?99S8CnCTkpYvzc2R0-1HiGYoMj35upxr8jLTafcjUcToflEJrj\_9Va23z17W4



TOTAL WEIGHT = 51 lb  
[M][F]

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

ALL WEBS 2x3 DRY No.2 SPF  
EXCEPT

DRY: SEASONED LUMBER.

| <b>PLATES (table is in inches)</b> |          |        |     |     |      |      |
|------------------------------------|----------|--------|-----|-----|------|------|
| JT                                 | TYPE     | PLATES | W   | LEN | Y    | X    |
| B                                  | TMVW-t   | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| C                                  | TTWW-m   | MT20   | 4.0 | 5.0 | 1.75 | 1.25 |
| D                                  | TTWW-m   | MT20   | 3.0 | 4.0 | 2.00 | 1.25 |
| E                                  | TMVW-t   | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| G                                  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| H                                  | BMWWWW-t | MT20   | 3.0 | 8.0 |      |      |
| I                                  | BMWW-t   | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| J                                  | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |

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

## BEARINGS

|    | FACTORED       |      | MAXIMUM FACTORED |      |        | INPUT | REQRD |
|----|----------------|------|------------------|------|--------|-------|-------|
|    | GROSS REACTION |      | GROSS REACTION   |      |        | BRG   | BRG   |
| JT | VERT           | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |
| J  | 781            | 0    | 781              | 0    | 0      | 5-8   | 1-8   |
| G  | 781            | 0    | 781              | 0    | 0      | 5-8   | 1-8   |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| J         | 544      | 402 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 142 / 0 | 0 / 0 |
| G         | 544      | 402 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 142 / 0 | 0 / 0 |

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

## BRACING

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

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

## LOADING

TOTAL LOAD CASES: (4)

| C H O R D S   |             |                  |                  | W E B S            |       |             |                      |
|---------------|-------------|------------------|------------------|--------------------|-------|-------------|----------------------|
| MAX. FACTORED |             | FACTORED         |                  | MAX. FACTORED      |       |             |                      |
| MEMB.         | FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX CSI (LC)         |
| FR-TO         |             | FROM             | TO               |                    | FR-TO |             |                      |
| A-B           | 0 / 26      | -84.3            | -84.3            | 0.11 (1)           | 10.0  | I-C         | -51 / 58    0.02 (4) |
| B-C           | -735 / 0    | -84.3            | -84.3            | 0.18 (1)           | 6.25  | C-H         | 0 / 3    0.00 (4)    |
| C-D           | -657 / 0    | -84.3            | -84.3            | 0.27 (1)           | 6.25  | H-D         | -48 / 60    0.02 (4) |
| D-E           | -739 / 0    | -84.3            | -84.3            | 0.18 (1)           | 6.25  | B-I         | 0 / 671    0.15 (1)  |
| E-F           | 0 / 26      | -84.3            | -84.3            | 0.11 (1)           | 10.00 | H-E         | 0 / 674    0.15 (1)  |
| J-B           | -750 / 0    | 0.0              | 0.0              | 0.08 (1)           | 7.81  |             |                      |
| G-E           | -749 / 0    | 0.0              | 0.0              | 0.08 (1)           | 7.81  |             |                      |
| J-I           | 0 / 0       | -18.2            | -18.2            | 0.08 (4)           | 10.00 |             |                      |
| I-H           | 0 / 655     | -18.2            | -18.2            | 0.14 (1)           | 10.00 |             |                      |
| H-G           | 0 / 0       | -18.2            | -18.2            | 0.08 (4)           | 10.00 |             |                      |

## DESIGN CRITERIA

| SPECIFIED LOADS: |     |      |      |     |
|------------------|-----|------|------|-----|
| TOP              | CH. | LL = | 25.6 | PSF |
|                  |     | DL = | 3.0  | PSF |
| BOT              | CH. | LL = | 0.0  | PSF |
|                  |     | DL = | 7.3  | PSF |
| TOTAL LOAD       |     | =    | 35.9 | PSF |

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")  
ALLOWABLE DEFL.(TL)= L/360 (0.43")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.03")

CSI: TC=0.27/1.00 (C-D:1) , BC=0.14/1.00 (H-I:1) ,  
WB=0.15/1.00 (E-H:1) , SSI=0.16/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL= 0.25 (E) (INPUT = 1.00 )

**CITY OF RICHMOND HILL**  
**BUILDING DIVISION**

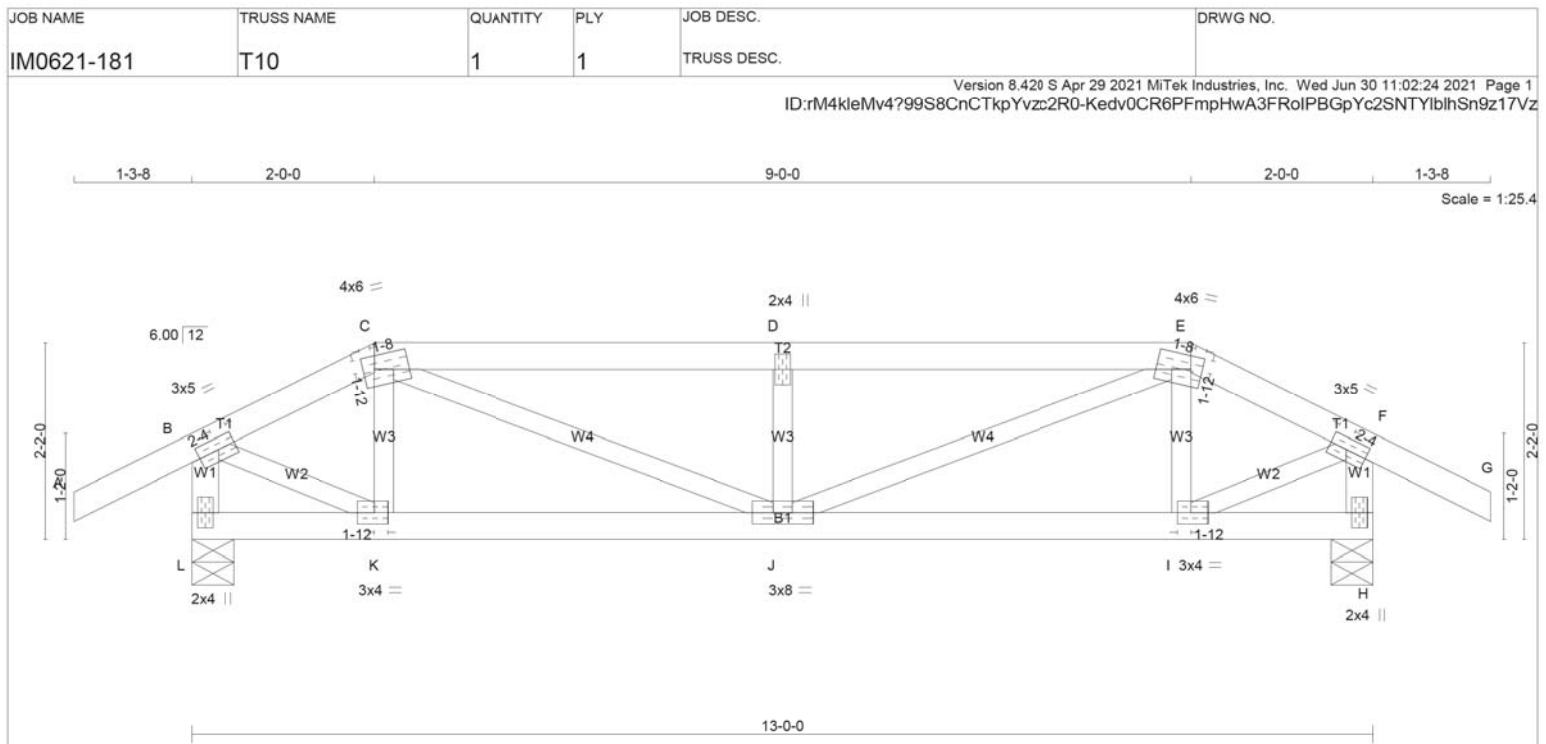
09/22/2022  
KOTT  
RECEIVED

Per: joshua.nabua



June 30, 2021

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



TOTAL WEIGHT = 50 lb [M]

**LUMBER**

N. L. G. A. RULES

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

ALL WEBS 2x3 DRY No.2 SPF

EXCEPT DRY: SEASONED LUMBER.

**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  | 781                     | 0                               | 781       | 0         |
| H  | 781                     | 0                               | 781       | 0         |

**UNFACTORED REACTIONS**

| 1ST LCASE | MAX/MIN. COMPONENT REACTIONS |         |       |            |       |         |       |
|-----------|------------------------------|---------|-------|------------|-------|---------|-------|
| JT        | COMBINED                     | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| L         | 544                          | 402 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 142 / 0 | 0 / 0 |
| H         | 544                          | 402 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 142 / 0 | 0 / 0 |

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

**BRACING**TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.39 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                               | WEBS  |                           |                               |          |
|--------|---------------------------|---------------------------|-------------------------------|-------|---------------------------|-------------------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED VERT. LOAD (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED VERT. LOAD (LC) |          |
| FR-TO  |                           | FROM                      | TO                            | FR-TO |                           | FROM                          | TO       |
| A-B    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)                | 10.00 | K-C                       | -178 / 2                      | 0.03 (1) |
| B-C    | -708 / 0                  | -84.3                     | -84.3 0.06 (1)                | 6.25  | C-J                       | 0 / 684                       | 0.15 (1) |
| C-D    | -1254 / 0                 | -84.3                     | -84.3 0.28 (1)                | 5.39  | J-D                       | -457 / 0                      | 0.07 (1) |
| D-E    | -1254 / 0                 | -84.3                     | -84.3 0.28 (1)                | 5.39  | J-E                       | 0 / 684                       | 0.15 (1) |
| E-F    | -708 / 0                  | -84.3                     | -84.3 0.06 (1)                | 6.25  | I-E                       | -178 / 2                      | 0.03 (1) |
| F-G    | 0 / 26                    | -84.3                     | -84.3 0.11 (1)                | 10.00 | B-K                       | 0 / 683                       | 0.15 (1) |
| L-B    | -775 / 0                  | 0.0                       | 0.0 0.08 (1)                  | 7.81  | I-F                       | 0 / 683                       | 0.15 (1) |
| H-F    | -775 / 0                  | 0.0                       | 0.0 0.08 (1)                  | 7.81  |                           |                               |          |
| L-K    | 0 / 0                     | -18.2                     | -18.2 0.05 (4)                | 10.00 |                           |                               |          |
| K-J    | 0 / 623                   | -18.2                     | -18.2 0.14 (1)                | 10.00 |                           |                               |          |
| J-I    | 0 / 623                   | -18.2                     | -18.2 0.14 (1)                | 10.00 |                           |                               |          |
| I-H    | 0 / 0                     | -18.2                     | -18.2 0.05 (4)                | 10.00 |                           |                               |          |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
|            | DL | =    | 3.0  | PSF |
| BOT CH.    | LL | =    | 0.0  | PSF |
|            | DL | =    | 7.3  | PSF |
| TOTAL LOAD | =  | 35.9 | PSF  |     |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 6.00/12

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

THIS DESIGN COMPLIES WITH:

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

(55 % OF 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.43")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")  
ALLOWABLE DEFL.(TL) = L/360 (0.43")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.06")

CSI: TC=0.28/1.00 (D-E:1), BC=0.14/1.00 (I-J:1), WB=0.15/1.00 (C-J:1), SSI=0.18/1.00 (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)     |
| MT20  | MAX MIN   | MAX MIN  | MAX MIN   |
|       | 650 371   | 1747 788 | 1987 1873 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL= 0.23 (F) (INPUT = 1.00)

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BUILDING DIVISION

09/22/2022

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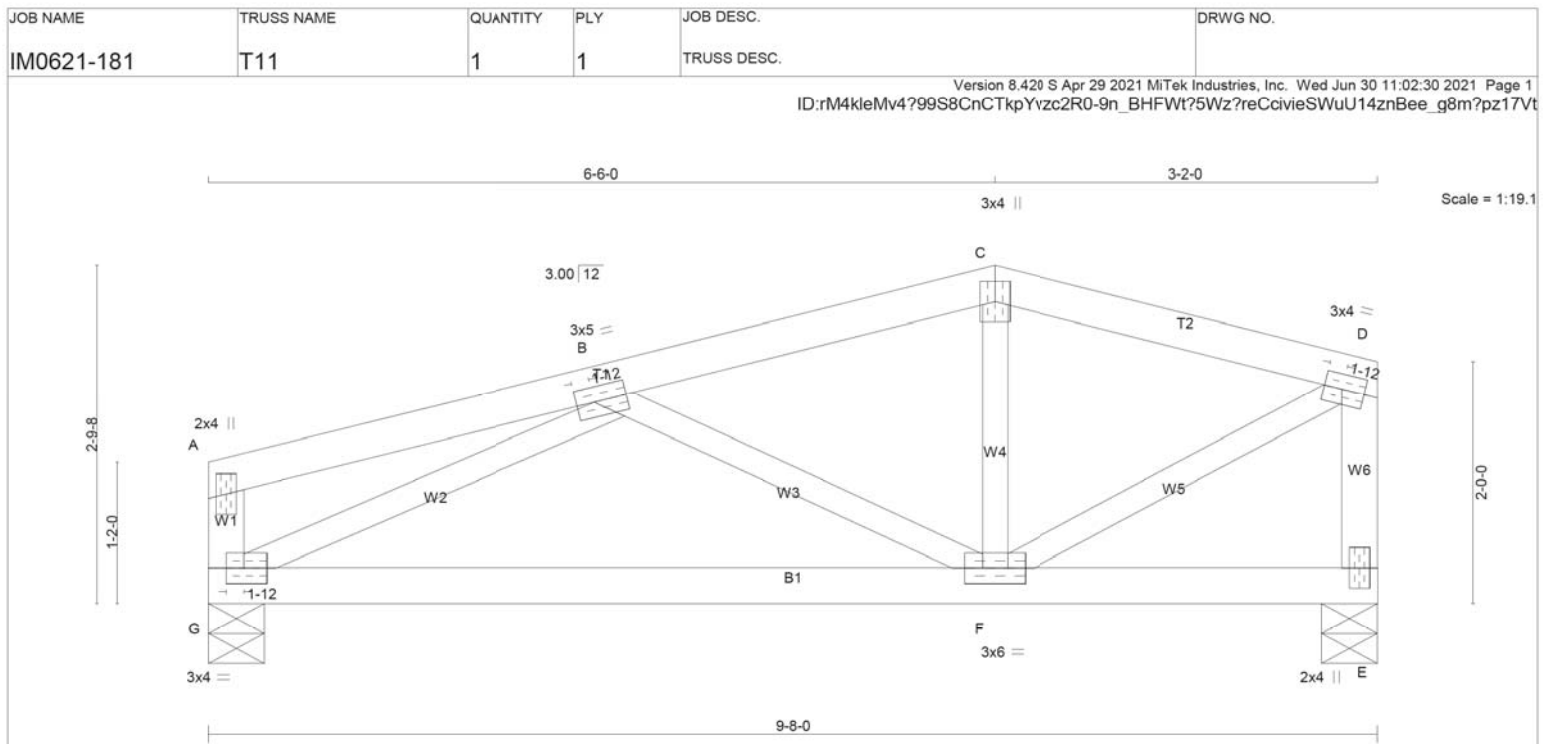
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Per: joshua.nabua



June 30, 2021

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

TOTAL WEIGHT = 35 lb  
[M][F]**LUMBER**

N. L. G. A. RULES

| CHORDS          | SIZE    | LUMBER | DESCR. |
|-----------------|---------|--------|--------|
| A - C           | 2x4 DRY | No.2   | SPF    |
| C - D           | 2x4 DRY | No.2   | SPF    |
| G - A           | 2x4 DRY | No.2   | SPF    |
| E - D           | 2x4 DRY | No.2   | SPF    |
| G - E           | 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    |
|----|---------|--------|-----|-----|------|------|
| A  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| B  | TMWW-t  | MT20   | 3.0 | 5.0 | 1.50 | 1.75 |
| C  | TTW+p   | MT20   | 3.0 | 4.0 |      |      |
| D  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.75 |
| E  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F  | BMWW-t  | MT20   | 3.0 | 6.0 |      |      |
| G  | BMVW1-t | MT20   | 3.0 | 4.0 | 1.50 | 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                    | HORZ                            | DOWN      | HORZ      |
| E  | 495                     | 0                               | 495       | 0         |
| G  | 495                     | 0                               | 495       | 0         |

**UNFACTORED REACTIONS**

| 1ST LCASE | COMBINED | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|-----------|----------|---------|-------|------------|-------|---------|-------|
| JT        | 347      | 247 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 100 / 0 | 0 / 0 |
| G         | 347      | 247 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 100 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                        | WEBS  |                           |                        |          |
|--------|---------------------------|---------------------------|------------------------|-------|---------------------------|------------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. FACTORED CSI (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |          |
| FR-TO  |                           | FROM TO                   |                        | FR-TO |                           |                        |          |
| A-B    | 0 / 7                     | -84.3 -84.3               | 0.13 (1)               | 10.00 | B-F                       | -231 / 8               | 0.06 (1) |
| B-C    | -468 / 0                  | -84.3 -84.3               | 0.10 (1)               | 6.25  | F-C                       | -15 / 51               | 0.02 (4) |
| C-D    | -461 / 0                  | -84.3 -84.3               | 0.11 (1)               | 6.25  | G-B                       | -732 / 0               | 0.18 (1) |
| G-A    | -111 / 0                  | 0.0 0.0                   | 0.01 (1)               | 7.81  | F-D                       | 0 / 508                | 0.11 (1) |
| E-D    | -486 / 0                  | 0.0 0.0                   | 0.05 (1)               | 7.81  |                           |                        |          |
| G-F    | 0 / 651                   | -18.2 -18.2               | 0.20 (4)               | 10.00 |                           |                        |          |
| F-E    | 0 / 0                     | -18.2 -18.2               | 0.16 (4)               | 10.00 |                           |                        |          |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |    |      |      |     |
|------------|----|------|------|-----|
| TOP CH.    | LL | =    | 25.6 | PSF |
| DL         | =  | 3.0  | PSF  |     |
| BOT CH.    | LL | =    | 0.0  | PSF |
| DL         | =  | 7.3  | PSF  |     |
| TOTAL LOAD | =  | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.32")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.32")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.06")

CSI: TC=0.13/1.00 (A-B:1), BC=0.20/1.00 (F-G:4),  
WB=0.18/1.00 (B-G:1), SSI=0.13/1.00 (A-B:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

**NAIL VALUES**

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (F) (INPUT = 0.90)  
JSI METAL= 0.22 (G) (INPUT = 1.00)

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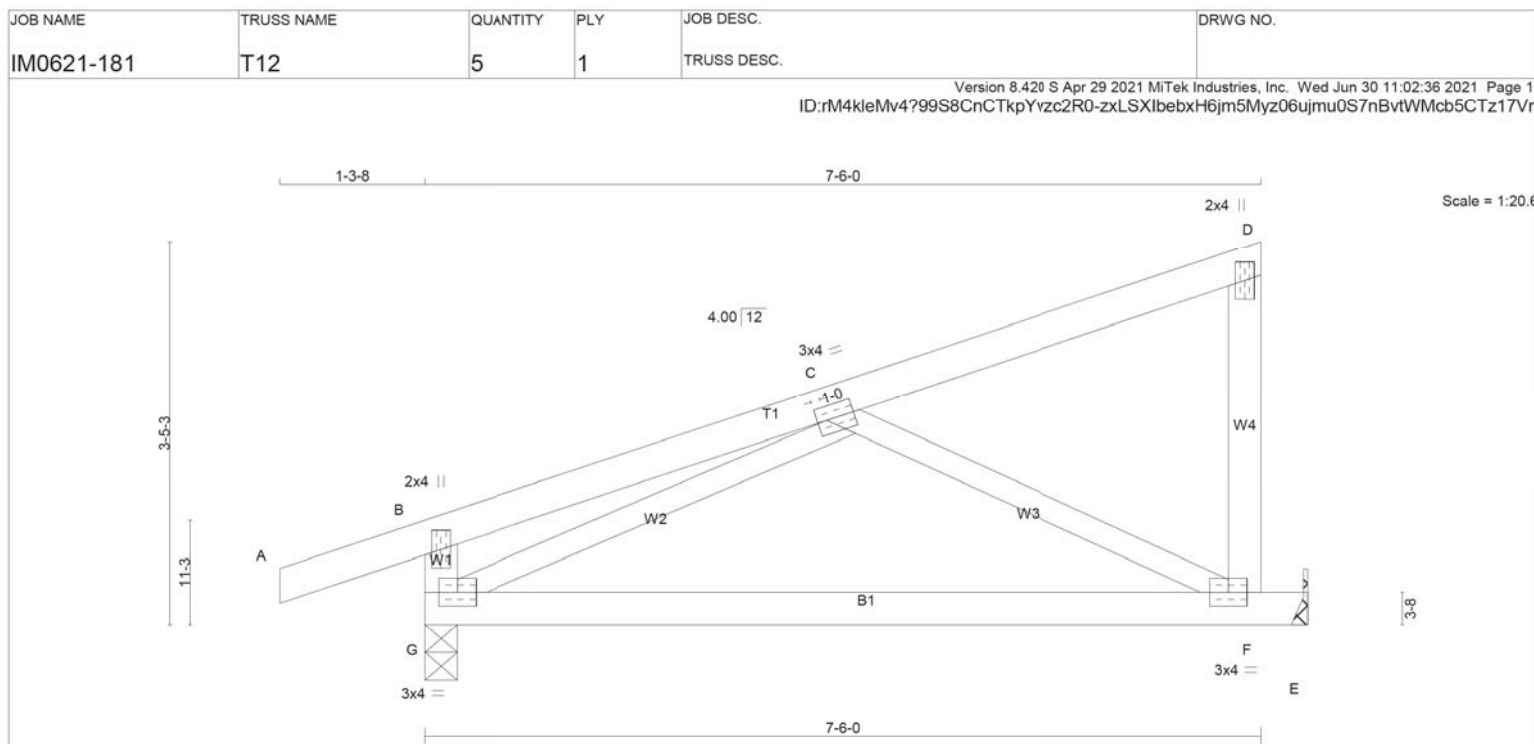
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Per: joshua.nabua



June 30, 2021

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**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | DRY | LUMBER     | DESCR. |
|--------|------|-----|------------|--------|
| A - D  | 2x4  | DRY | No.2       | SPF    |
| F - D  | 2x4  | DRY | No.2       | SPF    |
| G - B  | 2x4  | DRY | No.2       | SPF    |
| G - E  | 2x4  | DRY | 2100F 1.8E | SPF    |

|          |     |     |      |     |
|----------|-----|-----|------|-----|
| ALL WEBS | 2x3 | DRY | No.2 | SPF |
|----------|-----|-----|------|-----|

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 | 4.0 | 1.50 | 1.00 |
| D  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| F  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| G  | BMVW1-t | MT20   | 3.0 | 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  |
|----|-------------------------|------|---------------------------------|------|-----------|------------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |            |
| E  | 372                     | 0    | 372                             | 0    | 0         | MECHANICAL |
| G  | 518                     | 0    | 518                             | 0    | 0         | 3-8 1-8    |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT E. MINIMUM BEARING LENGTH AT JOINT E = 1-12.

**UNFACTORED REACTIONS**

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |        |       |
|-----------|----------|-------------------------------|-------|-----------|-------|--------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
| E         | 261      | 182 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 79 / 0 | 0 / 0 |
| G         | 360      | 270 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 90 / 0 | 0 / 0 |

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

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                | WEBS  |                           |               |  |
|--------|---------------------------|---------------------------|----------------|-------|---------------------------|---------------|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. CSI (LC)  | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC) |  |
| FR-TO  |                           | FROM TO                   | LENGTH         | FR-TO |                           |               |  |
| A-B    | 0 / 18                    | -84.3 -84.3               | 0.11 (1) 10.00 | C-F   | -436 / 0                  | 0.13 (1)      |  |
| B-C    | 0 / 12                    | -84.3 -84.3               | 0.19 (1) 10.00 | G-C   | -439 / 0                  | 0.13 (1)      |  |
| C-D    | -11 / 0                   | -84.3 -84.3               | 0.14 (1) 6.25  |       |                           |               |  |
| F-D    | -125 / 0                  | 0.0 0.0                   | 0.02 (1) 7.81  |       |                           |               |  |
| G-B    | -231 / 0                  | 0.0 0.0                   | 0.02 (1) 7.81  |       |                           |               |  |
| G-F    | 0 / 392                   | -18.2 -18.2               | 0.23 (4) 10.00 |       |                           |               |  |
| F-E    | 0 / 0                     | -18.2 -18.2               | 0.14 (1) 10.00 |       |                           |               |  |

**DESIGN CRITERIA****SPECIFIED LOADS:**

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 25.6 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 35.9 | 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 31.3 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 25.6 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.26")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")  
ALLOWABLE DEFL.(TL)= L/360 (0.26")  
CALCULATED VERT. DEFL.(TL) = L/440 (0.22")CSI: TC=0.19/1.00 (B-C:1) , BC=0.23/1.00 (F-G:4) ,  
WB=0.13/1.00 (C-F:1) , SSI=0.29/1.00 (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 (PSI) | SECTION (PLI) |
|-------|-----------|-------------|---------------|
| MT20  | 650       | 371         | 1747          |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.64 (C) (INPUT = 0.90 )  
JSI METAL= 0.16 (C) (INPUT = 1.00 )

June 30, 2021

READ ALL NOTES ON THIS PAGE AND ON THE  
ENGINEERING NOTE PAGE ENP-1. THE NOTE PAGE  
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CITY OF RICHMOND HILL  
BUILDING DIVISION

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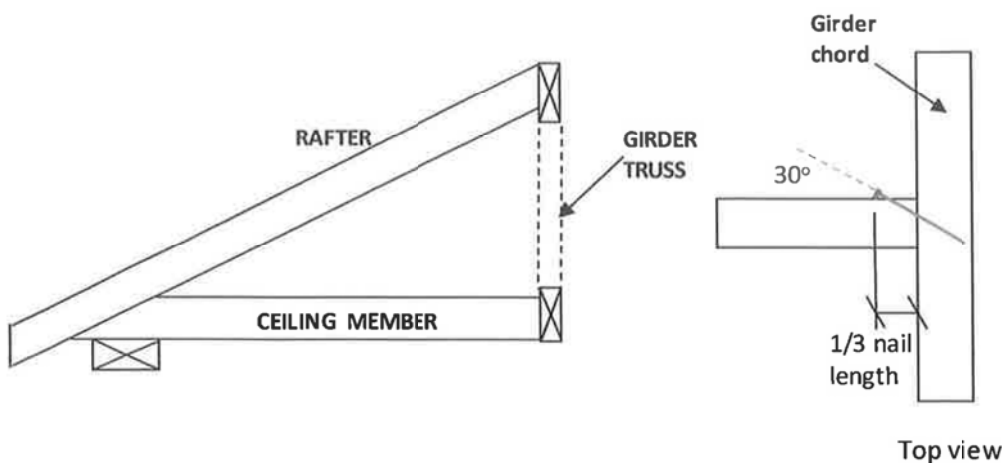
### TOE-NAIL CAPACITY DETAILS

#### LATERAL AND WITHDRAWAL RESISTANCE OF BEARING ANCHORAGE BY TOE-NAILS

| NAIL TYPE      | Length<br>(in) | Diameter<br>(in) | LATERAL Resistance per nail<br>(Lbs.) |        | WITHDRAWAL Resistance per nail<br>(Lbs.) |        |
|----------------|----------------|------------------|---------------------------------------|--------|------------------------------------------|--------|
|                |                |                  | SPF                                   | D. FIR | SPF                                      | D. FIR |
| COMMON WIRE    | 3.00           | 0.144            | 122                                   | 139    | 30                                       | 42     |
|                | 3.25           | 0.144            | 127                                   | 144    | 32                                       | 45     |
|                | 3.50           | 0.160            | 152                                   | 173    | 38                                       | 52     |
| COMMON SPIRAL  | 3.00           | 0.122            | 96                                    | 108    | 26                                       | 36     |
|                | 3.25           | 0.122            | 97                                    | 108    | 28                                       | 40     |
|                | 3.50           | 0.152            | 142                                   | 161    | 36                                       | 50     |
| 3.25" Gun nail | 3.25           | 0.120            | 94                                    | 105    | 28                                       | 39     |

**Note:** If using truss with D. Fir lumber and SPF bearing plate, use tabulated SPF values in table.

| Nail type:     | Common wire                 | Common spiral | Common wire | Common spiral | Gun Nail |
|----------------|-----------------------------|---------------|-------------|---------------|----------|
| Diameter (in.) | 0.160                       | 0.152         | 0.144       | 0.122         | 0.120    |
| Length (in.)   | 3.50                        | 3.50          | 3.00        | 3.00          | 3.25     |
| LUMBER         | MAXIMUM NUMBER OF TOE-NAILS |               |             |               |          |
| 2x4 SPF        | 2                           | 2             | 3           | 3             | 3        |
| 2x6 SPF        | 4                           | 4             | 4           | 5             | 5        |
| 2x4 D. FIR     | 2                           | 2             | 2           | 2             | 2        |
| 2x6 D. FIR     | 3                           | 3             | 3           | 4             | 4        |

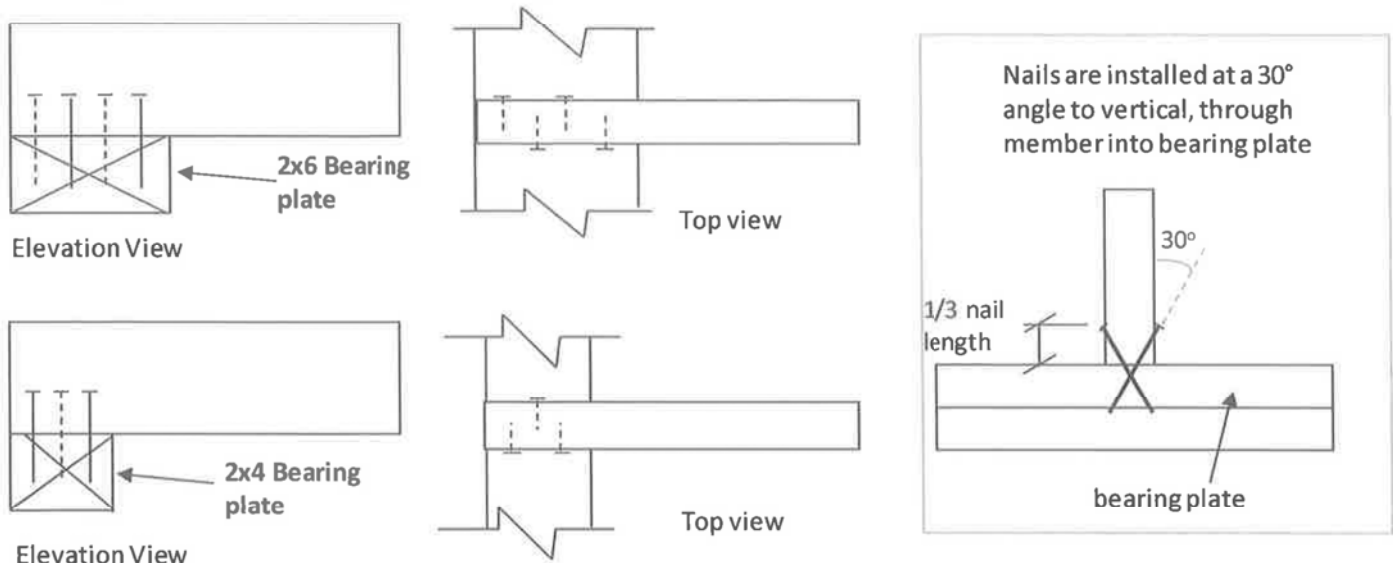


**Figure 1: Toe-Nailing Rafter / Ceiling Member to Girder Truss**



### TOE-NAIL CAPACITY DETAILS

Figure 2: Toe-Nail Anchorage to Bearing Plate for Uplift



#### NOTES:

1. Rafter and ceiling members may be connected to top and bottom chords of girder truss by toe-nailing the members into the girder chords (see fig. 1), provided the factored vertical reactions of the supported members do not exceed the lateral resistance of the toe-nails. Mechanical connectors (hangers) are required if factored vertical reactions exceed the toe-nail capacity, or if the connection must resist horizontal loads (loads perpendicular to the face of girder or rafter).
2. Trusses, rafters or ceiling members may be anchored to the bearing plate with toe-nails (see fig. 2), provided that the factored uplift reactions due to **wind or earthquake loads** do not exceed the **withdrawal resistance of the toe-nails**. Mechanical anchors (tie-downs) are required for reactions that exceed the toe-nail withdrawal capacity. Toe-nail anchorage to bearing plates is **NOT** permitted if uplift reactions are generated from gravity loads (snow, floor live, dead).
3. Tabulated toe-nail resistances on page 1 are for **one** toe-nail. Multiply unit values by the number of nails used in the connection. Maximum number of nails in a connection shall not exceed the tabulated limits shown on page 1 for a given lumber size /species.
4. Nail values are based on specific gravity of  $G = 0.42$  (SPF) and  $G = 0.49$  (D. Fir).
5. 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.
6. For wind / earthquake loads, tabulated lateral resistances may be multiplied by 1.15 ( $K_D$  factor). No increases are permitted for tabulated withdrawal resistances.
7. Lumber must be dry (< 19% moisture content) at the time of nail installation.
8. Nail values in this table comply with CSA O86-19, Clause 12.9.





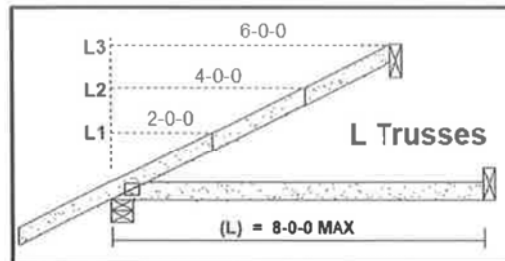
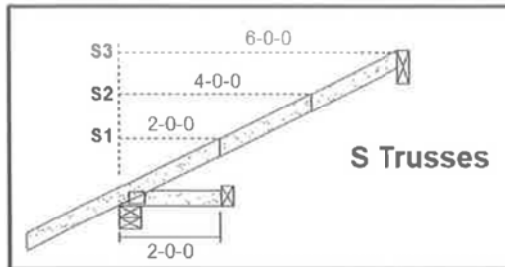
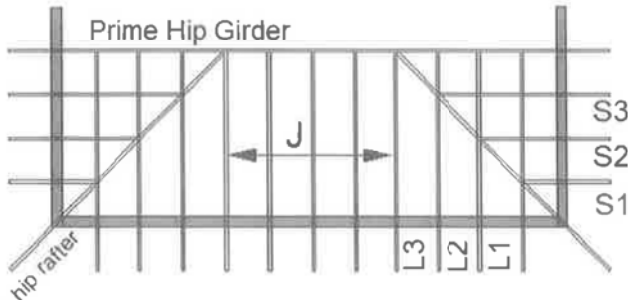
# STANDARD DETAIL MSD2015-J

Issued: MARCH 17, 2021

Expiry: APRIL 30, 2023

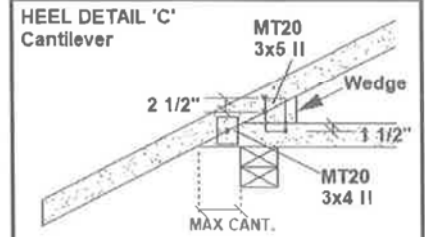
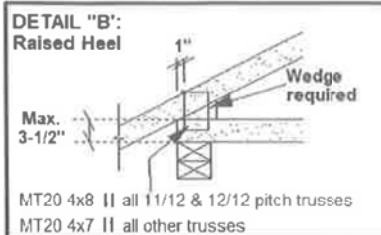
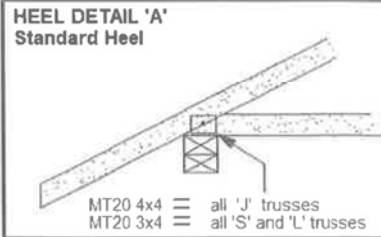
## STANDARD HIP END FRAMING

### PLAN VIEW



#### Specified Load Rating:

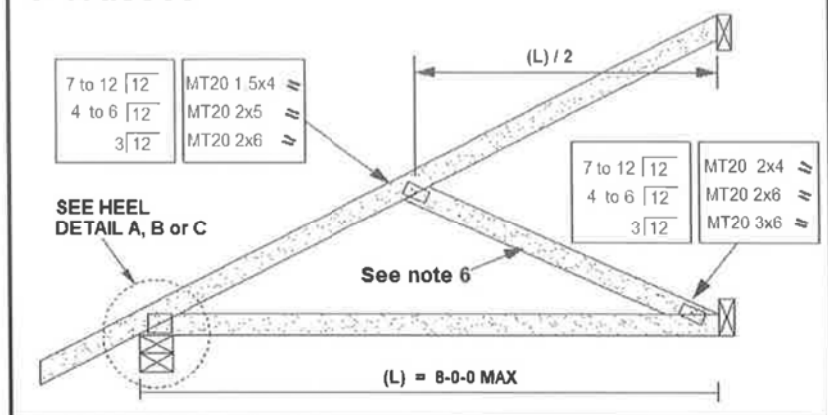
|                    |                  |
|--------------------|------------------|
| Top chord Live:    | 51.0 PSF or less |
| Top chord Dead:    | 6.0 PSF or less  |
| Bottom chord Live: | 0.0 PSF          |
| Bottom chord Dead: | 7.3 PSF or less  |



#### CANTILEVER DETAIL 'C'

| SLOPE | MAX CANT. | WEDGE PLATE | WEDGE SIZE |
|-------|-----------|-------------|------------|
| 3/12  | 17"       | 3 X 5       | 2 X 3      |
| 4/12  | 14"       | 3 X 5       | 2 X 3      |
| 5/12  | 12"       | 3 X 5       | 2 X 4      |
| 6/12  | 10"       | 3 X 5       | 2 X 4      |
| 7/12  | 9"        | 3 X 5       | 2 X 6      |
| 8/12  | 8 5/8"    | 3 X 5       | 2 X 6      |
| 9/12  | 8"        | 3 X 5       | 2 X 6      |
| 10/12 | 7 5/8"    | 3 X 5       | 2 X 6      |

### J Trusses



PEO

Certificate No. 10889485

#### NOTES:

1. This detail is valid only for projects conforming to **PART 9 NBCC 2015** that do not require a wind analysis to be incorporated into the design of the trusses.
2. Overhang length shall not exceed 24 inches.
3. All lumber shall be 2x4 SPF (or D-Fir) DRY No. 2 grade or better.
4. All plates specified are MITEK MT20, pressed into both faces of each truss. Heel plates of all trusses shall conform to heel details 'A', 'B' or 'C'.
5. Diagonal hip rafter design shall conform to section 9.23.14.6 of NBCC 2015.
6. For 6.0 ft. or less span, diagonal web on truss 'J' is optional. Girder design must reflect choice of partial jack ('J' with diagonal web) or open jack ('J' without diagonal web)
7. All truss-to-rafter and truss-to-truss connections shall be specified as per MITEK standard detail 'MSD2015-H: Toe-Nail Capacity Details'



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## STANDARD DETAIL MSD2015-K

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Expiry: APRIL 30, 2024

## STANDARD GABLE END DETAIL

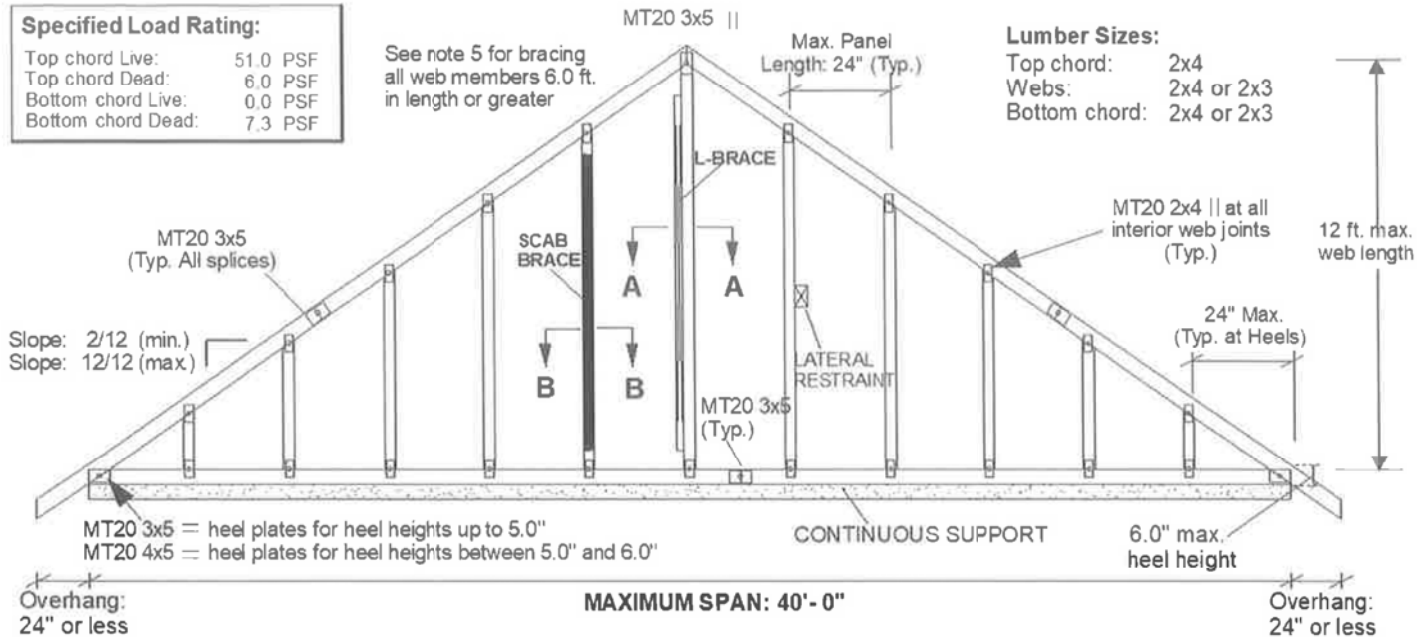
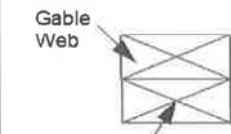
## Specified Load Rating:

|                    |          |
|--------------------|----------|
| Top chord Live:    | 51.0 PSF |
| Top chord Dead:    | 6.0 PSF  |
| Bottom chord Live: | 0.0 PSF  |
| Bottom chord Dead: | 7.3 PSF  |

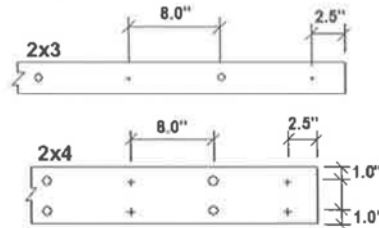
See note 5 for bracing  
all web members 6.0 ft.  
in length or greater

## Lumber Sizes:

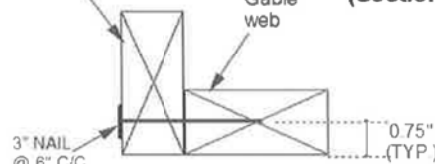
|               |            |
|---------------|------------|
| Top chord:    | 2x4        |
| Webs:         | 2x4 or 2x3 |
| Bottom chord: | 2x4 or 2x3 |

SCAB BRACE DETAIL  
(Section B-B)

SPF No. 2 DRY Scab, same size as web. Scab brace must cover 90% of web length



- + 0.122"x3.0" nail driven from front face
- o 0.122"x3.0" nail driven from back face

2x4 SPF No. 2  
DRY L-BraceL BRACE DETAIL  
(Section A-A)

Fasten L-Brace to narrow edge of web with one row of 0.122" x 3.0" nails spaced at 6.0" c/c along entire length of web. Brace must cover 90% of the web length. Respect a 2.5" minimum end distance.

## Notes:

1. This detail is only valid for projects conforming to **Part 9, NBCC 2015** that do not require a wind analysis to be incorporated into the design of the truss.
2. This detail is for vertical (gravity) load rating of the truss only. Truss must be continuously supported over the entire length of bottom chord.
3. Maximum web length not to exceed 12.0 ft. Spacing of gable stud webs in the truss not to exceed 24 inches cc.
4. Splice joints shall not be located in the first panel adjacent to the heel joint or peak joint.
5. Lateral restraint required at half-length of all webs over 6.0 ft. long. Alternatively install an L-Brace or scab brace as shown above. Scab braces shall be limited to 10 ft. long webs or less.
6. All plates are MITTEK MT20 pressed into both faces of truss.
7. All lumber to be SPF (or D-Fir) DRY and of No.2 grade or better.
8. Additional building bracing is typically installed to brace the face of the end wall assembly. See BCSI Canada 'Building Designer Responsibilities for Gable End Frame Bracing' for additional information on building bracing for gable-end assemblies.

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