

**NE0618-005****GREEN YORK HOMES - GRANELLI  
HOME CORP - LIANA 3 ELEV 1****RESPONSIBILITIES**

THIS DESIGN IS FOR AN INDIVIDUAL BUILDING COMPONENT AND HAS BEEN BASED ON INFORMATION PROVIDED BY THE DESIGN OFFICE OF KOTT LUMBER. 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 LUMBER 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**

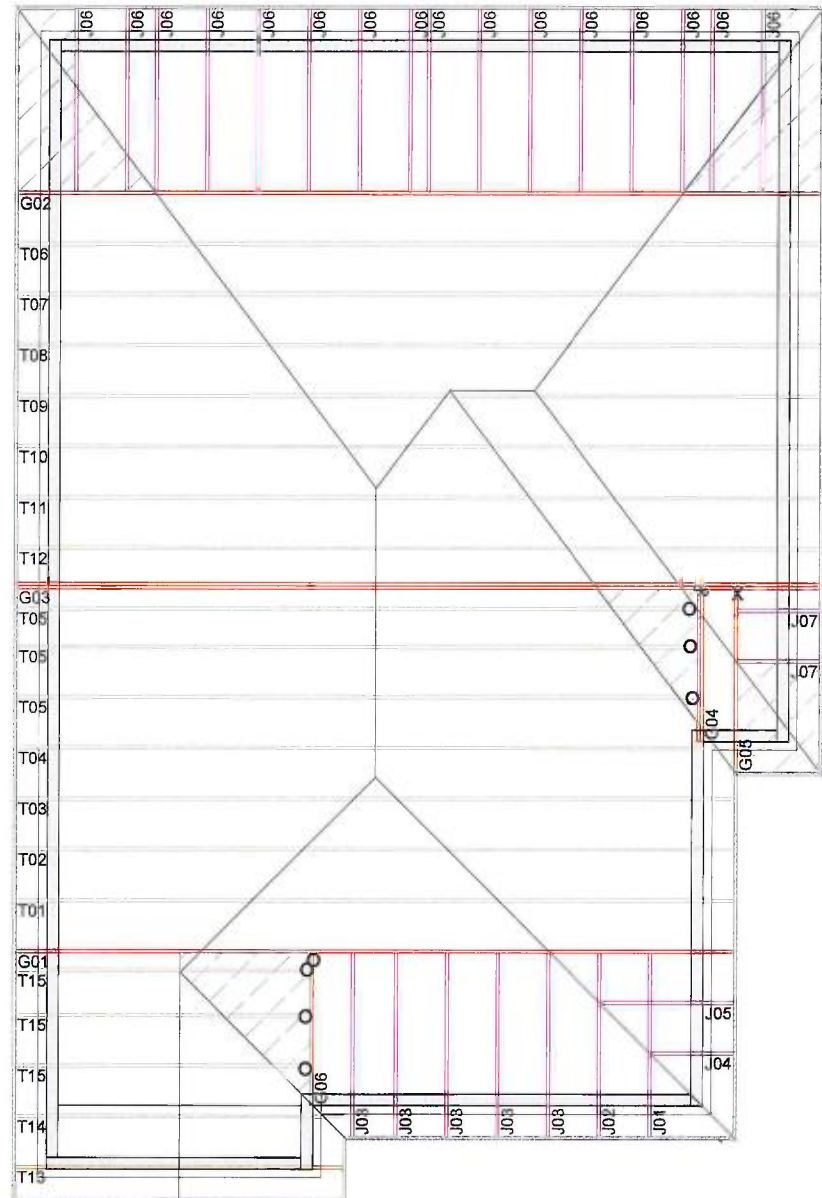
- Geometry of the truss and dimensions indicated on the drawing are identical to those of the installed truss.

Layout based on plans provided by  
Jardin Design Group Inc.  
Revision #2 dated May 22, 2018

THIS CERTIFICATION IS FOR THE ENGINEERING REVIEW OF STRUCTURAL COMPONENTS SHOWN ON THIS DRAWING AND IS LIMITED TO THE COMPONENTS SUPPLIED BY KOTT LUMBER FOR THE LOADS AND CONDITIONS SHOWN ON THE CALCULATION PAGE OF EACH COMPONENT. THE PLACEMENT OF THESE COMPONENTS ON THIS LAYOUT IS SHOWN FOR REFERENCE ONLY. ROOF TRUSSES MUST BE INSTALLED ACCORDING TO MANUFACTURER'S GUIDELINES AT 24" C/C UNLESS NOTED OTHERWISE. CONVENTIONAL FRAMING SHOWN ON THE LAYOUT MUST BE DESIGNED AND APPROVED BY THE PROJECT ENGINEER. TEMPORARY AND PERMANENT BRACINGS OF THE ROOF AND BUILDING ARE THE RESPONSIBILITY OF THE PROJECT ENGINEER AND TO CONFORM TO BCSI GUIDELINES.



ENG.JOB:NE0618-005



LOWER ROOF TO BE  
CRF AS PER PLAN

For conventional framing roof / ceilings  
framing shall conform to OBC.9.23

19-447167-RR.

All work shall conform to the Ontario  
Building Code O. Reg. 332/12 as amended

## ROOF TRUSS LAYOUT

 CONVENTIONAL  
FRAMING BY OTHERS

### HANGER LEGEND

X - LUS24  
# - HGUS26

O - LJS26DS  
% - HGUS26-2

DESIGN CRITERIA  
SPECIFIED LOADS  
TOP CH. LL = 23.3 psf  
DL = 3.0 psf  
BOT CH. LL = 0.0 psf  
DL = 7.0 psf  
TOTAL LOAD = 33.3 psf

SPACING @ 24" CENTERS,  
THIS TRUSS SYSTEM IS DESIGN FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBC 2010

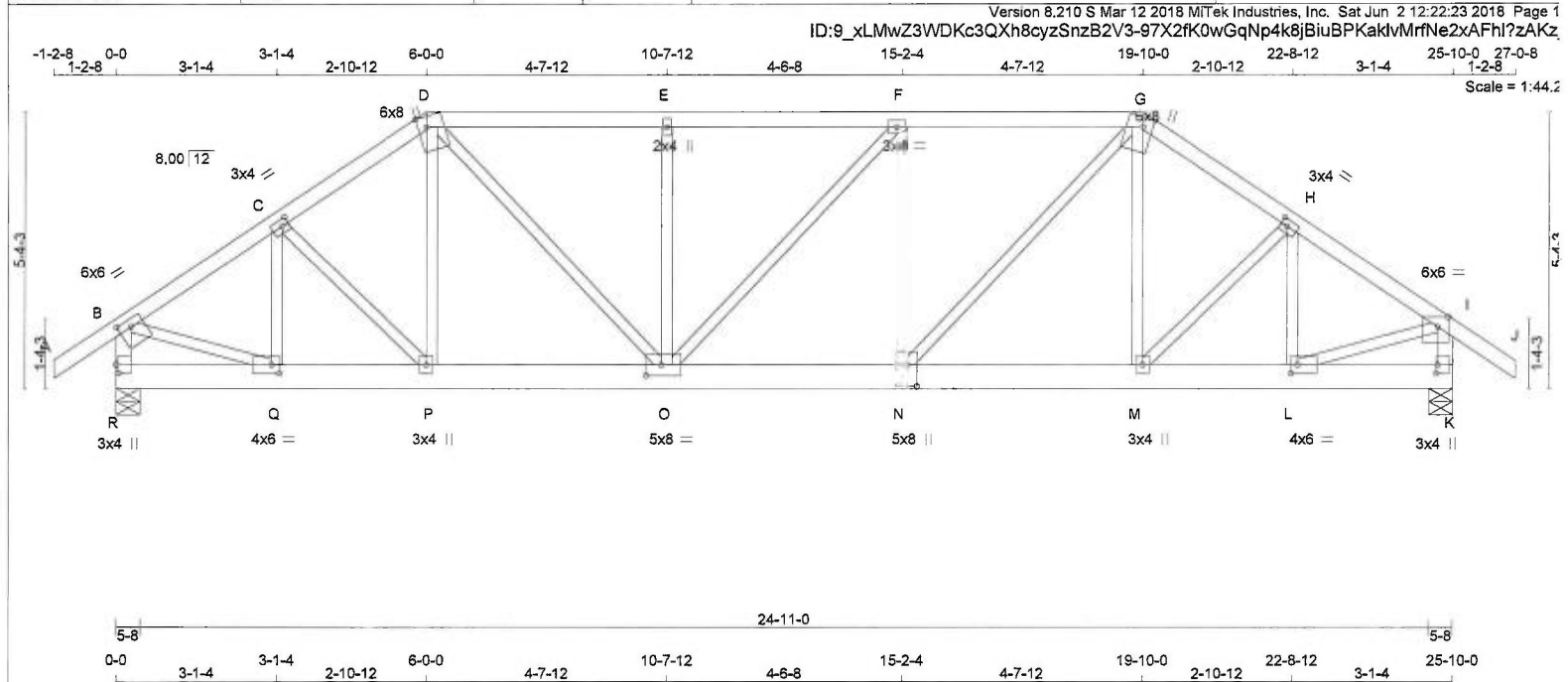
THIS DESIGN COMPLIES WITH PART 9 OF OBC 2012,  
SCBC 2012, ABC 2012, CSA 086-09, TPIC 2011

ALLOWABLE DEFLECTION OF EACH COMPONENT = L/360

|           |                  |
|-----------|------------------|
| Model:    | LIANA 3 ELE 1    |
| Customer: | GREEN YORK HOMES |
| Project:  | GRANELLI HOME    |
| Location: | BRAMPTON, ON     |
| Drawn By: | DM               |
| Date:     | 5/31/2018        |

SIZE AND LOCATION OF CONVENTIONAL FRAMING IS APPROXIMATE. ALL AREAS  
MAY NOT BE SHOWN. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

ALL CONVENTIONAL FRAMING TO CONFORM WITH PART 9 OF THE O.B.C RAFTER THAT  
CROSS MEET OVER TRUSSES TO BE 2X4 SPF @ 24" O/C WITH 2X4 VERT POST TO THE  
TRUSS BELOW EA CROSS PT. VERT POS. THAN 6' TO HAVE A LATERAL BRACING SO THAT  
THE DISTANCE BETEN PT & VERT ROWS OF BRACING DOES NOT EXCEED 6'



TOTAL WEIGHT = 130 lb

| LUMBER             |       |     |        |       |
|--------------------|-------|-----|--------|-------|
| N. L. G. A.        | RULES |     |        |       |
| CHORDS             | SIZE  |     | Lumber | DESCR |
| A - D              | 2x4   | DRY | No.2   | SPF   |
| D - G              | 2x4   | DRY | No.2   | SPF   |
| G - J              | 2x4   | DRY | No.2   | SPF   |
| R - B              | 2x4   | DRY | No.2   | SPF   |
| K - I              | 2x4   | DRY | No.2   | SPF   |
| R - N              | 2x6   | DRY | No.2   | SPF   |
| N - K              | 2x6   | DRY | No.2   | SPF   |
| ALL WEBS<br>EXCEPT | 2x3   | DRY | No.2   | SPF   |

DRY: SEASONED LUMBER.

| DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |                         |      |                                 |      |           |           |       |
|-----------------------------------------------------------------------------------------------|-------------------------|------|---------------------------------|------|-----------|-----------|-------|
| <u>BEARINGS</u>                                                                               |                         |      |                                 |      |           |           |       |
|                                                                                               | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQRD BRG |       |
|                                                                                               | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX     | IN-SX |
| JT                                                                                            | 2248                    | 0    | 2248                            | 0    | 0         | 5-8       | 5-8   |
| R                                                                                             | 2248                    | 0    | 2248                            | 0    | 0         | 5-8       | 5-8   |
| K                                                                                             | 2499                    | 0    | 2499                            | 0    | 0         | 5-8       | 5-8   |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.87 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY  
APPLIED.

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

## LOADING

**TOTAL LOAD CASES: (4)**

| C H O R D S   |           |            |          |          | W E B S       |       |               |          |  |
|---------------|-----------|------------|----------|----------|---------------|-------|---------------|----------|--|
| MAX. FACTORED |           | FACTORED   |          |          | MAX. FACTORED |       | MAX. FACTORED |          |  |
| MEMB.         | FORCE     | VERT. LOAD | LC1      | MAX      | MAX.          | MEMB. | FORCE         | MAX      |  |
|               | (LBS)     | (PLF)      | CSI (LC) |          | UNBRAC        |       | (LBS)         | CSI (LC) |  |
| FR-TO         |           | FROM TO    |          |          | LENGTH        | FR-TO |               |          |  |
| A-B           | 0 / 28    | -77.4      | -77.4    | 0.10 (1) | 10.00         | Q-C   | -853 / 0      | 0.13 (1) |  |
| B-C           | -2456 / 0 | -77.4      | -77.4    | 0.19 (1) | 4.21          | C-P   | 0 / 311       | 0.06 (1) |  |
| C-D           | -2749 / 0 | -77.4      | -77.4    | 0.21 (1) | 3.99          | P-D   | -59 / 30      | 0.02 (1) |  |
| D-E           | -3530 / 0 | -77.4      | -77.4    | 0.51 (1) | 3.26          | D-O   | 0 / 1841      | 0.46 (1) |  |
| E-F           | -3530 / 0 | -145.9     | -145.9   | 0.74 (1) | 2.87          | O-E   | -509 / 0      | 0.21 (1) |  |
| F-G           | -3457 / 0 | -145.9     | -145.9   | 0.74 (1) | 2.92          | O-F   | 0 / 108       | 0.03 (1) |  |
| G-H           | -3038 / 0 | -77.4      | -77.4    | 0.22 (1) | 3.80          | N-F   | -838 / 0      | 0.34 (1) |  |
| H-I           | -2737 / 0 | -77.4      | -77.4    | 0.21 (1) | 4.00          | N-G   | 0 / 1383      | 0.34 (1) |  |
| I-J           | 0 / 28    | -77.4      | -77.4    | 0.10 (1) | 10.00         | M-G   | -42 / 113     | 0.04 (4) |  |
| R-B           | -2191 / 0 | 0.0        | 0.0      | 0.24 (1) | 5.69          | M-H   | 0 / 319       | 0.08 (1) |  |
| K-I           | -2420 / 0 | 0.0        | 0.0      | 0.27 (1) | 5.44          | L-H   | -662 / 0      | 0.14 (1) |  |
|               |           |            |          |          |               | B-Q   | 0 / 2145      | 0.53 (1) |  |
|               |           |            |          |          |               | L-I   | 0 / 2390      | 0.59 (1) |  |
| R-Q           | 0 / 0     | -18.2      | -18.2    | 0.06 (1) | 10.00         |       |               |          |  |
| Q-P           | 0 / 2053  | -18.2      | -18.2    | 0.33 (1) | 10.00         |       |               |          |  |
| P-O           | 0 / 2271  | -18.2      | -18.2    | 0.36 (1) | 10.00         |       |               |          |  |
| O-N           | 0 / 3457  | -34.4      | -34.4    | 0.54 (1) | 10.00         |       |               |          |  |
| N-M           | 0 / 2511  | -34.4      | -34.4    | 0.37 (1) | 10.00         |       |               |          |  |
| M-L           | 0 / 2287  | -34.4      | -34.4    | 0.35 (1) | 10.00         |       |               |          |  |
| L-K           | 0 / 0     | -34.4      | -34.4    | 0.07 (1) | 10.00         |       |               |          |  |

| FACTORED CONCENTRATED LOADS (LBS) |         |      |      |      |       |      |       |
|-----------------------------------|---------|------|------|------|-------|------|-------|
| JT                                | LOC.    | LC1  | MAX- | MAX+ | FACE  | DIR. | TYPE  |
| G                                 | 19-10-0 | -348 | -348 | —    | FRONT | VERT | TOTAL |
| Q                                 | 10-5-4  | -854 | -854 | —    | FRONT | VERT | TOTAL |

## DESIGN CRITERIA

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

SPECIFIED LOADS:

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 23.3 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 33.6 | PSF |

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

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

GIRDER TYPE: CPrimeHip  
SIDE SETBACK = 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  
- ADD'L LOADS BASED ON 55 % OF GSL.  
LOADS APPLIED TO FIRST 15-0-0 OF SPAN  
MEASURED FROM THE RIGHT.

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)=  $L/360$  (0.86")  
 CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.12")  
 ALLOWABLE DEFL.(TL)=  $L/360$  (0.86")  
 CALCULATED VERT. DEFL.(TL) =  $L/999$  (0.21")

CSI: TC=0.74/1.00 (E-F:1), BC=0.54/1.00 (N-O:1),  
WB=0.59/1.00 (I-L:1), SSI=0.35/1.00 (F-G: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 = 0.50



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

CONTINUED ON PAGE 2



**HANGERS NOTES**

- 1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 348.1 lbs FACTORED DOWN AT 19-10-0 ON TOP CHORD, AND 854.0 lbs FACTORED DOWN AT 10-5-4 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

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

**NAIL VALUES**

| PLATE | GRIP(DRY) | SHEAR | SECTION |
|-------|-----------|-------|---------|
|       | (PSI)     | (PLI) | (PLI)   |
|       | MAX       | MIN   | MAX     |
| MT20  | 618       | 354   | 1667    |
|       |           | 822   | 2284    |
|       |           |       | 1656    |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (O) (INPUT = 0.90 )  
JSI METAL= 0.64 (B) (INPUT = 1.00 )

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

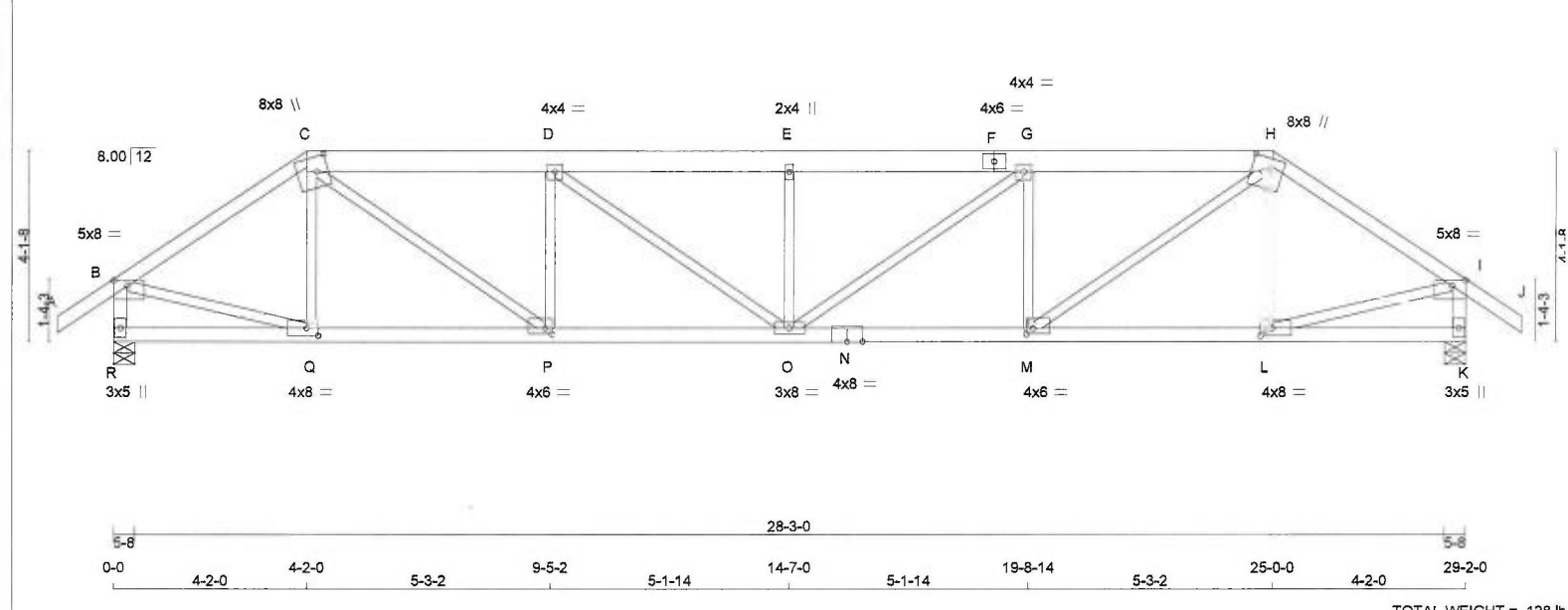


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-1-2-8 0-0 4-2-0 4-2-0 5-3-2 9-5-2 5-1-14 14-7-0 5-1-14 19-8-14 5-3-2 25-0-0 4-2-0 29-2-0 30-4-8 1-2-8

Scale = 1:49.4



| LUMBER                |        |      |        | DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER |          |                |                  |
|-----------------------|--------|------|--------|-----------------------------------------------------------------------------------------------|----------|----------------|------------------|
| N. L. G. A. RULES     | CHORDS | SIZE | LUMBER | DESCR.                                                                                        | BEARINGS | FACTORED       | MAXIMUM FACTORED |
| A - C                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| C - F                 | 2x6    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| F - H                 | 2x6    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| H - J                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| R - B                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| K - I                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| R - N                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| N - K                 | 2x4    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| ALL WEBS              | 2x3    | DRY  | No.2   | SPF                                                                                           | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| EXCEPT                |        |      |        |                                                                                               | FACTORED | GROSS REACTION | MAXIMUM FACTORED |
| DRY: SEASONED LUMBER. |        |      |        | UNFACTORED REACTIONS                                                                          |          |                |                  |
|                       |        |      |        | 1ST CASE MAX./MIN. COMPONENT REACTIONS                                                        |          |                |                  |
|                       |        |      |        | JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL                                                |          |                |                  |
|                       |        |      |        | R 1885 1314 / 0 0 / 0 0 / 0 0 / 0 571 / 0 0 / 0                                               |          |                |                  |
|                       |        |      |        | K 1885 1314 / 0 0 / 0 0 / 0 0 / 0 571 / 0 0 / 0                                               |          |                |                  |
|                       |        |      |        | TOTAL WEIGHT = 128 lb                                                                         |          |                |                  |

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 23.3 PSF

DL = 3.0 PSF

BOT CH. LL = 0.0 PSF

DL = 7.3 PSF

TOTAL LOAD = 33.6 PSF

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip

SIDE SETBACK = 4-2-0

END SETBACK = 6-0-0

END WALL WIDTH = 5-8

CORNER FRAMING TYPE: CONVENTIONAL

END JACK TYPE: CONVENTIONAL

APPLIED TO FRONT SIDE

- ADD'L LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, CBC 2012, ABC 2014

- CSA 086-09

- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.97")

CALCULATED VERT. DEFL.(LL) = L/999 (0.23")

ALLOWABLE DEFL.(TL) = L/360 (0.97")

CALCULATED VERT. DEFL.(TL) = L/851 (0.41")

CSI: TC=0.46/1.00 (H-I:1), BC=0.92/1.00 (M-C:1), WB=0.67/1.00 (L-L:1), SSI=0.29/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

| PLATES (table is in inches)                                                                                                                                                                                                                      |        |        |                   | BRACING                                                                                                                                    |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| JT                                                                                                                                                                                                                                               | TYPE   | PLATES | W LEN Y X         | TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 3.44 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED. |  |  |  |
| B                                                                                                                                                                                                                                                | TMVW-p | MT20   | 5.0 8.0 1.50 3.50 | ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.                                                                 |  |  |  |
| C                                                                                                                                                                                                                                                | TTWW+m | MT20   | 8.0 8.0 4.00 3.00 | LOADING                                                                                                                                    |  |  |  |
| D                                                                                                                                                                                                                                                | TMVW-t | MT20   | 4.0 4.0           | TOTAL LOAD CASES: (4)                                                                                                                      |  |  |  |
| E                                                                                                                                                                                                                                                | TMVW-w | MT20   | 2.0 4.0           | CHORDS                                                                                                                                     |  |  |  |
| F                                                                                                                                                                                                                                                | TS-t   | MT20   | 4.0 6.0           | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                            |  |  |  |
| G                                                                                                                                                                                                                                                | TMVW-t | MT20   | 4.0 4.0           | FACTORED VERT. LOAD LC1 MAX (PLF) CSI (LC)                                                                                                 |  |  |  |
| H                                                                                                                                                                                                                                                | TTWW+m | MT20   | 8.0 8.0 4.00 3.00 | UNBRAC LENGTH FR-TO                                                                                                                        |  |  |  |
| I                                                                                                                                                                                                                                                | TMVW-p | MT20   | 5.0 8.0 1.50 3.50 | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                            |  |  |  |
| K                                                                                                                                                                                                                                                | BMV1+p | MT20   | 3.0 5.0           | FACTORED VERT. LOAD LC1 MAX (PLF) CSI (LC)                                                                                                 |  |  |  |
| L                                                                                                                                                                                                                                                | BMVW-t | MT20   | 4.0 8.0 2.00 3.00 | UNBRAC LENGTH FR-TO                                                                                                                        |  |  |  |
| M                                                                                                                                                                                                                                                | BMVW-t | MT20   | 4.0 6.0 1.50 1.75 | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                            |  |  |  |
| N                                                                                                                                                                                                                                                | BS-t   | MT20   | 4.0 8.0           | FACTORED VERT. LOAD LC1 MAX (PLF) CSI (LC)                                                                                                 |  |  |  |
| O                                                                                                                                                                                                                                                | BMVW+m | MT20   | 3.0 8.0           | UNBRAC LENGTH FR-TO                                                                                                                        |  |  |  |
| P                                                                                                                                                                                                                                                | BMVW-t | MT20   | 4.0 8.0 1.50 1.75 | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                            |  |  |  |
| Q                                                                                                                                                                                                                                                | BMVW-t | MT20   | 4.0 8.0 2.00 3.00 | FACTORED VERT. LOAD LC1 MAX (PLF) CSI (LC)                                                                                                 |  |  |  |
| R                                                                                                                                                                                                                                                | BMV1+p | MT20   | 3.0 5.0           | UNBRAC LENGTH FR-TO                                                                                                                        |  |  |  |
| HANGERS NOTES                                                                                                                                                                                                                                    |        |        |                   | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                            |  |  |  |
| 1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 241.8 lbs FACTORED DOWN AT 25-0-0, AND 241.8 lbs FACTORED DOWN AT 4-2-0 ON TOP CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER. |        |        |                   | FACTORED VERT. LOAD LC1 MAX (PLF) CSI (LC)                                                                                                 |  |  |  |

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

CONTINUED ON PAGE 2

KOTT

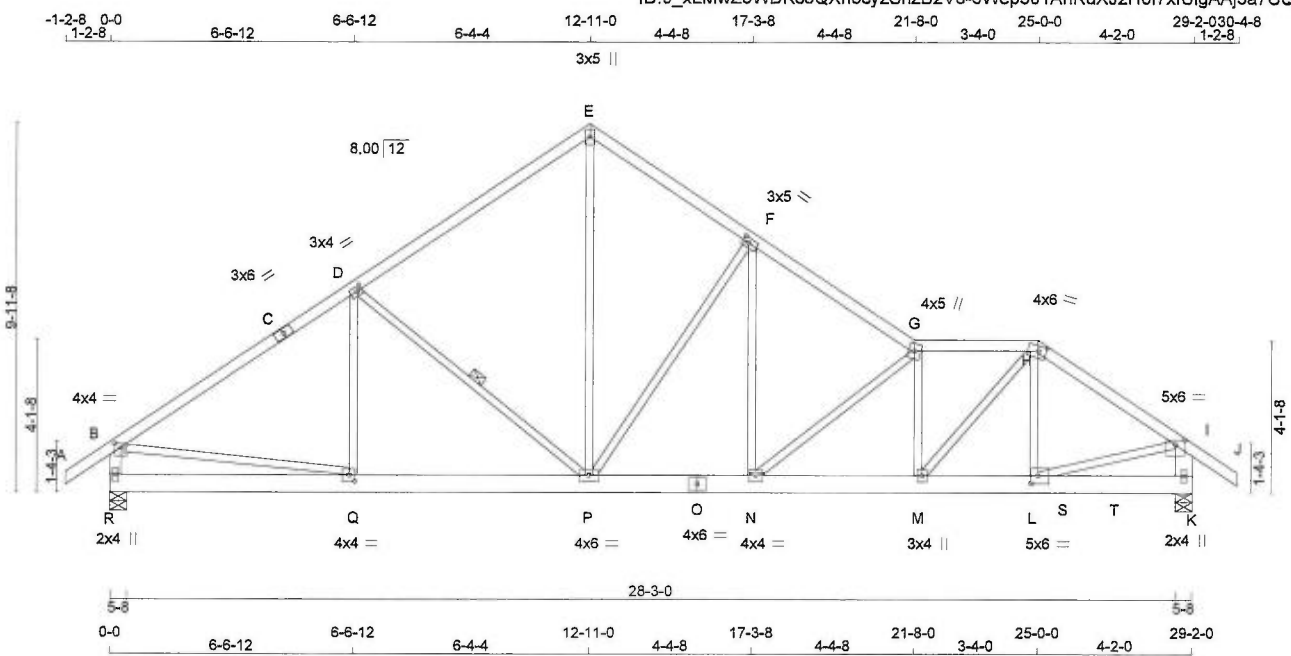
|            |            |          |     |             |                                                           |              |
|------------|------------|----------|-----|-------------|-----------------------------------------------------------|--------------|
| JOB NAME   | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | GREEN YORK HOMES - GRANELLI<br>HOME CORP - LIANA 3 ELEV 1 | DRWG NO.     |
| NE0618-005 | G02        | 1        | 1   | TRUSS DESC. |                                                           | PAGE 6 OF 38 |

Version 8.210 S Mar 12 2018 MiTek Industries, Inc. Sat Jun 2 12:22:24 2018 Page 2  
ID:9\_xLMwZ3WdKc3QXh8cyzSnzB2V3-dJ4Rsg1Y18VghuivkPQQxY7zyJc9OpgCAq?EHSzAKy

PLATE PLACEMENT TOL. = 0.250 inches  
PLATE ROTATION TOL. = 5.0 Deg.  
JSI GRIP= 0.90 (Q) (INPUT = 0.90 )  
JSI METAL= 0.90 (N) (INPUT = 1.00 )

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





Scale = 1:62.1

| LUMBER            | CHORDS | SIZE | LUMBER | DESCR. |
|-------------------|--------|------|--------|--------|
| N. L. G. A. RULES |        |      |        |        |
| A - C             | 2x4    | DRY  | No.2   | SPF    |
| C - E             | 2x4    | DRY  | No.2   | SPF    |
| E - G             | 2x4    | DRY  | No.2   | SPF    |
| G - H             | 2x4    | DRY  | No.2   | SPF    |
| H - J             | 2x4    | DRY  | No.2   | SPF    |
| R - B             | 2x4    | DRY  | No.2   | SPF    |
| K - I             | 2x6    | DRY  | No.2   | SPF    |
| R - O             | 2x6    | DRY  | No.2   | SPF    |
| O - K             | 2x6    | DRY  | No.2   | SPF    |
| ALL WEBS          | 2x3    | DRY  | No.2   | SPF    |
| EXCEPT            |        |      |        |        |

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

CHORDS #ROWS SURFACE SPACING (IN) LOAD(PLF)

TOP CHORDS : (0.122"x3") SPIRAL NAILS

A-C 1 12 TOP

C-E 1 12 TOP

E-G 1 12 TOP

G-H 1 12 TOP

H-J 1 12 TOP

R-B 1 12 TOP

K-I 2 12 TOP

BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS

R-O 2 12 TOP

O-K 2 12 SIDE(0.0)

WEBS : (0.122"x3") SPIRAL NAILS

2x3 1 6

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3-0 INCH NAILS.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PILES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

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

| BEARINGS       | FACTORED | MAXIMUM FACTORED | INPUT | REQRD  |
|----------------|----------|------------------|-------|--------|
| GROSS REACTION | DOWN     | GROSS REACTION   | BRG   | BRG    |
| JT VERT        | HORZ     | DOWN             | HORZ  | UPLIFT |
| R              | 1744     | 0                | 1744  | 0      |
| K              | 3460     | 0                | 3460  | 0      |

| UNFACTORED REACTIONS | 1ST LCASE | MAX./MIN. | COMPONENT REACTIONS |
|----------------------|-----------|-----------|---------------------|
| JT COMBINED          | SNOW      | LIVE      | PERM.LIVE           |
| R                    | 1223      | 861 / 0   | 0 / 0               |
| K                    | 2429      | 1697 / 0  | 0 / 0               |

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

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

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

1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF D-P. DBS = 20-0-0. CBF = 53 LBS.

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

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

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

| CHORDS        |             |             |          |              | WEBS          |       |             |              |  |
|---------------|-------------|-------------|----------|--------------|---------------|-------|-------------|--------------|--|
| MAX. FACTORED |             | FACTORED    |          |              | MAX. FACTORED |       | FACTORED    |              |  |
| MEMB.         | FORCE (LBS) | VERT. (PLF) | LOAD LC1 | MAX CSI (LC) | MAX. UNBRAC   | MEMB. | FORCE (LBS) | MAX CSI (LC) |  |
| FR-TO         |             | FROM        | TO       |              | LENGTH        | FR-TO |             |              |  |
| A-B           | 0 / 28      | -77.4       | -77.4    | 0.05 (1)     | 10.00         | Q-D   | -134 / 72   | 0.03 (1)     |  |
| B-C           | -2032 / 0   | -77.4       | -77.4    | 0.36 (1)     | 5.76          | D-P   | -421 / 0    | 0.10 (1)     |  |
| C-D           | -2032 / 0   | -77.4       | -77.4    | 0.36 (1)     | 5.76          | P-E   | 0 / 1545    | 0.19 (1)     |  |
| D-E           | -1711 / 0   | -77.4       | -77.4    | 0.34 (1)     | 6.15          | P-F   | -1377 / 0   | 0.89 (1)     |  |
| E-F           | -1699 / 0   | -77.4       | -77.4    | 0.15 (1)     | 6.25          | N-F   | 0 / 1232    | 0.15 (1)     |  |
| F-G           | -2563 / 0   | -77.4       | -77.4    | 0.16 (1)     | 5.50          | N-G   | -1740 / 0   | 0.50 (1)     |  |
| G-H           | -3462 / 0   | -77.4       | -77.4    | 0.12 (1)     | 4.93          | M-G   | -558 / 0    | 0.07 (1)     |  |
| H-I           | -3798 / 0   | -77.4       | -77.4    | 0.20 (1)     | 4.68          | M-H   | 0 / 404     | 0.05 (1)     |  |
| I-J           | 0 / 28      | -77.4       | -77.4    | 0.05 (1)     | 10.00         | L-H   | 0 / 1519    | 0.19 (1)     |  |
| R-B           | -1687 / 0   | 0.0         | 0.0      | 0.09 (1)     | 7.81          | B-Q   | 0 / 1736    | 0.21 (1)     |  |
| K-I           | -3072 / 0   | 0.0         | 0.0      | 0.11 (1)     | 7.81          | L-I   | 0 / 3231    | 0.40 (1)     |  |
|               |             |             |          |              |               |       |             |              |  |
| R-Q           | 0 / 0       | -18.2       | -18.2    | 0.04 (4)     | 10.00         |       |             |              |  |
| Q-P           | 0 / 1718    | -18.2       | -18.2    | 0.14 (1)     | 10.00         |       |             |              |  |
| P-O           | 0 / 2154    | -18.2       | -18.2    | 0.17 (1)     | 10.00         |       |             |              |  |
| O-N           | 0 / 2154    | -18.2       | -18.2    | 0.17 (1)     | 10.00         |       |             |              |  |
| N-M           | 0 / 3477    | -18.2       | -18.2    | 0.30 (1)     | 10.00         |       |             |              |  |
| M-L           | 0 / 3197    | -18.2       | -18.2    | 0.46 (1)     | 10.00         |       |             |              |  |
| L-S           | 0 / 0       | -18.2       | -18.2    | 0.32 (1)     | 10.00         |       |             |              |  |
| S-T           | 0 / 0       | -18.2       | -18.2    | 0.32 (1)     | 10.00         |       |             |              |  |
| T-K           | 0 / 0       | -18.2       | -18.2    | 0.32 (1)     | 10.00         |       |             |              |  |

| FACTORED CONCENTRATED LOADS (LBS) | JT     | LOC.  | LC1   | MAX- | MAX+ | FACE  | DIR. | TYPE  |
|-----------------------------------|--------|-------|-------|------|------|-------|------|-------|
| S                                 | 25-8-8 | -1946 | -1946 | -    | -    | FRONT | VERT | TOTAL |
| T                                 | 27-1-4 | -270  | -270  | -    | -    | FRONT | VERT | TOTAL |

### DESIGN CRITERIA

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

SPECIFIED LOADS:  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

SPACING = 24.0 IN. C/C

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

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, CBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.36/1.00 (B-D:1), BC=0.46/1.00 (L-M:1), WB=0.89/1.00 (F-P:1), SSI=0.63/1.00 (K-L: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 = 0.50

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 618 354 1667 822 2284 1656

CONTINUED ON PAGE 2

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



**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| B  | TMVW-p | MT20   | 4.0 | 4.0 | 1.25 | 2.00 |
| C  | TS-t   | MT20   | 3.0 | 6.0 |      |      |
| D  | TMWW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| E  | TTW+p  | MT20   | 3.0 | 5.0 |      |      |
| F  | TMWW-t | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| G  | TTWW+m | MT20   | 4.0 | 5.0 |      |      |
| H  | TTWW-m | MT20   | 4.0 | 6.0 | 1.75 | 2.50 |
| I  | TMVW-p | MT20   | 5.0 | 6.0 | 1.50 | 3.00 |
| K  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |
| L  | BMWW-t | MT20   | 5.0 | 6.0 | 2.50 | 2.25 |
| M  | BMWW-t | MT20   | 3.0 | 4.0 |      |      |
| N  | BMWW-t | MT20   | 4.0 | 4.0 |      |      |
| O  | BS-t   | MT20   | 4.0 | 6.0 |      |      |
| P  | BMWW-t | MT20   | 4.0 | 6.0 |      |      |
| Q  | BMWW-t | MT20   | 4.0 | 4.0 | 2.00 | 1.75 |
| R  | BMV1+p | MT20   | 2.0 | 4.0 |      |      |

**HANGERS NOTES**

- 1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 1945.7 lbs FACTORED DOWN AT 25-8-8, AND 270.4 lbs FACTORED DOWN AT 27-1-4 ON BOTTOM CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

PLATE PLACEMENT TOL. = 0.250 inches

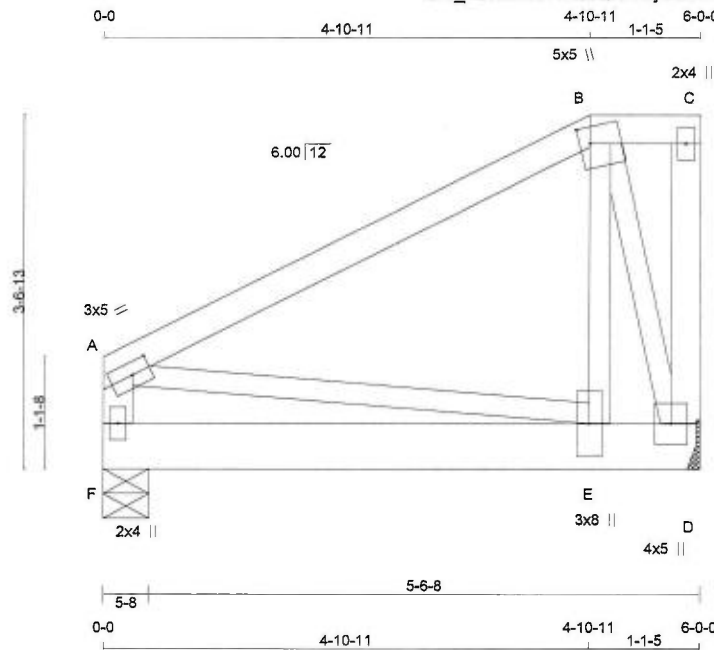
PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL= 0.40 (L) (INPUT = 1.00 )

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





Scale = 1:23.2

TOTAL WEIGHT =  $2 \times 31 = 61 \text{ lb}$   
[M]

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

ALL WEBS 2x3 DRY No.2 SPF  
EXCEPT

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 2 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

| CHORDS #ROWS                             | SURFACE<br>SPACING (IN) | LOAD(PLF)    |
|------------------------------------------|-------------------------|--------------|
| TOP CHORDS : (0.122"x3") SPIRAL NAILS    |                         |              |
| A-B 1                                    | 12                      | TOP          |
| B-C 1                                    | 12                      | TOP          |
| C-D 1                                    | 12                      | TOP          |
| F-A 1                                    | 12                      | TOP          |
| BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS |                         |              |
| F-D 2                                    | 9                       | SIDE (276.4) |
| WEBS : (0.122"x3") SPIRAL NAILS          |                         |              |
| 2x3 1                                    | 6                       |              |

NAILS TO BE DRIVEN FROM ONE SIDE ONLY.

TOP - COMPONENTS ARE LOADED FROM THE TOP AND MUST BE PLACED ON TOP EDGE OF ALL PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

SIDE - PLF SHOWN IS THE EQUIVALENT UDL APPLIED TO ONE SIDE THAT THE CORRESPONDING NAILING PATTERN SHALL BE CAPABLE OF TRANSFERRING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.

**PLATES (table is in inches)**

| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| A  | TMVW-t | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| B  | TTWW+m | MT20   | 5.0 | 5.0 | 2.00 | 1.25 |
| C  | TMV+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        |
| D  | 1945                       | 0    | 1945                               | 0    | 0      | MECHANICAL   |              |
| F  | 1945                       | 0    | 1945                               | 0    | 0      | 5-8          | 5-8          |

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT D TO RESIST THE MAX FACTORED REACTIONS.

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| D         | 1367     | 947 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 419 / 0 | 0 / 0 |
| F         | 1367     | 947 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 419 / 0 | 0 / 0 |

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

## BRACING

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

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

## LOADING

**TOTAL LOAD CASES: (4)**

| CHORDS |                           |                           |                   |             | WEBS  |                           |                    |  |  |
|--------|---------------------------|---------------------------|-------------------|-------------|-------|---------------------------|--------------------|--|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX. CSI (LC) | MAX. UNBRAC | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. CSI (LC)      |  |  |
| FR-TO  |                           | FROM                      | TO                | LENGTH      | FR-TO |                           |                    |  |  |
| A-B    | -932 / 0                  | -77.4                     | -77.4             | 0.18 (1)    | 6.25  | E-B                       | 0 / 2841 0.35 (1)  |  |  |
| B-C    | 0 / 0                     | -77.4                     | -77.4             | 0.01 (1)    | 10.00 | B-D                       | -2811 / 0 0.31 (1) |  |  |
| D-C    | -43 / 0                   | 0.0                       | 0.0               | 0.00 (1)    | 7.81  | A-E                       | 0 / 842 0.10 (1)   |  |  |
| F-A    | -729 / 0                  | 0.0                       | 0.0               | 0.04 (1)    | 7.81  |                           |                    |  |  |
| F-E    | 0 / 0                     | -571.0                    | -571.0            | 0.48 (1)    | 10.00 |                           |                    |  |  |
| E-D    | 0 / 926                   | -571.0                    | -571.0            | 0.45 (1)    | 10.00 |                           |                    |  |  |

## DESIGN CRITERIA

| SPECIFIED LOADS: |     |      |      |     |
|------------------|-----|------|------|-----|
| TOP              | CH. | LL = | 23.3 | PSF |
|                  |     | DL = | 3.0  | PSF |
| BOT              | CH. | LL = | 0.0  | PSF |
|                  |     | DL = | 7.3  | PSF |
| TOTAL LOAD       |     | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CStdGirder  
START DISTANCE = 0-0  
START SPAN CARRIED = 25-7-0  
END DISTANCE = 6-0-0  
END SPAN CARRIED = 25-7-0  
END WALL WIDTH = 5-8  
APPLIED TO BACK SIDE OF BOTTOM CHORD.  
- ADD'L LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)=  $L/360$  (0.20")  
CALCULATED VERT. DEFL.(LL) =  $L/999$  (0.05")  
ALLOWABLE DEFL.(TL)=  $L/360$  (0.20")  
CALCULATED VERT. DEFL.(TL) =  $L/822$  (0.09")

CSI: TC=0.18/1.00 (A-B:1), BC=0.48/1.00 (E-F:1), WB=0.35/1.00 (B-E:1), SSI=0.54/1.00 (E-F: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 = 0.50

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        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

CONTINUED ON PAGE 2

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



PLATES (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y | X |
|----|---------|--------|-----|-----|---|---|
| D  | BMVW1+p | MT20   | 4.0 | 5.0 |   |   |
| E  | BMVW+t  | MT20   | 3.0 | 8.0 |   |   |
| F  | BMV1+p  | MT20   | 2.0 | 4.0 |   |   |

PLATE PLACEMENT TOL. = 0.250 inches

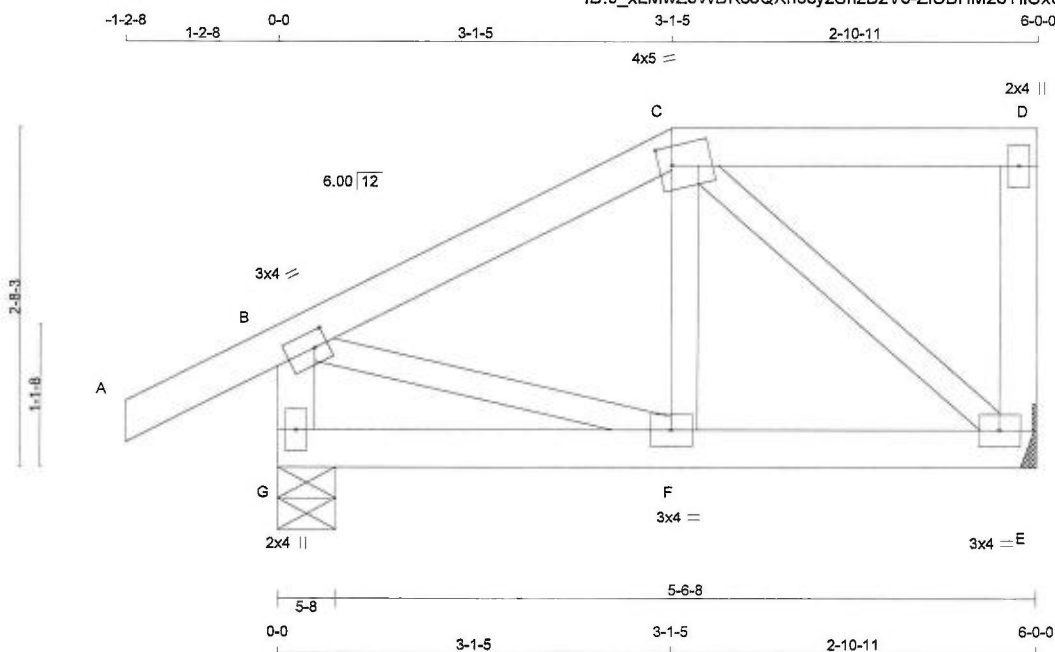
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.79 (E) (INPUT = 0.90 )

JSI METAL= 0.39 (B) (INPUT = 1.00 )

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





Scale = 1:18.2

TOTAL WEIGHT = 26 lb

## LUMBER

## N. L. G. A. RULES

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

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

DRY: SEASONED LUMBER.

**PLATES** (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.25 |
| C  | TTWW-m  | MT20   | 4.0 | 5.0 | 1.75 | 1.25 |
| D  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| E  | BMVW1-t | MT20   | 3.0 | 4.0 |      |      |
| F  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| G  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

## HANGERS NOTES

1) SPECIAL HANGER(S) OR CONNECTION(S) REQUIRED TO SUPPORT CONCENTRATED LOAD(S) 20.0 lbs FACTORED DOWN AT 3-1-5 ON TOP CHORD. DESIGN FOR UNSPECIFIED CONNECTION(S) IS DELEGATED TO THE BUILDING DESIGNER.

**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 | REQD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------|--------------|-------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | UPLIFT | IN-SX        | IN-SX       |
| E  | 272                        | 0    | 272                                | 0    | 0      | MECHANICAL   |             |
| G  | 383                        | 0    | 383                                | 0    | 0      | 5-8          | 5-8         |

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT E TO RESIST THE MAX FACTORED REACTIONS.

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |        |       |
|-----------|----------|-------------------------------|-------|-----------|-------|--------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
| E         | 190      | 134 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 56 / 0 | 0 / 0 |
| G         | 266      | 201 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 65 / 0 | 0 / 0 |

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

## BRACING

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

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

## LOADING

TOTAL LOAD CASES: (4)

| CHORDS |               |                  |       |              | WEBS        |       |               |              |          |
|--------|---------------|------------------|-------|--------------|-------------|-------|---------------|--------------|----------|
| MEMB.  | MAX. FACTORED | FACTORED         |       |              | MAX. UNBRAC | MEMB. | MAX. FACTORED |              |          |
|        | FORCE (LBS)   | VERT. LOAD (PLF) | LC1   | MAX CSI (LC) |             |       | FORCE (LBS)   | MAX CSI (LC) |          |
| FR-TO  |               | FROM             | TO    |              | LENGTH      | FR-TO |               |              |          |
| A-B    | 0 / 22        | -77.4            | -77.4 | 0.10 (1)     | 10.0        | F-C   | 0 / 52        |              | 0.02 (4) |
| B-C    | -209 / 0      | -77.4            | -77.4 | 0.14 (1)     | 6.25        | C-E   | -243 / 0      |              | 0.06 (1) |
| C-D    | 0 / 0         | -68.5            | -68.5 | 0.11 (1)     | 10.0        | B-F   | 0 / 193       |              | 0.05 (1) |
| E-D    | -98 / 0       | 0.0              | 0.0   | 0.01 (1)     | 7.81        |       |               |              |          |
| G-B    | -360 / 0      | 0.0              | 0.0   | 0.04 (1)     | 7.81        |       |               |              |          |
|        |               |                  |       |              |             |       |               |              |          |
| G-F    | 0 / 0         | -16.2            | -16.2 | 0.04 (4)     | 10.0        |       |               |              |          |
| F-E    | 0 / 187       | -16.2            | -16.2 | 0.06 (4)     | 10.0        |       |               |              |          |

FACTORED CONCENTRATED LOADS (LBS)

|    |       |     |      |      |       |      |       |
|----|-------|-----|------|------|-------|------|-------|
| JT | LOC.  | LC1 | MAX- | MAX+ | FACE  | DIR. | TYPE  |
| C  | 3-1-5 | -20 | -20  | —    | FRONT | VERT | TOTAL |



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

## DESIGN CRITERIA

SPECIFIED LOADS:

|              |      |      |     |
|--------------|------|------|-----|
| TOP CH.      | LL = | 23.3 | PSF |
|              | DL = | 3.0  | PSF |
| BOT CH.      | LL = | 0.0  | PSF |
|              | DL = | 7.3  | PSF |
| TOTAL LOAD = |      | 33.6 | PSF |

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip

LEFT SETBACK = 3-1.5  
RIGHT SETBACK = 0-0  
END SETBACK = 2-0-0  
END WALL WIDTH = 5-8  
CORNER FRAMING TYPE: CONVENTIONAL  
END JACK TYPE: CONVENTIONAL  
APPLIED TO FRONT SIDE  
- ADD'L LOADS BASED ON 55 % OF GSL

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

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

CSI: TC=0.14/1.00 (B-C:1), BC=0.06/1.00 (E-F:4)  
WB=0.06/1.00 (C-E:1), SSI=0.09/1.00 (B-C:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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        | 618       | 354 | 1667  | 822 | 2284 1656 |

CONTINUED ON PAGE 2



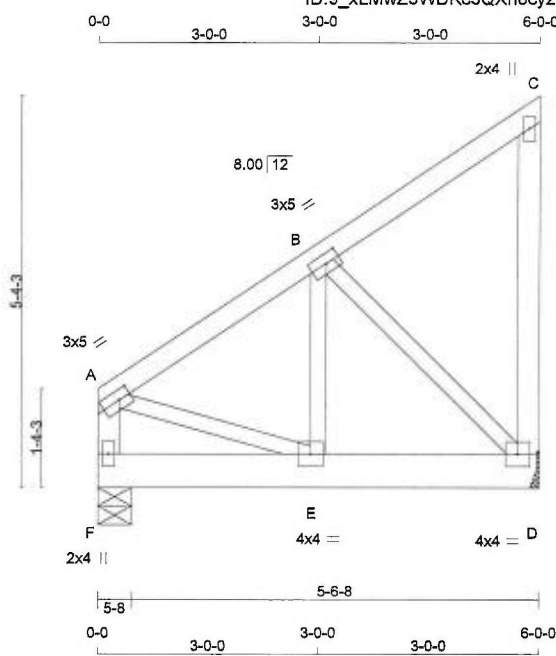
|             |            |          |     |             |                                                           |               |
|-------------|------------|----------|-----|-------------|-----------------------------------------------------------|---------------|
| JOB NAME    | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | GREEN YORK HOMES - GRANELLI<br>HOME CORP - LIANA 3 ELEV 1 | DRWG NO.      |
| NE0618-005. | G05        | 1        | 1   | TRUSS DESC. |                                                           | PAGE 12 OF 38 |

Version 8.210 S Mar 12 2018 MiTek Industries, Inc. Sat Jun 2 12:22:26 2018 Page 2  
ID:9\_xLMwZ3WDKc3QXh8cyzSnzB2V3-ZiCBHM2oYIIIOxCslsqSu1zCON6W4ssjUd8ULLKzAKy

PLATE PLACEMENT TOL. = 0.250 inches  
PLATE ROTATION TOL. = 5.0 Deg.  
JSI GRIP= 0.49 (B) (INPUT = 0.90 )  
JSI METAL= 0.12 (B) (INPUT = 1.00 )

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





Scale = 1:31.4

TOTAL WEIGHT = 33 lb [M]

| <u>LUMBER</u>         |      |     |        |  |       |
|-----------------------|------|-----|--------|--|-------|
| N. L. G. A. RULES     |      |     |        |  |       |
| CHORDS                | SIZE |     | LUMBER |  | DESCR |
| A - C                 | 2x4  | DRY | No.2   |  | SPF   |
| D - C                 | 2x4  | DRY | No.2   |  | SPF   |
| F - A                 | 2x4  | DRY | No.2   |  | SPF   |
| F - D                 | 2x6  | DRY | No.2   |  | SPF   |
| ALL WEBS              | 2x3  | DRY | No.2   |  | SPF   |
| EXCEPT                |      |     |        |  |       |
| DRY: SEASONED LUMBER. |      |     |        |  |       |

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| A                           | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| B                           | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.25 |
| C                           | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| D                           | BMVW1-t | MT20   | 4.0 | 4.0 |      |      |
| E                           | BMVW-t  | MT20   | 4.0 | 4.0 |      |      |
| F                           | 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 |       |
|----------|------|----------------|------|------------------|------|------------|-------|-------|-------|
| JT       | VERT | GROSS REACTION | HORZ | GROSS REACTION   | DOWN | BRG        | IN-SX | BRG   | IN-SX |
| D        | 855  | 0              | 855  | 0                | 0    | MECHANICAL |       |       |       |
| F        | 855  | 0              | 855  | 0                | 0    | 5-8        | 5-8   |       |       |

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT D TO RESIST THE MAX FACTORED REACTIONS.

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |  |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|--|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |  |
| D         | 600      | 416 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 184 / 0 | 0 / 0 |  |
| F         | 600      | 416 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 184 / 0 | 0 / 0 |  |

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

### BRACING

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

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

### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                 | WEBS  |                           |              |    |
|--------|---------------------------|---------------------------|-----------------|-------|---------------------------|--------------|----|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 (LC)    | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 (LC) |    |
| FR-TO  |                           | FROM                      | TO              | FR-TO |                           | FROM         | TO |
| A-B    | -605 / 0                  | -77.4                     | -77.4 0.12 (1)  | E-B   | 0 / 565                   | 0.14 (1)     |    |
| B-C    | -14 / 0                   | -77.4                     | -77.4 0.12 (1)  | B-D   | -721 / 0                  | 0.21 (1)     |    |
| D-C    | -80 / 0                   | 0.0                       | 0.0 0.04 (1)    | A-E   | 0 / 540                   | 0.13 (1)     |    |
| F-A    | -596 / 0                  | 0.0                       | 0.0 0.07 (1)    |       |                           |              |    |
| F-E    | 0 / 0                     | -207.5                    | -207.5 0.12 (1) |       |                           |              |    |
| E-D    | 0 / 515                   | -207.5                    | -207.5 0.19 (1) |       |                           |              |    |

### DESIGN CRITERIA

| SPECIFIED LOADS: |      |          |
|------------------|------|----------|
| TOP CH.          | LL = | 23.3 PSF |
|                  | DL = | 3.0 PSF  |
| BOT CH.          | LL = | 0.0 PSF  |
|                  | DL = | 7.3 PSF  |
| TOTAL LOAD       | =    | 33.6 PSF |

### SPACING = 24.0 IN. C/C

GIRDER TYPE: CStdGirder  
START DISTANCE = 0-0  
START SPAN CARRIED = 10-4-8  
END DISTANCE = 6-0-0  
END SPAN CARRIED = 10-4-8  
END WALL WIDTH = 5-8  
APPLIED TO BACK SIDE OF BOTTOM CHORD.  
- ADD'L LOADS BASED ON 55 % OF GSL.

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.01")

CSI: TC=0.12/1.00 (A-B:1) , BC=0.19/1.00 (D-E:1) , WB=0.21/1.00 (B-D:1) , SSI=0.24/1.00 (E-F: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 = 0.50

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)   |
| MT20        | 618       | 354   | 1667    |
|             |           | 822   | 2284    |
|             |           |       | 1656    |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

CONTINUED ON PAGE 2



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



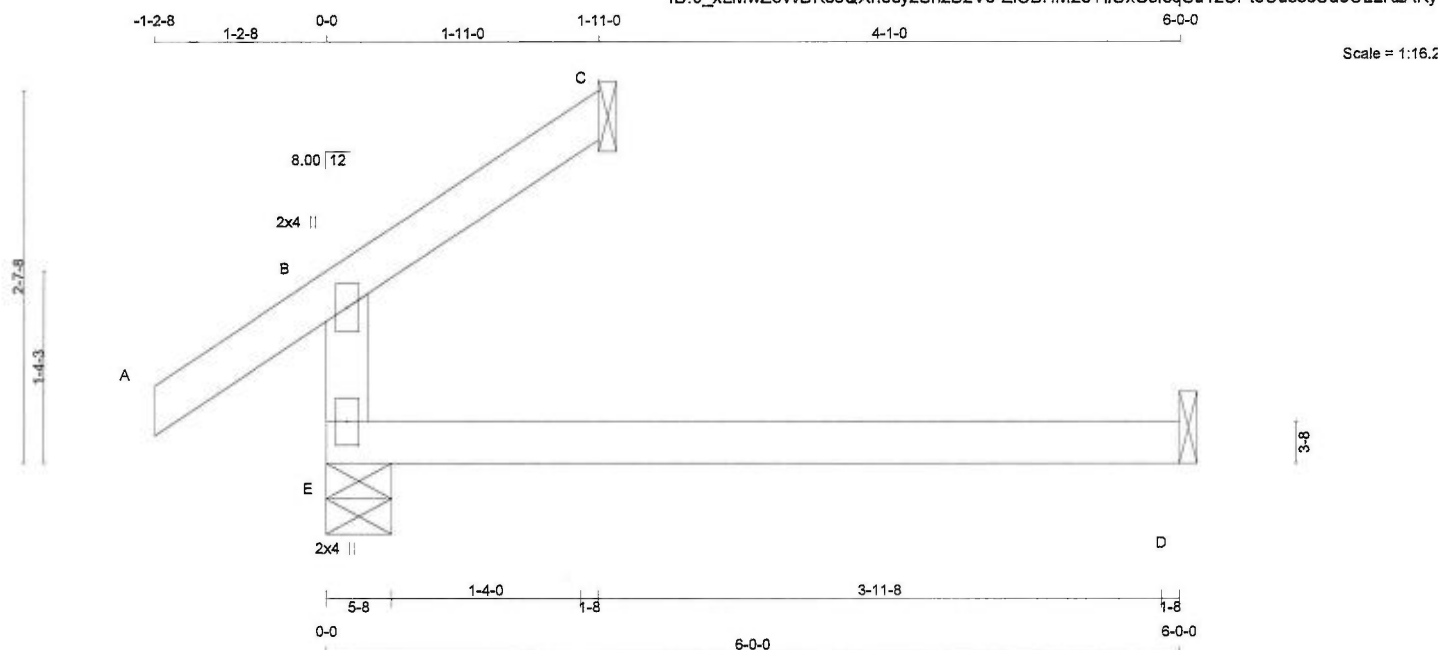
|             |            |          |     |             |                                                           |               |
|-------------|------------|----------|-----|-------------|-----------------------------------------------------------|---------------|
| JOB NAME    | TRUSS NAME | QUANTITY | PLY | JOB DESC.   | GREEN YORK HOMES - GRANELLI<br>HOME CORP - LIANA 3 ELEV 1 | DRWG NO.      |
| NE0618-005. | G06        | 1        | 1   | TRUSS DESC. |                                                           | PAGE 14 OF 38 |

Version 8.210 S Mar 12 2018 MiTek Industries, Inc. Sat Jun 2 12:22:26 2018 Page 2  
ID:9\_xLMwZ3WDKc3QXh8cyzSnzB2V3-ZiCBHM2oYIIIOxCslsqSu1zCPg6U5spOUd8ULLKzAKy

JSI GRIP= 0.85 (B) (INPUT = 0.90 )  
JSI METAL= 0.20 (A) (INPUT = 1.00 )

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





TOTAL WEIGHT = 12 lb  
[M]IF

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

DRY: SEASONED LUMBER.

| 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**

| JT | FACTORED<br>GROSS REACTION |      | MAXIMUM FACTORED<br>GROSS REACTION |      | INPUT<br>BRG | REQRD<br>BRG |
|----|----------------------------|------|------------------------------------|------|--------------|--------------|
|    | VERT                       | HORZ | DOWN                               | HORZ | IN-SX        | IN-SX        |
| E  | 256                        | 0    | 256                                | 0    | 0            | 5-8          |
| C  | 56                         | 0    | 56                                 | 0    | 0            | 1-8          |
| D  | 46                         | 0    | 51                                 | 0    | 0            | 1-8          |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

### UNFACTORED REACTIONS

| JT | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |       |           |       |        |       |
|----|-----------|-------------------------------|-------|-----------|-------|--------|-------|
|    | COMBINED  | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
| E  | 181       | 115 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 66 / 0 | 0 / 0 |
| C  | 38        | 34 / 0                        | 0 / 0 | 0 / 0     | 0 / 0 | 4 / 0  | 0 / 0 |
| D  | 37        | 0 / 0                         | 0 / 0 | 0 / 0     | 0 / 0 | 37 / 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 PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

## LOADING

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

| CHORDS |                                 |                                 |                        | WEBS                     |       |                                 |                 |
|--------|---------------------------------|---------------------------------|------------------------|--------------------------|-------|---------------------------------|-----------------|
| MEMB.  | MAX. FACTORED<br>FORCE<br>(LBS) | FACTORED<br>VERT. LOAD<br>(PLF) | LC1<br>MAX<br>CSI (LC) | MAX.<br>UNBRAC<br>LENGTH | MEMB. | MAX. FACTORED<br>FORCE<br>(LBS) | MAX<br>CSI (LC) |
| FR-TO  |                                 | FROM                            | TO                     |                          | FR-TO |                                 |                 |
| E-B    | -192 / 0                        | 0.0                             | 0.0                    | 0.11 (4)                 |       | 7.81                            |                 |
| A-B    | 0 / 28                          | -77.4                           | -77.4                  | 0.09 (1)                 | 10.00 |                                 |                 |
| B-C    | -10 / 0                         | -77.4                           | -77.4                  | 0.04 (1)                 | 10.00 |                                 |                 |
| E-D    | 0 / 0                           | -18.2                           | -18.2                  | 0.13 (4)                 | 10.00 |                                 |                 |

## DESIGN CRITERIA

SPECIFIED LOADS:

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 23.3 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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 (0.04")

CSI: TC=0.11/1.00 (B-E:4), BC=0.13/1.00 (D-E:4),  
WB=0.00/1.00 (n/a:0), SSI=0.09/1.00 (D-E:4)

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

COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

| NAIL VALUES |           |     |       |     |         |      |
|-------------|-----------|-----|-------|-----|---------|------|
| PLATE       | GRIP(DRY) |     | SHEAR |     | SECTION |      |
|             | (PSI)     |     | (PLI) |     | (PLI)   |      |
|             | MAX       | MIN | MAX   | MIN | MAX     | MIN  |
| MT20        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

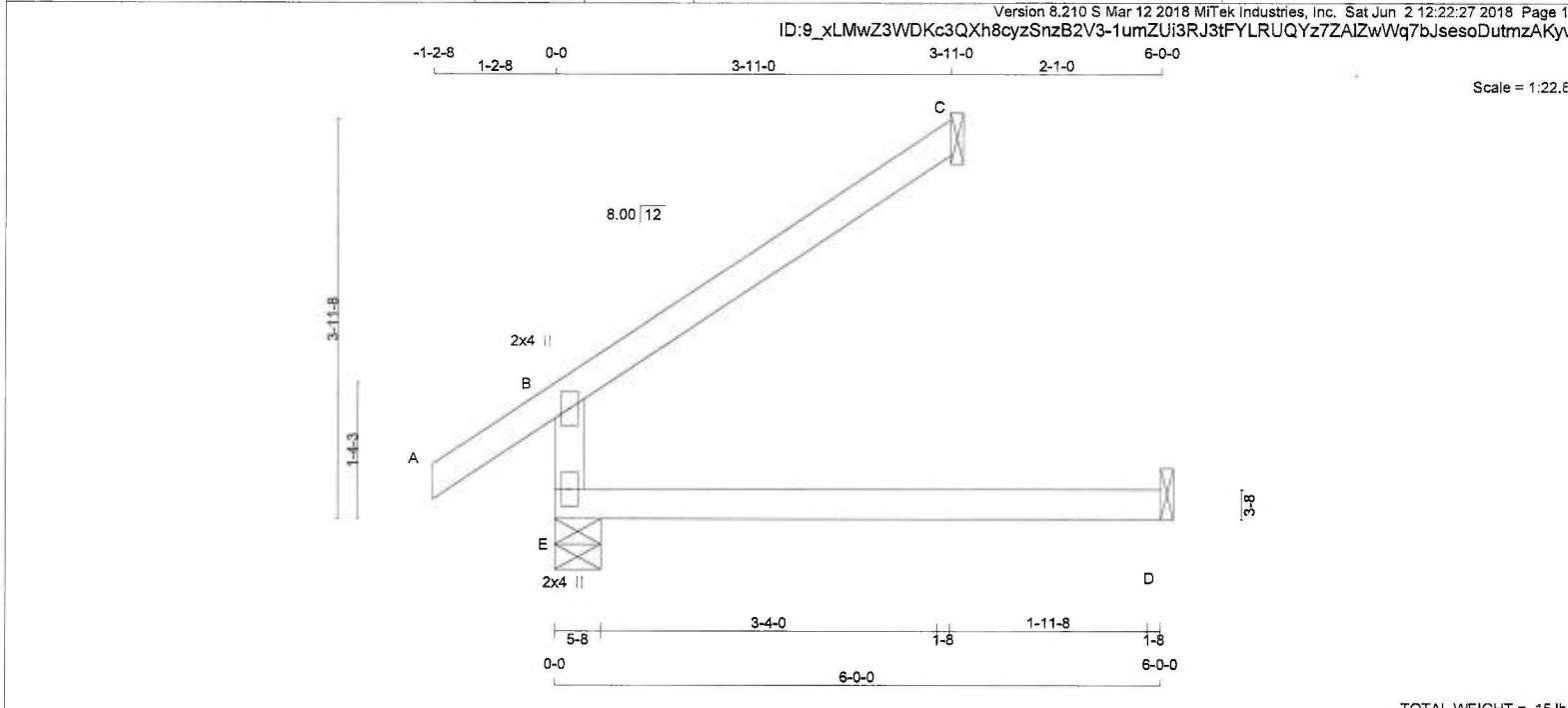
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (B) (INPUT = 0.90 )  
JSI METAL= 0.05 (B) (INPUT = 1.00 )



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





**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.

**DESIGN CRITERIA**  
SPECIFIED LOADS:  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

**BEARINGS**  

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|-----------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |           |
| E  | 353                     | 0    | 353                             | 0    | 5-8       | 5-8       |
| C  | 114                     | 0    | 114                             | 0    | 1-8       | 1-8       |
| D  | 46                      | 0    | 51                              | 0    | 1-8       | 1-8       |

**DESIGN CRITERIA**  
SPACING = 24.0 IN. C/C  
THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010  
THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011  
DESIGN ASSUMPTIONS  
-OVERHANG NOT TO BE ALTERED OR CUT OFF.  
(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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 (0.04")  
CSI: TC=0.15/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), 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 = 0.50  
AUTOSOLVE RIGHT HEEL ONLY  
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .  
NAIL VALUES  

| PLATE | GRIP(DRY) | SHEAR (PSI) | SECTION (PLI) |
|-------|-----------|-------------|---------------|
| MT20  | 618       | 354         | 1667          |

**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 |   |   |

**UNFACTORED REACTIONS**  

| JT | COMBINED | MAX/MIN. COMPONENT REACTIONS |       |           |       |        |       |
|----|----------|------------------------------|-------|-----------|-------|--------|-------|
|    |          | SNOW                         | LIVE  | PERM.LIVE | WIND  | DEAD   | SOIL  |
| E  | 247      | 174 / 0                      | 0 / 0 | 0 / 0     | 0 / 0 | 73 / 0 | 0 / 0 |
| C  | 77       | 68 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 9 / 0  | 0 / 0 |
| D  | 37       | 0 / 0                        | 0 / 0 | 0 / 0     | 0 / 0 | 37 / 0 | 0 / 0 |

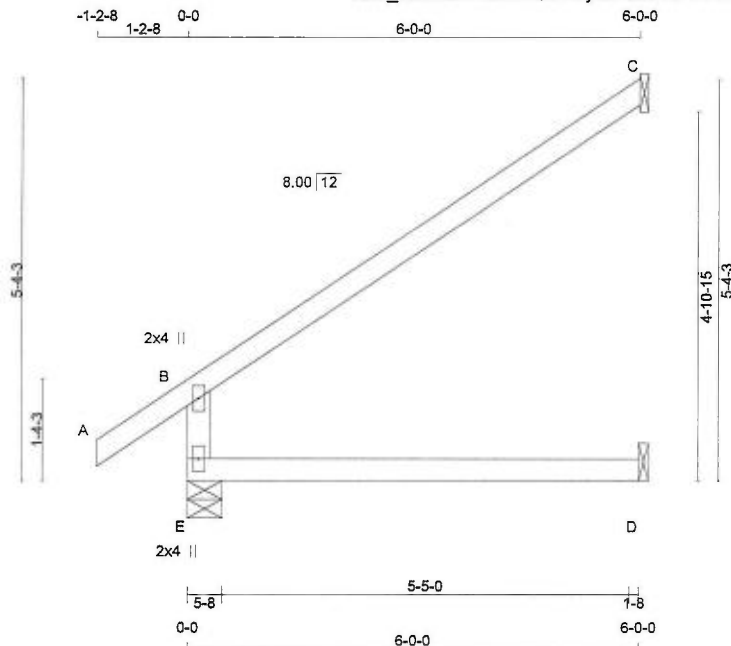
**LOADING**  
TOTAL LOAD CASES: (4)  

| MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) |       | MAX. UNBRACED LENGTH FR-TO | MEMB. FORCE (LBS) | MAX. FACTORED FORCE (LBS) |
|-------|---------------------------|---------------------------|-------|----------------------------|-------------------|---------------------------|
|       |                           | FROM                      | TO    |                            |                   |                           |
| E-B   | -289 / 0                  | 0.0                       | 0.0   | 0.11 (4)                   | 7.81              |                           |
| A-B   | 0 / 28                    | -77.4                     | -77.4 | 0.09 (1)                   | 10.00             |                           |
| B-C   | -21 / 0                   | -77.4                     | -77.4 | 0.15 (1)                   | 6.25              |                           |
| E-D   | 0 / 0                     | -18.2                     | -18.2 | 0.13 (4)                   | 10.00             |                           |

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.  
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

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

Version 8.210 S Mar 12 2018 MiTek Industries, Inc. Sat Jun 2 12:22:28 2018 Page 1  
ID: 9\_xLMwZ3WDKc3QXh8cyzSnzB2V3-V5Kxi2434M?6AV0gzFUM6OIhOw9MKm6n5SzSQDzAKy



TOTAL WEIGHT = 5 X 18 = 90 lb [M][F]

| 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.

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

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG |       | REQRD BRG |  |
|----|-------------------------|------|---------------------------------|------|-----------|-------|-----------|--|
|    | VERT                    | HORZ | DOWN                            | HORZ | UPLIFT    | IN-SX | IN-SX     |  |
| E  | 454                     | 0    | 454                             | 0    | 0         | 5-8   | 5-8       |  |
| C  | 174                     | 0    | 174                             | 0    | 0         | 1-8   | 1-8       |  |
| D  | 46                      | 0    | 51                              | 0    | 0         | 1-8   | 1-8       |  |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

#### SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

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

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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 (0.04")

CSI: TC=0.36/1.00 (B-C:1), BC=0.13/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), SSI=0.19/1.00 (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 = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

NAIL VALUES  
PLATE GRIP(DRY) SHEAR SECTION  
(PSI) (PLI) (PLI)  
MAX MIN MAX MIN MAX MIN  
MT20 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.25 (B) (INPUT = 0.90)  
JSI METAL= 0.10 (B) (INPUT = 1.00)

| 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 |     |

SEE MITTEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

#### UNFACTORED REACTIONS

| JT | 1ST LCASE COMBINED |      | MAX/MIN. SNOW |       | LIVE   |       | PERM. LIVE |        | WIND  |       | DEAD  |       | SOIL  |       |
|----|--------------------|------|---------------|-------|--------|-------|------------|--------|-------|-------|-------|-------|-------|-------|
|    | VERT               | HORZ | DOWN          | HORZ  | UPLIFT | IN-SX | IN-SX      |        |       |       |       |       |       |       |
| E  | 316                | 0    | 235 / 0       | 0 / 0 | 0 / 0  | 0 / 0 | 0 / 0      | 81 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 |
| C  | 118                | 0    | 105 / 0       | 0 / 0 | 0 / 0  | 0 / 0 | 0 / 0      | 14 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 |
| D  | 37                 | 0    | 0 / 0         | 0 / 0 | 0 / 0  | 0 / 0 | 0 / 0      | 37 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 |

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

#### BRACING

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

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

#### LOADING

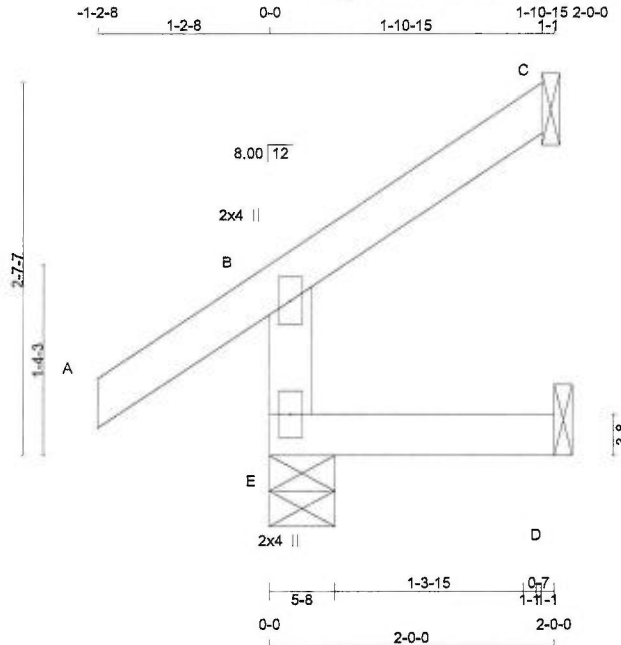
TOTAL LOAD CASES: (4)

| MEMB. | CHORDS           |                  | FACTORED   |          | WEBS                       |                   | FACTORED   |          |
|-------|------------------|------------------|------------|----------|----------------------------|-------------------|------------|----------|
|       | MAX. FORCE (LBS) | VERT. LOAD (PLF) | MAX. (PLF) | CS1 (LC) | MAX. UNBRACED LENGTH FR-TO | MEMB. FORCE (LBS) | MAX. (LBS) | CS1 (LC) |
| FR-TO |                  |                  |            |          |                            |                   |            |          |
| E-B   | -390 / 0         | 0.0              | 0.0        | 0.11 (4) | 7.81                       |                   |            |          |
| A-B   | 0 / 28           | -77.4            | -77.4      | 0.09 (1) | 10.00                      |                   |            |          |
| B-C   | -32 / 0          | -77.4            | -77.4      | 0.36 (1) | 6.25                       |                   |            |          |
| E-D   | 0 / 0            | -18.2            | -18.2      | 0.13 (4) | 10.00                      |                   |            |          |



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





Scale = 1:16.2

TOTAL WEIGHT = 8 lb [M]

| LUMBER            |        |      |        |     | DESCR. |
|-------------------|--------|------|--------|-----|--------|
| N. L. G. A. RULES | CHORDS | SIZE | LUMBER |     |        |
| 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

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|-----------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |           |
| E  | 212                     | 0    | 212                             | 0    | 5-8       | 5-8       |
| C  | 56                      | 0    | 56                              | 0    | 1-8       | 1-8       |
| D  | 16                      | 0    | 16                              | 0    | 1-8       | 1-8       |

SEE MITTEK STANDARD DETAIL B37579H 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  | 146       | 115/0 | 0/0                           | 0/0        | 0/0  | 31/0 | 0/0  |
| C  | 38        | 34/0  | 0/0                           | 0/0        | 0/0  | 4/0  | 0/0  |
| D  | 13        | 0/0   | 0/0                           | 0/0        | 0/0  | 13/0 | 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 PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

#### LOADING

TOTAL LOAD CASES: (5)

| MEMB. | CHORDS                    |                  | FACTORED     |                      | WEBS                      |                      |
|-------|---------------------------|------------------|--------------|----------------------|---------------------------|----------------------|
|       | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX (LC) | MAX. UNBRACED LENGTH | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH |
| FR-TO |                           |                  |              |                      |                           |                      |
| E-B   | -192/0                    | 0.0              | 0.0 (4)      | 7.81                 |                           |                      |
| A-B   | 0/28                      | -77.4            | -77.4 (1)    | 10.00                |                           |                      |
| B-C   | -10/0                     | -77.4            | -77.4 (1)    | 10.00                |                           |                      |
| E-D   | 0/0                       | -18.2            | -18.2 (4)    | 10.00                |                           |                      |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

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

(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.09/1.00 (A-B:1), BC=0.02/1.00 (D-E:4),  
WB=0.00/1.00 (n/a:0), SSI=0.06/1.00 (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 = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

| NAIL VALUES |           |         |         |               |
|-------------|-----------|---------|---------|---------------|
| PLATE       | GRIP(DRY) | SHEAR   | SECTION |               |
| (PSI)       | (PLI)     | (PLI)   |         |               |
| MAX MIN     | MAX MIN   | MAX MIN |         |               |
| MT20        | 618       | 354     | 1667    | 822 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

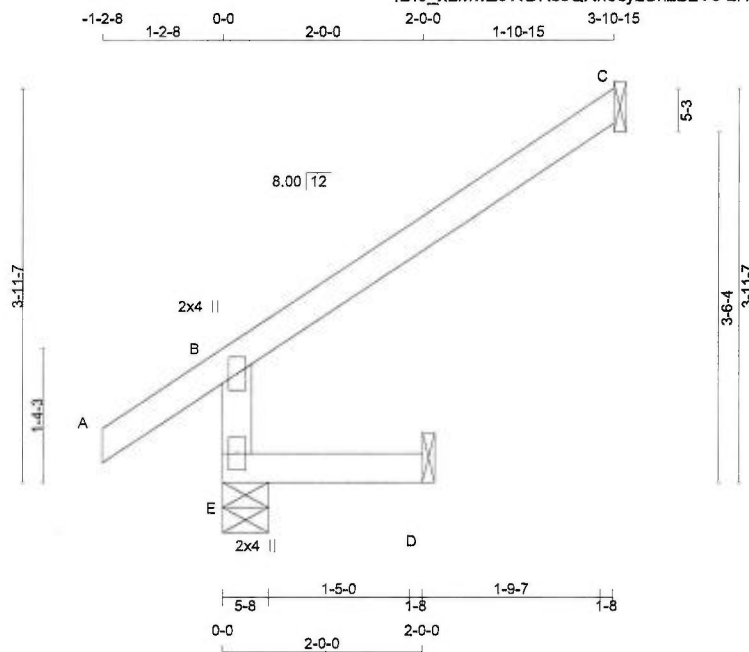
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.12 (B) (INPUT = 0.90)  
JSI METAL= 0.05 (B) (INPUT = 1.00)



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





Scale = 1:23.1

TOTAL WEIGHT = 11 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 |
| E        | 309                     | 309                             | 5-8             |
| C        | 114                     | 114                             | 1-8             |
| D        | 16                      | 18                              | 1-8             |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

#### UNFACTORED REACTIONS

| JT | 1ST LCASE COMBINED | SNOW    | MAX/MIN. LIVE | PERM. LIVE | WIND  | DEAD   | SOIL  |
|----|--------------------|---------|---------------|------------|-------|--------|-------|
| E  | 212                | 174 / 0 | 0 / 0         | 0 / 0      | 0 / 0 | 38 / 0 | 0 / 0 |
| C  | 77                 | 68 / 0  | 0 / 0         | 0 / 0      | 0 / 0 | 9 / 0  | 0 / 0 |
| D  | 13                 | 0 / 0   | 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 PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

#### LOADING

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                  | WEBS     |                           |                            |                    |
|--------|---------------------------|---------------------------|------------------|----------|---------------------------|----------------------------|--------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. UNBRACED LENGTH FR-TO | MEMB. MAX CSI (LC) |
| FR-TO  |                           | FROM                      | TO               | FR-TO    |                           |                            |                    |
| E-B    | -289 / 0                  | 0.0                       | 0.0              | 0.01 (4) | 7.81                      |                            |                    |
| A-B    | 0 / 28                    | -77.4                     | -77.4            | 0.09 (1) | 10.00                     |                            |                    |
| B-C    | -21 / 0                   | -77.4                     | -77.4            | 0.20 (1) | 6.25                      |                            |                    |
| E-D    | 0 / 0                     | -18.2                     | -18.2            | 0.02 (4) | 10.00                     |                            |                    |

#### DESIGN CRITERIA

SPECIFIED LOADS:  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

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

(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.20/1.00 (B-C:1), BC=0.02/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), 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 = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

| NAIL VALUES |           |       |         |
|-------------|-----------|-------|---------|
| PLATE       | GRIP(DRY) | SHEAR | SECTION |
| (PSI)       | (PLI)     | (PLI) | (PLI)   |
| MAX         | MIN       | MAX   | MIN     |
| MT20        | 618       | 354   | 1667    |
|             | 822       | 2284  | 1656    |

PLATE PLACEMENT TOL. = 0.250 inches

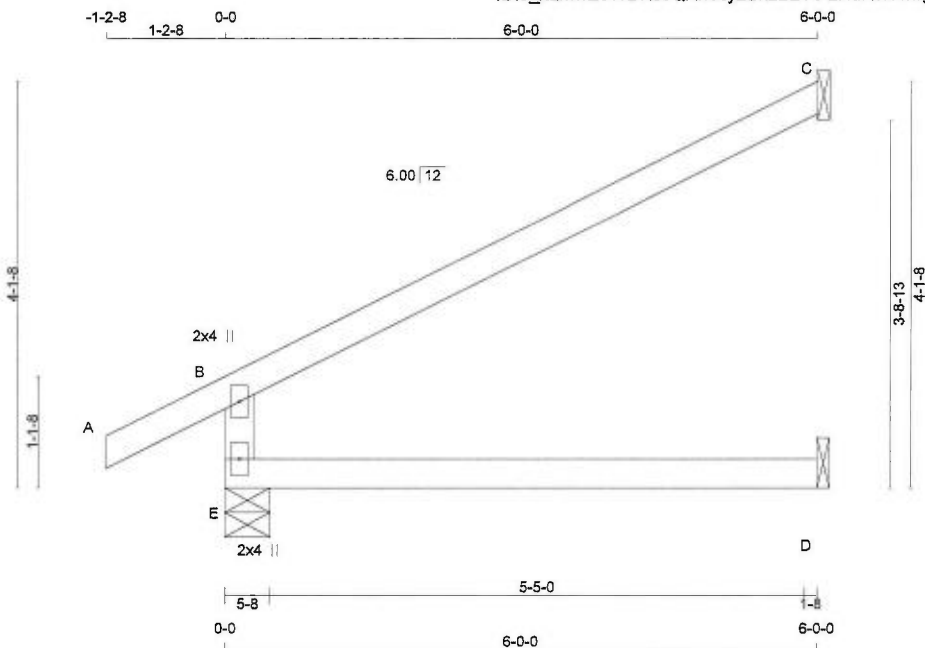
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.19 (B) (INPUT = 0.90)  
JSI METAL= 0.07 (B) (INPUT = 1.00)



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





Scale = 1:23.4

TOTAL WEIGHT = 16 X 17 = 271 lb [M]F

| 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.

**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 |
| E        | 453                     | 453                             | 5-8             |
| C        | 174                     | 174                             | 1-8             |
| D        | 45                      | 50                              | 1-8             |

**DESIGN CRITERIA**

| SPECIFIED LOADS:      |    |            |
|-----------------------|----|------------|
| TOP CH.               | LL | = 23.3 PSF |
|                       | DL | = 3.0 PSF  |
| BOT CH.               | LL | = 0.0 PSF  |
|                       | DL | = 7.3 PSF  |
| TOTAL LOAD = 33.6 PSF |    |            |

| 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     |

SEE MITTEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | SNOW    | MAX./MIN. LIVE | PERM. LIVE | WIND  | DEAD   | SOIL  |
|----|--------------------|---------|----------------|------------|-------|--------|-------|
| E  | 316                | 234 / 0 | 0 / 0          | 0 / 0      | 0 / 0 | 82 / 0 | 0 / 0 |
| C  | 118                | 105 / 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 PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |                | WEBS  |                           |              |                       |
|--------|---------------------------|---------------------------|----------------|-------|---------------------------|--------------|-----------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 (LC)   | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 (LC) | UNBRACED LENGTH FR-TO |
| FR-TO  |                           | FROM                      | TO             | FR-TO |                           |              |                       |
| E-B    | -389 / 0                  | 0.0                       | 0.0 0.11 (4)   | 7.61  |                           |              |                       |
| A-B    | 0 / 22                    | -77.4                     | -77.4 0.09 (1) | 10.00 |                           |              |                       |
| B-C    | -26 / 0                   | -77.4                     | -77.4 0.36 (1) | 6.25  |                           |              |                       |
| E-D    | 0 / 0                     | -18.2                     | -18.2 0.14 (4) | 10.00 |                           |              |                       |

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

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

(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.36/1.00 (B-C:1), BC=0.14/1.00 (D-E:4), WB=0.00/1.00 (n/a:0), 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 = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

| NAIL VALUES |           |       |                    |
|-------------|-----------|-------|--------------------|
| PLATE       | GRIP(DRY) | SHEAR | SECTION            |
| (PSI)       | (PLI)     | (PLI) |                    |
| MAX         | MIN       | MAX   | MIN                |
| MT20        | 618       | 354   | 1667 822 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

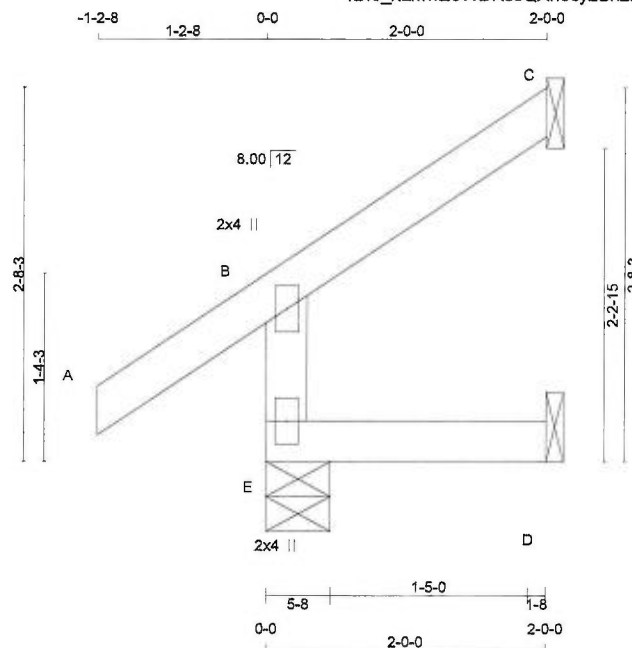
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.22 (B) (INPUT = 0.90 )  
JSI METAL= 0.09 (B) (INPUT = 1.00 )



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





Scale = 1:16.5

TOTAL WEIGHT = 2 X 8 = 16 lb [M]

#### LUMBER

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

DRY: SEASONED LUMBER.

#### 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 | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|-----------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |           |
| E  | 216                     | 0    | 216                             | 0    | 5-8       | 5-8       |
| C  | 58                      | 0    | 58                              | 0    | 1-8       | 1-8       |
| D  | 16                      | 0    | 18                              | 0    | 1-8       | 1-8       |

SEE MITEK STANDARD DETAIL B37579H FOR CONNECTION TO JOINT(S) C, D

##### UNFACTORED REACTIONS

| JT | 1ST LCASE |         | MAX./MIN. COMPONENT REACTIONS |           |       |        |       |
|----|-----------|---------|-------------------------------|-----------|-------|--------|-------|
|    | COMBINED  | SNOW    | LIVE                          | PERM.LIVE | WIND  | DEAD   | SOIL  |
| E  | 149       | 118 / 0 | 0 / 0                         | 0 / 0     | 0 / 0 | 31 / 0 | 0 / 0 |
| C  | 40        | 35 / 0  | 0 / 0                         | 0 / 0     | 0 / 0 | 5 / 0  | 0 / 0 |
| D  | 13        | 0 / 0   | 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 PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

##### LOADING

TOTAL LOAD CASES: (5)

| MEMB. | CHORDS                    |                  | FACTORED      |              | MAX. UNBRACED LENGTH | MEMB. FR-TO | WEBS                      |                        |
|-------|---------------------------|------------------|---------------|--------------|----------------------|-------------|---------------------------|------------------------|
|       | MAX. FACTORED FORCE (LBS) | VERT. LOAD (PLF) | LC1 MAX (PLF) | LC1 MAX (LC) |                      |             | MAX. FACTORED FORCE (LBS) | MAX. FACTORED CSI (LC) |
| FR-TO |                           | FROM             | TO            |              |                      |             |                           |                        |
| E-B   | -196 / 0                  | 0.0              | 0.0           | 0.01 (4)     | 7.81                 |             |                           |                        |
| A-B   | 0 / 28                    | -77.4            | -77.4         | 0.09 (1)     | 10.00                |             |                           |                        |
| B-C   | -10 / 0                   | -77.4            | -77.4         | 0.05 (1)     | 6.25                 |             |                           |                        |
| E-D   | 0 / 0                     | -18.2            | -18.2         | 0.02 (4)     | 10.00                |             |                           |                        |

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

#### DESIGN CRITERIA

##### SPECIFIED LOADS:

|            |    |   |      |     |
|------------|----|---|------|-----|
| TOP CH.    | LL | = | 23.3 | PSF |
|            | DL | = | 3.0  | PSF |
| BOT CH.    | LL | = | 0.0  | PSF |
|            | DL | = | 7.3  | PSF |
| TOTAL LOAD |    | = | 33.6 | PSF |

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:

- PART 9 OF OBC 2012, BCBC 2012, ABC 2014
- CSA 086-09
- TPIC 2011

##### DESIGN ASSUMPTIONS

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 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=0.09/1.00 (A-B:1) , BC=0.02/1.00 (D-E:4) ,  
WB=0.00/1.00 (n/a:0) , SSI=0.06/1.00 (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 = 0.50

AUTOSOLVE RIGHT HEEL ONLY

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

##### NAIL VALUES

| PLATE | GRIP(DRY) | SHEAR    | SECTION   |
|-------|-----------|----------|-----------|
|       | (PSI)     | (PLI)    | (PLI)     |
|       | MAX MIN   | MAX MIN  | MAX MIN   |
| MT20  | 618 354   | 1667 822 | 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

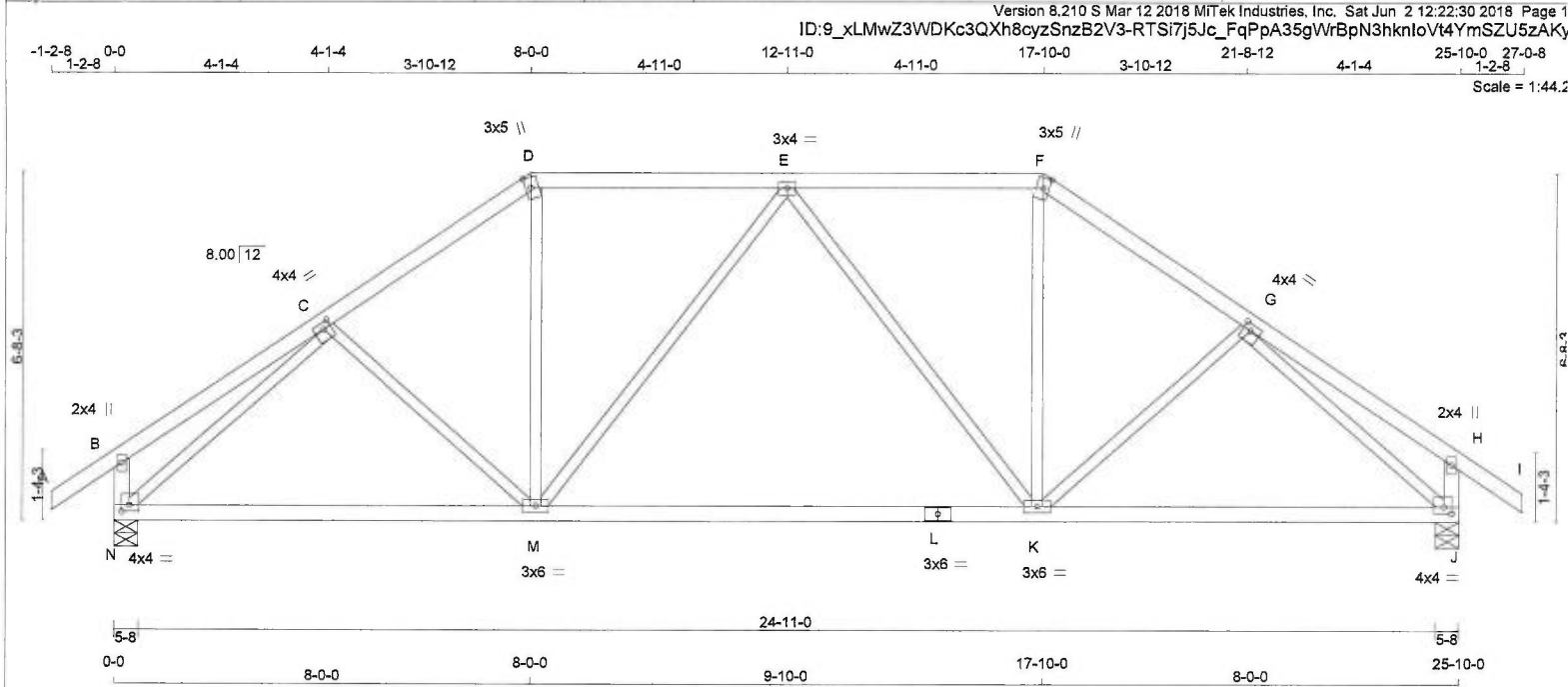
JSI GRIP= 0.13 (B) (INPUT = 0.90 )

JSI METAL= 0.05 (B) (INPUT = 1.00 )



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





**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   |
| N - B           | 2x4  | DRY    | No.2   |
| J - H           | 2x4  | DRY    | No.2   |
| N - L           | 2x4  | DRY    | No.2   |
| L - J           | 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   | 4.0 | 4.0 | 1.50 | 1.75 |
| D  | TTW+m   | MT20   | 3.0 | 5.0 | 2.50 | 1.25 |
| E  | TMWW-t  | MT20   | 3.0 | 4.0 |      |      |
| F  | TTW+m   | MT20   | 3.0 | 5.0 | 2.50 | 1.25 |
| G  | TMWW-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.75 |
| H  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| J  | BMVW1-t | MT20   | 4.0 | 4.0 | 1.50 | 1.75 |
| K  | BMWW-t  | MT20   | 3.0 | 6.0 |      |      |
| L  | BS-t    | MT20   | 3.0 | 6.0 |      |      |
| M  | BMWW-t  | MT20   | 3.0 | 6.0 |      |      |
| N  | BMVW1-t | MT20   | 4.0 | 4.0 | 1.50 | 1.75 |

**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 |                 |                 |
| N  | 1335                    | 0    | 1335                            | 0    | 5-8             | 5-8             |
| J  | 1335                    | 0    | 1335                            | 0    | 5-8             | 5-8             |

| UNFACTORED REACTIONS |           |                               |       |           |       |         |       |
|----------------------|-----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT                   | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|                      | COMBINED  | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| N                    | 935       | 662 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 274 / 0 | 0 / 0 |
| J                    | 935       | 662 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 274 / 0 | 0 / 0 |

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

**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.46 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

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

| CHORDS |                           |                           |               | WEBS     |                           |               |          |
|--------|---------------------------|---------------------------|---------------|----------|---------------------------|---------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. LC1 (LC) |          |
| FR-TO  |                           | FROM                      | TO            | FR-TO    |                           | FROM          | TO       |
| A-B    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | C-M                       | -74 / 36      | 0.04 (1) |
| B-C    | 0 / 19                    | -77.4                     | -77.4         | 0.19 (1) | M-D                       | 0 / 461       | 0.10 (1) |
| C-D    | -1330 / 0                 | -77.4                     | -77.4         | 0.17 (1) | M-E                       | -291 / 0      | 0.39 (1) |
| D-E    | -1097 / 0                 | -77.4                     | -77.4         | 0.25 (1) | E-K                       | -291 / 0      | 0.39 (1) |
| E-F    | -1097 / 0                 | -77.4                     | -77.4         | 0.25 (1) | K-F                       | 0 / 461       | 0.10 (1) |
| F-G    | -1330 / 0                 | -77.4                     | -77.4         | 0.17 (1) | K-G                       | -74 / 36      | 0.04 (1) |
| G-H    | 0 / 19                    | -77.4                     | -77.4         | 0.19 (1) | N-C                       | -1558 / 0     | 0.75 (1) |
| H-I    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | G-J                       | -1558 / 0     | 0.75 (1) |
| N-B    | -220 / 0                  | 0.0                       | 0.0           | 0.02 (1) |                           |               |          |
| J-H    | -220 / 0                  | 0.0                       | 0.0           | 0.02 (1) |                           |               |          |
| N-M    | 0 / 1145                  | -18.2                     | -18.2         | 0.41 (4) |                           |               |          |
| M-L    | 0 / 1272                  | -18.2                     | -18.2         | 0.42 (4) |                           |               |          |
| L-K    | 0 / 1272                  | -18.2                     | -18.2         | 0.42 (4) |                           |               |          |
| K-J    | 0 / 1144                  | -18.2                     | -18.2         | 0.41 (4) |                           |               |          |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
 TOP CH. LL = 23.3 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.3 PSF  
 TOTAL LOAD = 33.6 PSF

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

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
 - CSA 086-09  
 - TPIC 2011

(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.86")  
 CALCULATED VERT. DEFL.(LL) = L/999 (0.05")  
 ALLOWABLE DEFL.(TL)= L/360 (0.86")  
 CALCULATED VERT. DEFL.(TL) = L/999 (0.16")

CSI: TC=0.25/1.00 (D-E:1) , BC=0.42/1.00 (K-M:4) , WB=0.75/1.00 (C-N:1) , SSI=0.18/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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

**NAIL VALUES**

| PLATE | GRIP(DRY) | SHEAR | SECTION            |
|-------|-----------|-------|--------------------|
| (PSI) | (PLI)     | (PLI) | (PLI)              |
| MAX   | MIN       | MAX   | MIN                |
| MT20  | 618       | 354   | 1667 822 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

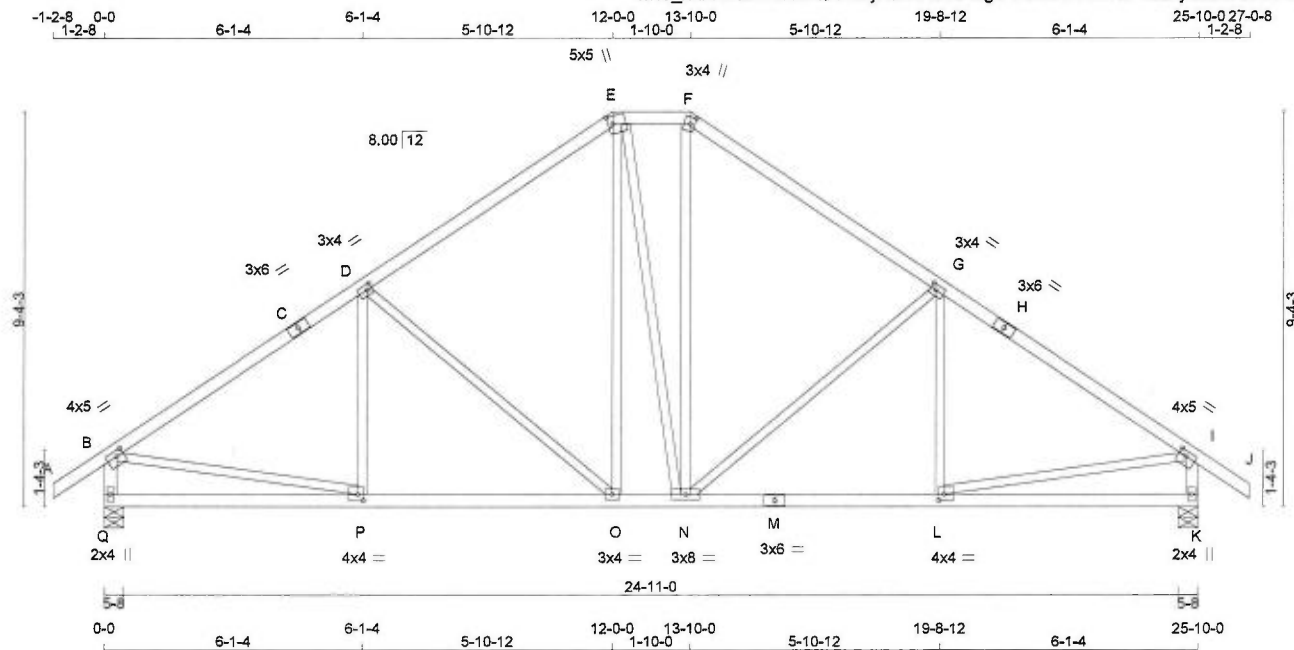
JSI GRIP= 0.88 (N) (INPUT = 0.90 )  
 JSI METAL= 0.57 (G) (INPUT = 1.00 )



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







Scale = 1:54.4

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

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |          |        |     |     |           |
|-----------------------------|----------|--------|-----|-----|-----------|
| JT                          | TYPE     | PLATES | W   | LEN | Y X       |
| B                           | TMVW+t   | MT20   | 4.0 | 5.0 | 1.50 2.00 |
| C                           | TS-t     |        | 3.0 | 6.0 |           |
| D                           | TMVW+t   | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| E                           | TTVW+m   | MT20   | 5.0 | 5.0 | 2.25 1.25 |
| F                           | TTW+m    | MT20   | 3.0 | 4.0 | 2.00 1.25 |
| G                           | TMVW-t   | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| H                           | TS-t     |        | 3.0 | 6.0 |           |
| I                           | TMVW-t   | MT20   | 4.0 | 5.0 | 1.50 2.00 |
| K                           | BMV/1+p  | MT20   | 2.0 | 4.0 |           |
| L                           | BMVW-t   | MT20   | 4.0 | 4.0 | 1.75 1.50 |
| M                           | BS-t     |        | 3.0 | 6.0 |           |
| N                           | BMVWVW-t | MT20   | 3.0 | 8.0 |           |
| O                           | BMVW-t   | MT20   | 3.0 | 4.0 |           |
| P                           | BMVW-t   | MT20   | 4.0 | 4.0 | 1.75 1.50 |
| Q                           | BMV/1+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  | 1335                       | 0    | 1335                               | 0    | 0      | 5-8          | 5-8          |
| K  | 1335                       | 0    | 1335                               | 0    | 0      | 5-8          | 5-8          |

### UNFACTORED REACTIONS

| JT | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS |       |            |       |         | SOIL  |
|----|-----------|-------------------------------|-------|------------|-------|---------|-------|
|    | COMBINED  | SNOW                          | LIVE  | PERM. LIVE | WIND  | DEAD    |       |
| Q  | 935       | 662 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 274 / 0 | 0 / 0 |
| K  | 935       | 662 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 274 / 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 = 5.02 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY  
APPLIED.

ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED

**LOADING**

**TOTAL LOAD CASES: (4)**

| CHORDS |                           |                           |                  | WEBS               |       |                           |                       |
|--------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|-----------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX FACTORED CSI (LC) |
| FR-TO  |                           | FROM TO                   |                  |                    | FR-TO |                           |                       |
| A-B    | 0 / 28                    | -77.4                     | -77.4            | 0.09 (1)           | 10.00 | P-D                       | -76 / 84 0.03 (1)     |
| B-C    | -1422 / 0                 | -77.4                     | -77.4            | 0.41 (1)           | 5.02  | D-O                       | -435 / 0 0.56 (1)     |
| C-D    | -1422 / 0                 | -77.4                     | -77.4            | 0.41 (1)           | 5.02  | O-E                       | 0 / 334 0.08 (1)      |
| D-E    | -1087 / 0                 | -77.4                     | -77.4            | 0.38 (1)           | 5.58  | E-N                       | 0 / 11 0.00 (1)       |
| E-F    | -883 / 0                  | -77.4                     | -77.4            | 0.04 (1)           | 6.25  | N-F                       | 0 / 346 0.08 (1)      |
| F-G    | -1089 / 0                 | -77.4                     | -77.4            | 0.38 (1)           | 5.58  | N-G                       | -431 / 0 0.55 (1)     |
| G-H    | -1420 / 0                 | -77.4                     | -77.4            | 0.41 (1)           | 5.02  | L-G                       | -80 / 82 0.04 (1)     |
| H-I    | -1420 / 0                 | -77.4                     | -77.4            | 0.41 (1)           | 5.02  | B-P                       | 0 / 1226 0.28 (1)     |
| I-J    | 0 / 28                    | -77.4                     | -77.4            | 0.09 (1)           | 10.00 | L-I                       | 0 / 1224 0.28 (1)     |
| Q-B    | -1290 / 0                 | 0.0                       | 0.0              | 0.13 (1)           | 7.10  |                           |                       |
| K-I    | -1289 / 0                 | 0.0                       | 0.0              | 0.13 (1)           | 7.10  |                           |                       |
|        |                           |                           |                  |                    |       |                           |                       |
| Q-P    | 0 / 0                     | -18.2                     | -18.2            | 0.17 (4)           | 10.00 |                           |                       |
| P-O    | 0 / 1209                  | -18.2                     | -18.2            | 0.28 (1)           | 10.00 |                           |                       |
| O-N    | 0 / 881                   | -18.2                     | -18.2            | 0.20 (1)           | 10.00 |                           |                       |
| N-M    | 0 / 1207                  | -18.2                     | -18.2            | 0.28 (1)           | 10.00 |                           |                       |
| M-L    | 0 / 1207                  | -18.2                     | -18.2            | 0.28 (1)           | 10.00 |                           |                       |
| L-K    | 0 / 0                     | -18.2                     | -18.2            | 0.17 (4)           | 10.00 |                           |                       |

### DESIGN CRITERIA

**SPECIFIED LOADS:**

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 23.3 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.86")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.86")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")

CSI: TC=0.41/1.00 (B-D:1), BC=0.28/1.00 (O-P:1).  
WB=0.56/1.00 (D-O:1), SSI=0.19/1.00 (B-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

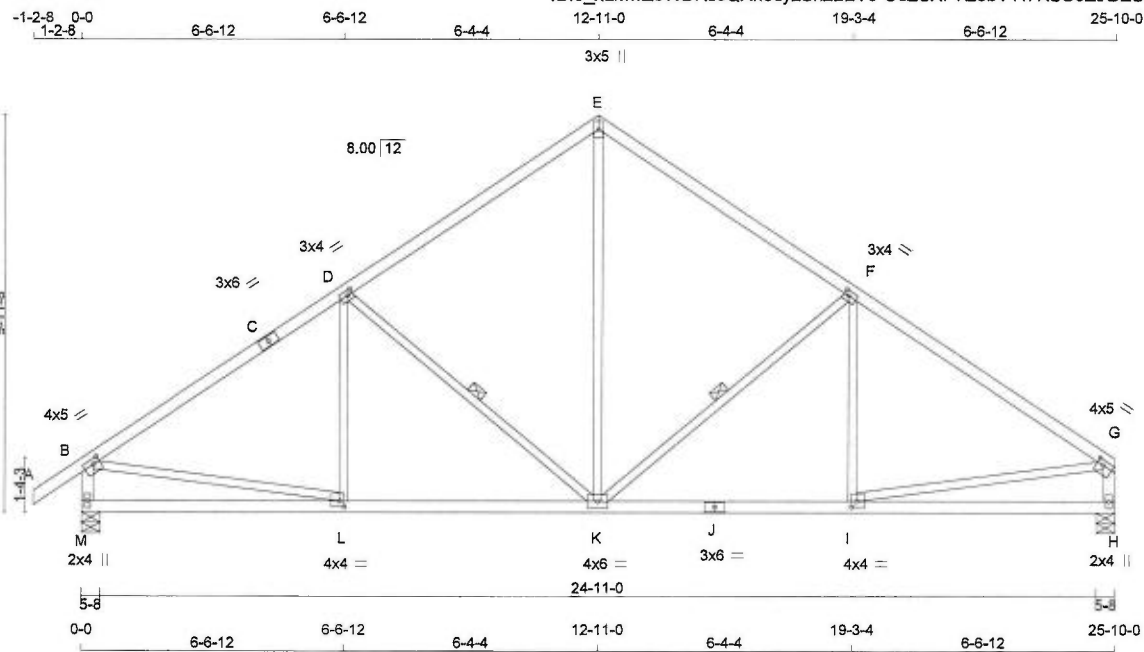
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (F) (INPUT = 0.90 )  
JSI METAL= 0.48 (B) (INPUT = 1.00 )



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





Scale = 1:57.6

TOTAL WEIGHT = 108 lb

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

ALL WEBS 2x3 DRY  
EXCEPT

DRY: SEASONED LUMBER.

| PLATES (table in inches) |           |        |     |     |           |
|--------------------------|-----------|--------|-----|-----|-----------|
| JT                       | TYPE      | PLATES | W   | LEN | Y X       |
| B                        | TMVVW-t   | MT20   | 4.0 | 5.0 | 1.50 2.00 |
| C                        | TS-t      | MT20   | 3.0 | 6.0 |           |
| D                        | TMVVW-t   | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| E                        | TTW+p     | MT20   | 3.0 | 5.0 |           |
| F                        | TMVVW-t   | MT20   | 3.0 | 4.0 | 1.50 1.50 |
| G                        | TMVVW-t   | MT20   | 4.0 | 5.0 | 1.50 2.00 |
| H                        | BMV1+p    | MT20   | 2.0 | 4.0 |           |
| I                        | BMVVW-t   | MT20   | 4.0 | 4.0 | 1.75 1.50 |
| J                        | BS-t      | MT20   | 3.0 | 6.0 |           |
| K                        | BMVVVVW-t | MT20   | 4.0 | 6.0 |           |
| L                        | BMVVW-t   | MT20   | 4.0 | 4.0 | 1.75 1.50 |
| M                        | BMV1+p    | MT20   | 2.0 | 4.0 |           |

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

## EXISTING 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        |
| M  | 1335                       | 0    | 1335                               | 0    | 0      | 5-8          | 5-8          |
| H  | 1235                       | 0    | 1235                               | 0    | 0      | 5-8          | 5-8          |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |            |       |         |       |
|-----------|----------|-------------------------------|-------|------------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| M         | 935      | 662 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 274 / 0 | 0 / 0 |
| H         | 868      | 602 / 0                       | 0 / 0 | 0 / 0      | 0 / 0 | 266 / 0 | 0 / 0 |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.92 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY  
APPLIED.

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

1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF D-K, F-K. DBS = 20-0-0 . CBF = 61 LBS.

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

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

## LOADING

**TOTAL LOAD CASES: (4)**

| CHORDS |                           |                           |                  |                    | WEBS  |                           |                       |  |  |
|--------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|-----------------------|--|--|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX FACTORED CSI (LC) |  |  |
| FR-TO  |                           | FROM TO                   |                  |                    | FR-TO |                           |                       |  |  |
| A-B    | 0 / 28                    | -77.4                     | -77.4            | 0.09 (1)           | 10.00 | L-D                       | -57 / 94 0.03 (4)     |  |  |
| B-C    | -1415 / 0                 | -77.4                     | -77.4            | 0.48 (1)           | 4.92  | D-K                       | -488 / 0 0.23 (1)     |  |  |
| C-D    | -1415 / 0                 | -77.4                     | -77.4            | 0.48 (1)           | 4.92  | K-E                       | 0 / 743 0.17 (1)      |  |  |
| D-E    | -1038 / 0                 | -77.4                     | -77.4            | 0.44 (1)           | 5.59  | K-F                       | -487 / 0 0.23 (1)     |  |  |
| E-F    | -1038 / 0                 | -77.4                     | -77.4            | 0.44 (1)           | 5.59  | I-F                       | -58 / 94 0.03 (4)     |  |  |
| F-G    | -1414 / 0                 | -77.4                     | -77.4            | 0.48 (1)           | 4.92  | B-L                       | 0 / 1219 0.27 (1)     |  |  |
| M-B    | -1265 / 0                 | 0.0                       | 0.0              | 0.13 (1)           | 7.11  | I-G                       | 0 / 1219 0.27 (1)     |  |  |
| H-G    | -1186 / 0                 | 0.0                       | 0.0              | 0.12 (1)           | 7.33  |                           |                       |  |  |
|        |                           |                           |                  |                    |       |                           |                       |  |  |
| M-L    | 0 / 0                     | -18.2                     | -18.2            | 0.18 (4)           | 10.00 |                           |                       |  |  |
| L-K    | 0 / 1205                  | -18.2                     | -18.2            | 0.29 (1)           | 10.00 |                           |                       |  |  |
| K-J    | 0 / 1204                  | -18.2                     | -18.2            | 0.29 (1)           | 10.00 |                           |                       |  |  |
| J-I    | 0 / 1204                  | -18.2                     | -18.2            | 0.29 (1)           | 10.00 |                           |                       |  |  |
| I-H    | 0 / 0                     | -18.2                     | -18.2            | 0.18 (4)           | 10.00 |                           |                       |  |  |

## DESIGN CRITERIA

SPECIFIED LOADS:

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 23.3 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , BCBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.86")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")  
ALLOWABLE DEFL.(TL)= L/360 (0.86")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.10")

CSI: TC=0.48/1.00 (B-D:1), BC=0.29/1.00 (K-L:1),  
WB=0.27/1.00 (B-L:1), SSI=0.20/1.00 (B-D:1)

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

COMPANION LIVE LOAD FACTOR = 0.50

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        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

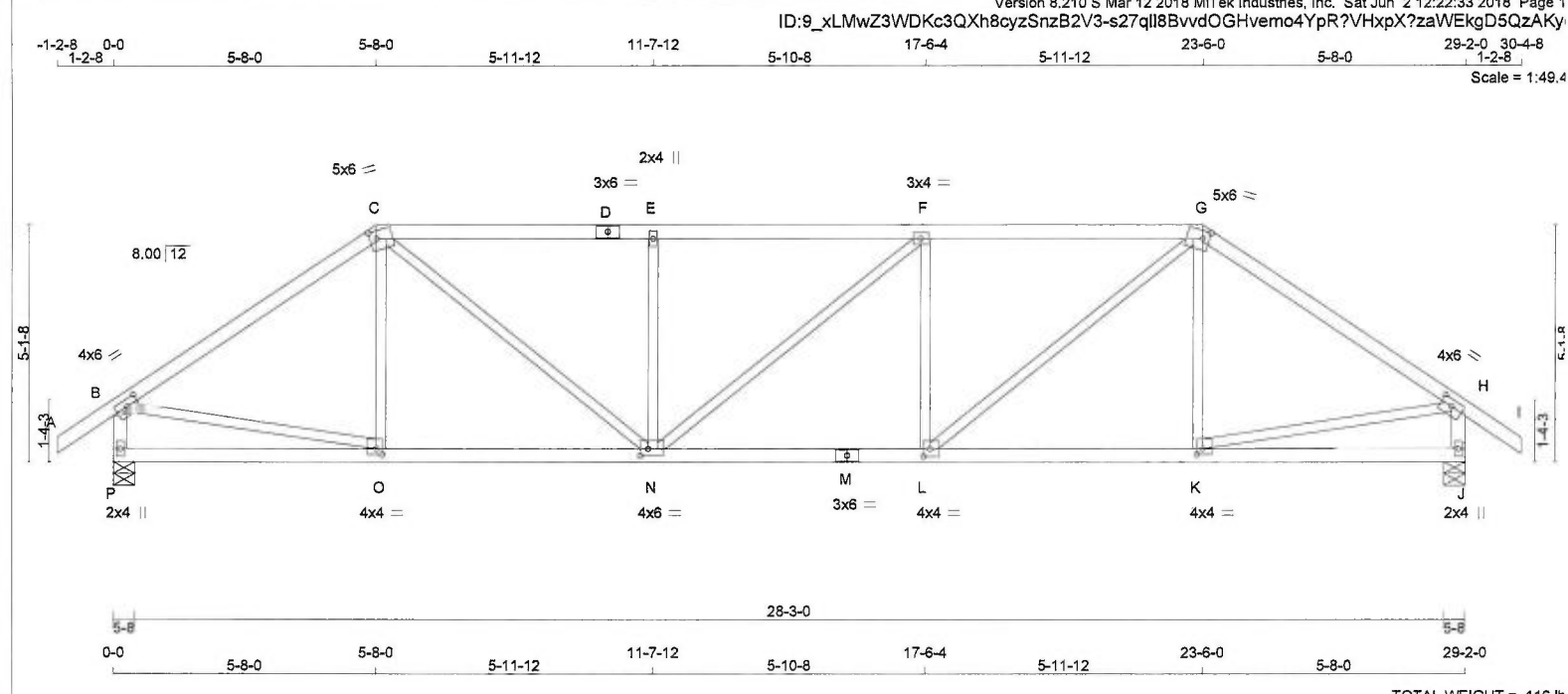
JSI GRIP= 0.86 (G) (INPUT = 0.90 )  
JSI METAL= 0.48 (B) (INPUT = 1.00 )



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







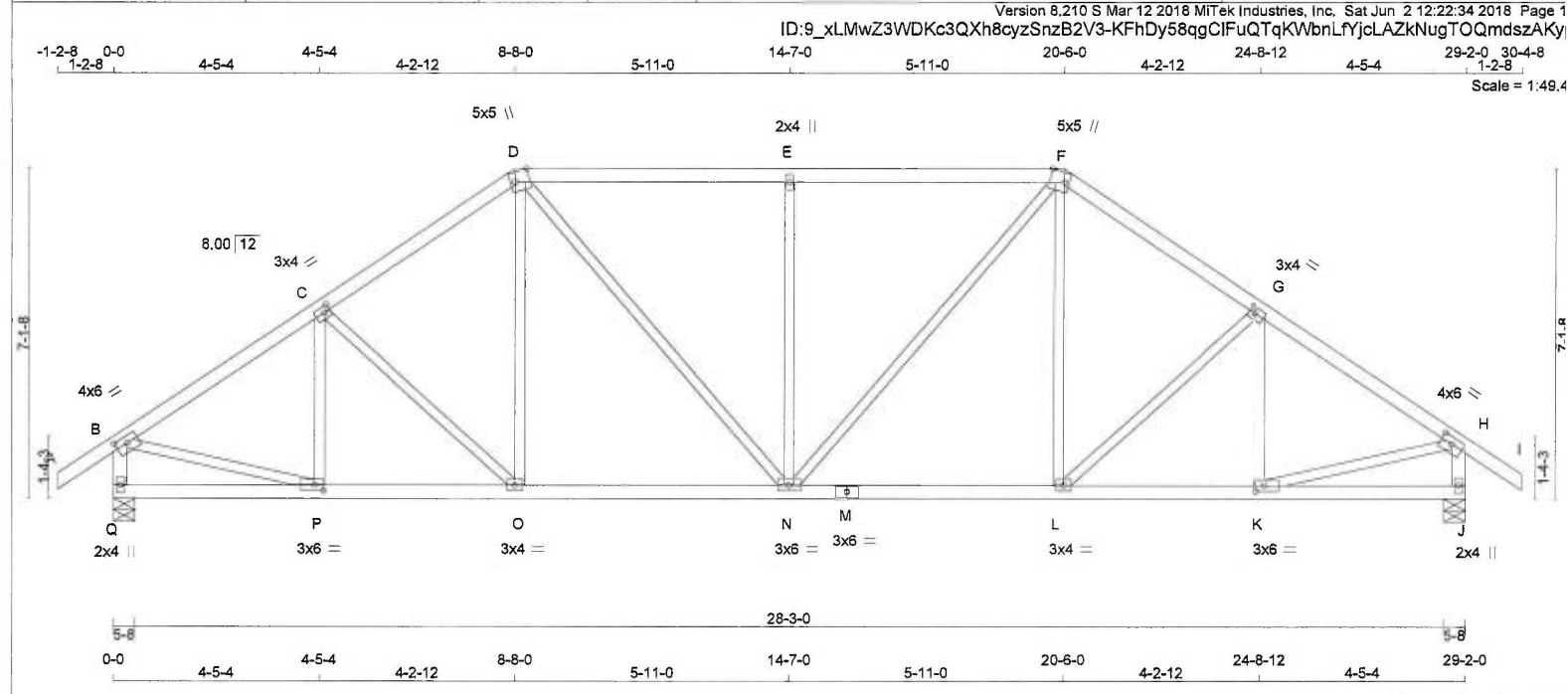
|                                                                                                                                                                                                                                                                                                                                                                |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER DESCR. LUMBER<br>A - C 2x4 DRY No.2 SPF<br>C - D 2x4 DRY No.2 SPF<br>D - G 2x4 DRY No.2 SPF<br>G - I 2x4 DRY No.2 SPF<br>P - B 2x4 DRY No.2 SPF<br>J - H 2x4 DRY No.2 SPF<br>P - M 2x4 DRY No.2 SPF<br>M - J 2x4 DRY No.2 SPF<br><br>ALL WEBS 2x3 DRY No.2 SPF<br>EXCEPT<br><br>DRY: SEASONED LUMBER. |  |  |  | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b><br>FACTORED MAXIMUM FACTORED INPUT REQD<br>GROSS REACTION GROSS REACTION BRG BRG<br>JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX<br>P 1494 0 1494 0 0 5-8 5-8<br>J 1494 0 1494 0 0 5-8 5-8<br><br><b>UNFACTORED REACTIONS</b><br>1ST LCASE MAX./MIN. COMPONENT REACTIONS<br>JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL<br>P 1047 739 / 0 0 / 0 0 / 0 308 / 0 0 / 0<br>J 1047 739 / 0 0 / 0 0 / 0 308 / 0 0 / 0<br><br>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) P, J<br><br><b>BRACING</b><br>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.21 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.<br><br>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.<br><br><b>LOADING</b><br>TOTAL LOAD CASES: (4)<br><br>CHORDS WEBS<br>MAX. FACTORED MAX. FACTORED<br>MEMB. FORCE VERT. LOAD LC1 MAX MEMB. FORCE MAX<br>(LBS) (PLF) CSI (LC) UNBRAC LENGTH FR-TO (LBS) CSI (LC)<br>FR-TO FROM TO<br>A-B 0 / 28 -77.4 -77.4 0.09 (1) 10.00 O-C -117 / 61 0.05 (1)<br>B-C -1609 / 0 -77.4 -77.4 0.55 (1) 4.58 C-N 0 / 956 0.22 (1)<br>C-D -2079 / 0 -77.4 -77.4 0.48 (1) 4.22 N-E -495 / 0 0.19 (1)<br>D-E -2079 / 0 -77.4 -77.4 0.48 (1) 4.22 N-F -2 / 0 0.00 (1)<br>E-F -2079 / 0 -77.4 -77.4 0.49 (1) 4.21 L-F -497 / 0 0.19 (1)<br>F-G -2081 / 0 -77.4 -77.4 0.49 (1) 4.21 L-G 0 / 958 0.22 (1)<br>G-H -1609 / 0 -77.4 -77.4 0.55 (1) 4.58 K-G -118 / 61 0.05 (1)<br>H-I 0 / 28 -77.4 -77.4 0.09 (1) 10.00 B-O 0 / 1359 0.31 (1)<br>P-B -1452 / 0 0.0 0.0 0.15 (1) 6.79 K-H 0 / 1358 0.31 (1)<br>J-H -1452 / 0 0.0 0.0 0.15 (1) 6.79<br><br>P-O 0 / 0 -18.2 -18.2 0.15 (4) 10.00<br>O-N 0 / 1335 -18.2 -18.2 0.30 (1) 10.00<br>N-M 0 / 2081 -18.2 -18.2 0.39 (1) 10.00<br>M-L 0 / 2081 -18.2 -18.2 0.39 (1) 10.00<br>L-K 0 / 1335 -18.2 -18.2 0.30 (1) 10.00<br>K-J 0 / 0 -18.2 -18.2 0.15 (4) 10.00 |  |  |  | <b>DESIGN CRITERIA</b><br><br>SPECIFIED LOADS:<br>TOP CH. LL = 23.3 PSF<br>DL = 3.0 PSF<br>BOT CH. LL = 0.0 PSF<br>DL = 7.3 PSF<br>TOTAL LOAD = 33.6 PSF<br><br><b>SPACING = 24.0 IN. C/C</b><br><br>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM<br><br>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010<br><br>THIS DESIGN COMPLIES WITH:<br>- PART 9 OF OBC 2012, BCBC 2012, ABC 2014<br>- CSA 086-09<br>- TPIC 2011<br><br>(55% OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD<br><br>ALLOWABLE DEFL.(LL)= L/360 (0.97")<br>CALCULATED VERT. DEFL.(LL)= L/ 999 (0.10")<br>ALLOWABLE DEFL.(TL)= L/360 (0.97")<br>CALCULATED VERT. DEFL.(TL)= L/ 999 (0.19")<br><br>CSI: TC=0.55/1.00 (B-C:1) , BC=0.39/1.00 (L-N:1) ,<br>WB=0.31/1.00 (B-O:1) , SS=0.21/1.00 (F-G:1)<br><br>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10<br>COMP=1.10 SHEAR=1.10 TENS= 1.10<br><br>COMPANION LIVE LOAD FACTOR = 0.50<br><br>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .<br><br>NAIL VALUES<br>PLATE GRIP(DRY) SHEAR SECTION<br>(PSI) (PLI) (PLI)<br>MAX MIN MAX MIN MAX MIN<br>MT20 618 354 1667 822 2284 1656<br><br>PLATE PLACEMENT TOL. = 0.250 inches<br><br>PLATE ROTATION TOL. = 5.0 Deg.<br><br>JSI GRIP= 0.90 (G) (INPUT = 0.90 )<br>JSI METAL= 0.57 (M) (INPUT = 1.00 ) |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|



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







**LUMBER**  
N. L. G. A. RULES  
CHORDS SIZE LUMBER DESCR.

|       |     |     |      |     |
|-------|-----|-----|------|-----|
| A - D | 2x4 | DRY | No.2 | SPF |
| D - F | 2x4 | DRY | No.2 | SPF |
| F - I | 2x4 | DRY | No.2 | SPF |
| Q - B | 2x4 | DRY | No.2 | SPF |
| J - H | 2x4 | DRY | No.2 | SPF |
| Q - M | 2x4 | DRY | No.2 | SPF |
| M - J | 2x4 | DRY | No.2 | SPF |

ALL WEBS 2x3 DRY No.2 SPF  
EXCEPT  
  
DRY: SEASONED LUMBER.

**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 |           |           |
| Q  | 1494                    | 0    | 1494                            | 0    | 5-8       | 5-8       |
| J  | 1494                    | 0    | 1494                            | 0    | 5-8       | 5-8       |

**UNFACTORED REACTIONS**  

| JT | 1ST LCASE |         | MAX./MIN. COMPONENT REACTIONS |           |       |         |       |
|----|-----------|---------|-------------------------------|-----------|-------|---------|-------|
|    | COMBINED  | SNOW    | LIVE                          | PERM.LIVE | WIND  | DEAD    | SOIL  |
| Q  | 1047      | 739 / 0 | 0 / 0                         | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |
| J  | 1047      | 739 / 0 | 0 / 0                         | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |

TOTAL WEIGHT = 128 lb  
[M]F

**PLATES (table is in inches)**  

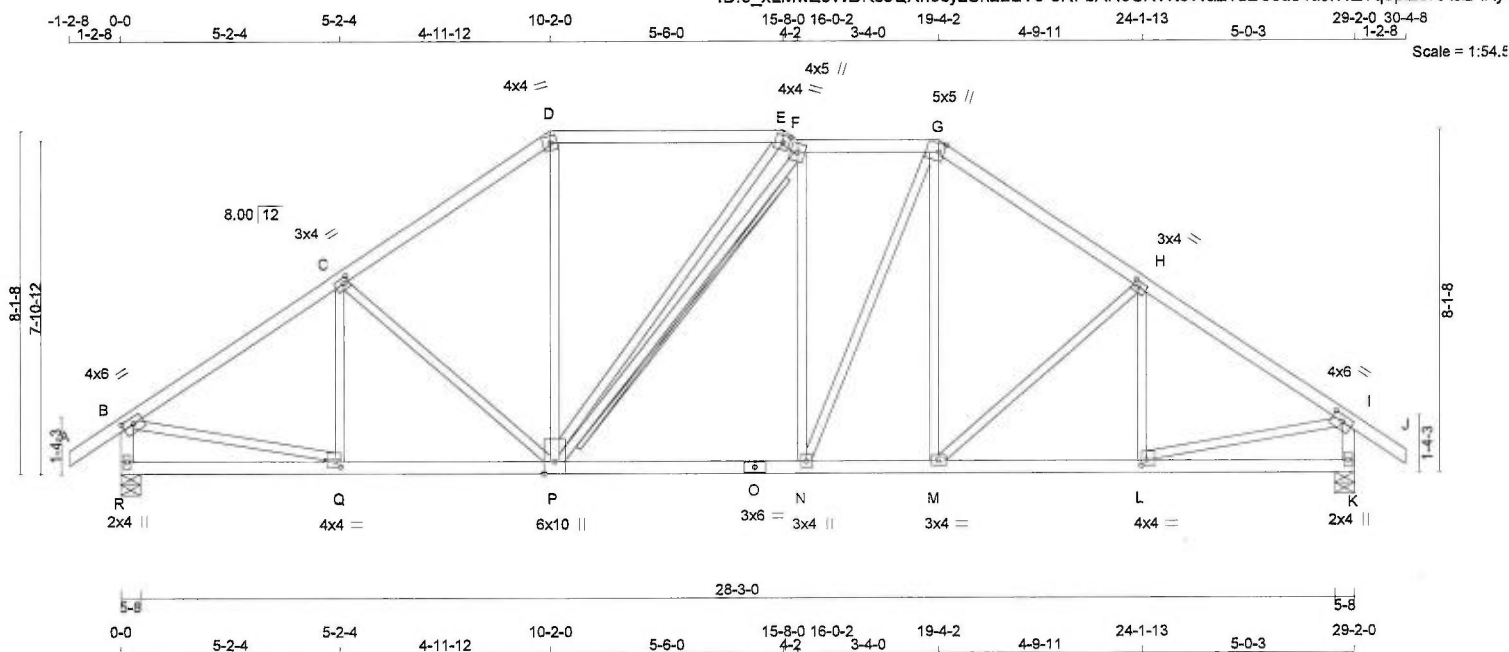
| JT | TYPE   | PLATES | W   | LEN | Y    | X    |
|----|--------|--------|-----|-----|------|------|
| B  | TMVW-t | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| C  | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D  | TTVW+m | MT20   | 5.0 | 5.0 | Edge | 3.75 |
| E  | TMVW-w | MT20   | 2.0 | 4.0 |      |      |
| F  | TTVW+m | MT20   | 5.0 | 5.0 | Edge | 3.75 |
| G  | TMVW-t | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| H  | TMVW-t | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| J  | BMV1-p | MT20   | 2.0 | 4.0 |      |      |
| K  | BMVW-t | MT20   | 3.0 | 6.0 | 1.50 | 2.25 |
| L  | BMVW-t | MT20   | 3.0 | 4.0 |      |      |
| M  | BS-t   | MT20   | 3.0 | 6.0 |      |      |
| N  | BMVW-t | MT20   | 3.0 | 6.0 |      |      |
| O  | BMVW-t | MT20   | 3.0 | 4.0 |      |      |
| P  | BMVW-t | MT20   | 3.0 | 6.0 | 1.50 | 2.25 |
| Q  | BMV1-p | MT20   | 2.0 | 4.0 |      |      |

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

**BRACING**  
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.88 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.  
  
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.

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

| CHORDS |                           |                           |               | WEBS     |                           |               |                           |
|--------|---------------------------|---------------------------|---------------|----------|---------------------------|---------------|---------------------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. LC1 (LC) | MAX. UNBRACED LENGTH (LC) |
| FR-TO  |                           | FROM                      | TO            | FR-TO    |                           | FROM          | TO                        |
| A-B    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | P-C                       | -237 / 0      | 0.07 (1)                  |
| B-C    | -1617 / 0                 | -77.4                     | -77.4         | 0.21 (1) | C-O                       | -154 / 0      | 0.09 (1)                  |
| C-D    | -1526 / 0                 | -77.4                     | -77.4         | 0.21 (1) | O-D                       | 0 / 201       | 0.05 (1)                  |
| D-E    | -1542 / 0                 | -77.4                     | -77.4         | 0.38 (1) | D-N                       | 0 / 443       | 0.10 (1)                  |
| E-F    | -1542 / 0                 | -77.4                     | -77.4         | 0.38 (1) | N-E                       | -560 / 0      | 0.49 (1)                  |
| F-G    | -1526 / 0                 | -77.4                     | -77.4         | 0.21 (1) | N-F                       | 0 / 443       | 0.10 (1)                  |
| G-H    | -1617 / 0                 | -77.4                     | -77.4         | 0.21 (1) | L-F                       | 0 / 201       | 0.05 (1)                  |
| H-I    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | L-G                       | -154 / 0      | 0.09 (1)                  |
| Q-B    | -1458 / 0                 | 0.0                       | 0.0           | 0.15 (1) | K-G                       | -237 / 0      | 0.07 (1)                  |
| J-H    | -1458 / 0                 | 0.0                       | 0.0           | 0.15 (1) | B-P                       | 0 / 1399      | 0.31 (1)                  |
|        |                           |                           |               |          | K-H                       | 0 / 1399      | 0.31 (1)                  |
| Q-P    | 0 / 0                     | -18.2                     | -18.2         | 0.07 (4) |                           |               |                           |
| P-O    | 0 / 1363                  | -18.2                     | -18.2         | 0.28 (1) |                           |               |                           |
| O-N    | 0 / 1252                  | -18.2                     | -18.2         | 0.27 (1) |                           |               |                           |
| N-M    | 0 / 1252                  | -18.2                     | -18.2         | 0.27 (1) |                           |               |                           |
| M-L    | 0 / 1252                  | -18.2                     | -18.2         | 0.27 (1) |                           |               |                           |
| L-K    | 0 / 1363                  | -18.2                     | -18.2         | 0.28 (1) |                           |               |                           |
| K-J    | 0 / 0                     | -18.2                     | -18.2         | 0.07 (4) |                           |               |                           |



TOTAL WEIGHT = 142 lb  
[MIF]

| 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    |
| F - G              | 2x4  | DRY No.2 | SPF    |
| G - J              | 2x4  | DRY No.2 | SPF    |
| R - B              | 2x4  | DRY No.2 | SPF    |
| K - I              | 2x4  | DRY No.2 | SPF    |
| R - O              | 2x4  | DRY No.2 | SPF    |
| O - K              | 2x4  | DRY No.2 | SPF    |
| ALL WEBS<br>EXCEPT | 2x3  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |          |        |     |      |           |
|-----------------------------|----------|--------|-----|------|-----------|
| JT                          | TYPE     | PLATES | W   | LEN  | Y X       |
| B                           | TMVW-t   | MT20   | 4.0 | 6.0  | 1.75 3.00 |
| C                           | TMVW-t   | MT20   | 3.0 | 4.0  | 1.50 1.50 |
| D                           | TTW-m    | MT20   | 4.0 | 4.0  |           |
| E                           | TTW-m    | MT20   | 4.0 | 4.0  | 2.00 1.75 |
| F                           | TTWW+m   | MT20   | 4.0 | 5.0  |           |
| G                           | TTWW+m   | MT20   | 5.0 | 5.0  | 2.50 1.50 |
| H                           | TMVW-t   | MT20   | 3.0 | 4.0  | 1.50 1.50 |
| I                           | TMVW-t   | MT20   | 4.0 | 6.0  | 1.75 3.00 |
| K                           | BMV1+p   | MT20   | 2.0 | 4.0  |           |
| L                           | BMVW-t   | MT20   | 4.0 | 4.0  | 1.50 1.50 |
| M                           | BMVW-t   | MT20   | 3.0 | 4.0  |           |
| N                           | BMVW+t   | MT20   | 3.0 | 4.0  |           |
| O                           | BS-t     | MT20   | 3.0 | 6.0  |           |
| P                           | BMVWVW+m | MT20   | 6.0 | 10.0 | Edge      |
| Q                           | BMVW-t   | MT20   | 4.0 | 4.0  | 1.50 1.50 |
| R                           | BMV1+p   | MT20   | 2.0 | 4.0  |           |

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

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

| BEARINGS       |      |      |                  |      |        |       |       |
|----------------|------|------|------------------|------|--------|-------|-------|
| FACTORED       |      |      | MAXIMUM FACTORED |      |        | INPUT | REQRD |
| GROSS REACTION |      |      | GROSS REACTION   |      |        | BRG   | BRG   |
| JT             | VERT | HORZ | DOWN             | HORZ | UPLIFT | IN-SX | IN-SX |
| R              | 1494 | 0    | 1494             | 0    | 0      | 5-8   | 5-8   |
| K              | 1494 | 0    | 1494             | 0    | 0      | 5-8   | 5-8   |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| R         | 1047     | 739 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |
| K         | 1047     | 739 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |

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

## BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.89 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY  
APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT F-P

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

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

## LOADING

**TOTAL LOAD CASES: (4)**

| CHORDS        |           |            |          |          | WEBS          |       |           |          |  |
|---------------|-----------|------------|----------|----------|---------------|-------|-----------|----------|--|
| MAX. FACTORED |           | FACTORED   |          |          | MAX. FACTORED |       |           |          |  |
| MEMB.         | FORCE     | VERT. LOAD | LC1 MAX  | MAX.     | MEMB.         | FORCE | MAX       |          |  |
|               | (LBS)     | (PLF)      | CSI (LC) | UNBRAC   |               | (LBS) | CSI (LC)  |          |  |
| FR-TO         |           | FROM TO    |          | LENGTH   | FR-TO         |       |           |          |  |
| A-B           | 0 / 28    | -77.4      | -77.4    | 0.09 (1) | 10.00         | Q-C   | -178 / 31 | 0.06 (1) |  |
| B-C           | -1640 / 0 | -77.4      | -77.4    | 0.30 (1) | 4.89          | C-P   | -268 / 0  | 0.23 (1) |  |
| C-D           | -1452 / 0 | -77.4      | -77.4    | 0.28 (1) | 5.13          | P-D   | 0 / 435   | 0.10 (1) |  |
| D-E           | -1190 / 0 | -77.4      | -77.4    | 0.32 (1) | 5.48          | P-F   | -677 / 0  | 0.49 (1) |  |
| E-F           | -1107 / 0 | -77.4      | -77.4    | 0.01 (1) | 6.02          | N-F   | -217 / 0  | 0.26 (1) |  |
| F-G           | -1327 / 0 | -77.4      | -77.4    | 0.13 (1) | 5.50          | N-G   | 0 / 324   | 0.07 (1) |  |
| G-H           | -1466 / 0 | -77.4      | -77.4    | 0.27 (1) | 5.14          | M-G   | 0 / 234   | 0.05 (1) |  |
| H-I           | -1638 / 0 | -77.4      | -77.4    | 0.28 (1) | 4.91          | M-H   | -250 / 0  | 0.20 (1) |  |
| I-J           | 0 / 28    | -77.4      | -77.4    | 0.09 (1) | 10.00         | L-H   | -183 / 33 | 0.06 (1) |  |
| R-B           | -1453 / 0 | 0.0        | 0.0      | 0.15 (1) | 6.78          | B-Q   | 0 / 1413  | 0.32 (1) |  |
| K-I           | -1455 / 0 | 0.0        | 0.0      | 0.15 (1) | 6.77          | L-I   | 0 / 1412  | 0.32 (1) |  |
|               |           |            |          |          |               | P-E   | 0 / 472   | 0.11 (1) |  |
| R-Q           | 0 / 0     | -18.2      | -18.2    | 0.10 (4) | 10.00         |       |           |          |  |
| Q-P           | 0 / 1386  | -18.2      | -18.2    | 0.29 (1) | 10.00         |       |           |          |  |
| P-O           | 0 / 1330  | -18.2      | -18.2    | 0.28 (1) | 10.00         |       |           |          |  |
| O-N           | 0 / 1330  | -18.2      | -18.2    | 0.28 (1) | 10.00         |       |           |          |  |
| N-M           | 0 / 1200  | -18.2      | -18.2    | 0.23 (1) | 10.00         |       |           |          |  |
| M-L           | 0 / 1383  | -18.2      | -18.2    | 0.27 (1) | 10.00         |       |           |          |  |
| L-K           | 0 / 0     | -18.2      | -18.2    | 0.11 (4) | 10.00         |       |           |          |  |

## DESIGN CRITERIA

|                  |      |      |     |
|------------------|------|------|-----|
| SPECIFIED LOADS: |      |      |     |
| TOP CH.          | LL = | 23.3 | PSF |
|                  | DL = | 3.0  | PSF |
| BOT CH.          | LL = | 0.0  | PSF |
|                  | DL = | 7.3  | PSF |
| TOTAL LOAD       | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIQ 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.13")

CSI: TC=0.32/1.00 (D-E:1), BC=0.29/1.00 (P-Q:1),  
WB=0.49/1.00 (F-P:1), SSI=0.17/1.00 (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 = 0.50

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        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

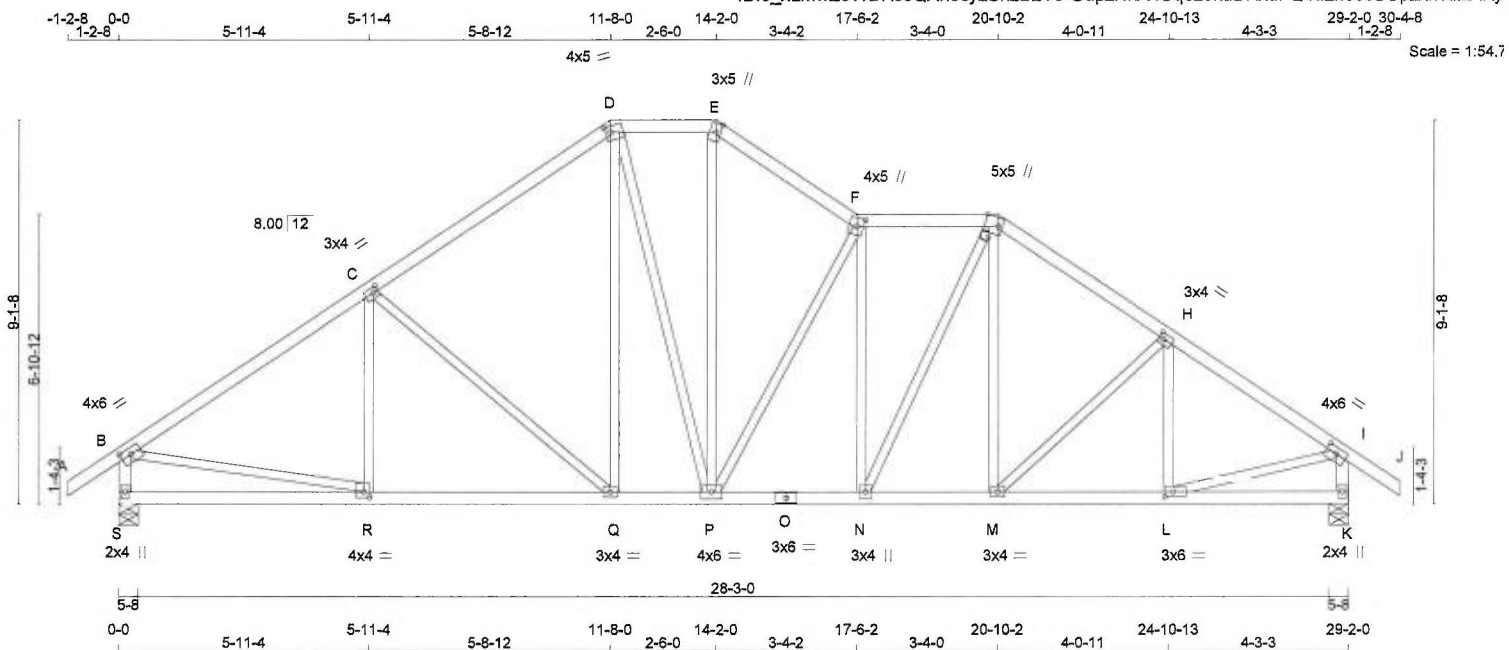
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.84 (L) (INPUT = 0.90 )  
JSI METAL= 0.52 (Q) (INPUT = 1.00 )



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





TOTAL WEIGHT = 146 lb  
[M][F]

| 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    |
| F - G              | 2x4  | DRY No.2 | SPF    |
| G - J              | 2x4  | DRY No.2 | SPF    |
| S - B              | 2x4  | DRY No.2 | SPF    |
| K - I              | 2x4  | DRY No.2 | SPF    |
| S - O              | 2x4  | DRY No.2 | SPF    |
| O - K              | 2x4  | DRY No.2 | SPF    |
| ALL WEBS<br>EXCEPT | 2x3  | DRY No.2 | SPF    |

DRY: SEASONED LUMBER.

| J | T | TYPE     | PLATES | W   | LEN | Y    | X    |
|---|---|----------|--------|-----|-----|------|------|
| B | T | MMVW-t   | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| C | T | MMVW-t   | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| D | T | TWVW-m   | MT20   | 4.0 | 5.0 | 1.75 | 1.50 |
| E | T | TWVW-m   | MT20   | 3.0 | 5.0 | 2.50 | 1.25 |
| F | T | TWVW+m   | MT20   | 4.0 | 5.0 | 2.50 | 1.75 |
| G | T | TWVW+m   | MT20   | 5.0 | 5.0 | Edge | 3.75 |
| H | I | MMVW-t   | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| I | T | MMVW-t   | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| K | L | BMVW+1p  | MT20   | 2.0 | 4.0 |      |      |
| L | K | BMVW-t   | MT20   | 3.0 | 6.0 | 1.50 | 2.25 |
| M | N | BMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| N | M | BMVW+t   | MT20   | 3.0 | 4.0 |      |      |
| O | S | B5-t     | MT20   | 3.0 | 6.0 |      |      |
| P | Q | BMVWWW-t | MT20   | 4.0 | 6.0 |      |      |
| Q | P | BMVW-t   | MT20   | 3.0 | 4.0 |      |      |
| R | S | BMVW-t   | MT20   | 4.0 | 4.0 | 1.50 | 1.50 |
| S | R | BMVW+1p  | MT20   | 2.0 | 4.0 |      |      |

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

| FACTORED | MAXIMUM FACTORED | INPUT | REQRD |
|----------|------------------|-------|-------|
| 1        | 1                | 1     | 1     |
| 2        | 2                | 2     | 2     |
| 3        | 3                | 3     | 3     |
| 4        | 4                | 4     | 4     |
| 5        | 5                | 5     | 5     |
| 6        | 6                | 6     | 6     |
| 7        | 7                | 7     | 7     |
| 8        | 8                | 8     | 8     |
| 9        | 9                | 9     | 9     |
| 10       | 10               | 10    | 10    |
| 11       | 11               | 11    | 11    |
| 12       | 12               | 12    | 12    |
| 13       | 13               | 13    | 13    |
| 14       | 14               | 14    | 14    |
| 15       | 15               | 15    | 15    |
| 16       | 16               | 16    | 16    |
| 17       | 17               | 17    | 17    |
| 18       | 18               | 18    | 18    |
| 19       | 19               | 19    | 19    |
| 20       | 20               | 20    | 20    |
| 21       | 21               | 21    | 21    |
| 22       | 22               | 22    | 22    |
| 23       | 23               | 23    | 23    |
| 24       | 24               | 24    | 24    |
| 25       | 25               | 25    | 25    |
| 26       | 26               | 26    | 26    |
| 27       | 27               | 27    | 27    |
| 28       | 28               | 28    | 28    |
| 29       | 29               | 29    | 29    |
| 30       | 30               | 30    | 30    |
| 31       | 31               | 31    | 31    |
| 32       | 32               | 32    | 32    |
| 33       | 33               | 33    | 33    |
| 34       | 34               | 34    | 34    |
| 35       | 35               | 35    | 35    |
| 36       | 36               | 36    | 36    |
| 37       | 37               | 37    | 37    |
| 38       | 38               | 38    | 38    |
| 39       | 39               | 39    | 39    |
| 40       | 40               | 40    | 40    |
| 41       | 41               | 41    | 41    |
| 42       | 42               | 42    | 42    |
| 43       | 43               | 43    | 43    |
| 44       | 44               | 44    | 44    |
| 45       | 45               | 45    | 45    |
| 46       | 46               | 46    | 46    |
| 47       | 47               | 47    | 47    |
| 48       | 48               | 48    | 48    |
| 49       | 49               | 49    | 49    |
| 50       | 50               | 50    | 50    |
| 51       | 51               | 51    | 51    |
| 52       | 52               | 52    | 52    |
| 53       | 53               | 53    | 53    |
| 54       | 54               | 54    | 54    |
| 55       | 55               | 55    | 55    |
| 56       | 56               | 56    | 56    |
| 57       | 57               | 57    | 57    |
| 58       | 58               | 58    | 58    |
| 59       | 59               | 59    | 59    |
| 60       | 60               | 60    | 60    |
| 61       | 61               | 61    | 61    |
| 62       | 62               | 62    | 62    |
| 63       | 63               | 63    | 63    |
| 64       | 64               | 64    | 64    |
| 65       | 65               | 65    | 65    |
| 66       | 66               | 66    | 66    |
| 67       | 67               | 67    | 67    |
| 68       | 68               | 68    | 68    |
| 69       | 69               | 69    | 69    |
| 70       | 70               | 70    | 70    |
| 71       | 71               | 71    | 71    |
| 72       | 72               | 72    | 72    |
| 73       | 73               | 73    | 73    |
| 74       | 74               | 74    | 74    |
| 75       | 75               | 75    | 75    |
| 76       | 76               | 76    | 76    |
| 77       | 77               | 77    | 77    |
| 78       | 78               | 78    | 78    |
| 79       | 79               | 79    | 79    |
| 80       | 80               | 80    | 80    |
| 81       | 81               | 81    | 81    |
| 82       | 82               | 82    | 82    |
| 83       | 83               | 83    | 83    |
| 84       | 84               | 84    | 84    |
| 85       | 85               | 85    | 85    |
| 86       | 86               | 86    | 86    |
| 87       | 87               | 87    | 87    |
| 88       | 88               | 88    | 88    |
| 89       | 89               | 89    | 89    |
| 90       | 90               | 90    | 90    |
| 91       | 91               | 91    | 91    |
| 92       | 92               | 92    | 92    |
| 93       | 93               | 93    | 93    |
| 94       | 94               | 94    | 94    |
| 95       | 95               | 95    | 95    |
| 96       | 96               | 96    | 96    |
| 97       | 97               | 97    | 97    |
| 98       | 98               | 98    | 98    |
| 99       | 99               | 99    | 99    |
| 100      | 100              | 100   | 100   |

| JT | GROSS REACTION |      | GROSS REACTION |      | UPLIFT | BRG   | BRG   |
|----|----------------|------|----------------|------|--------|-------|-------|
|    | VERT           | HORZ | DOWN           | HORZ |        | IN-SX | IN-SX |
| S  | 1494           | 0    | 1494           | 0    | 0      | 5-8   | 5-8   |
| K  | 1494           | 0    | 1494           | 0    | 0      | 5-8   | 5-8   |

## 1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW    | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
|----|----------|---------|-------|-----------|-------|---------|-------|
| S  | 1047     | 739 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |
| K  | 1047     | 739 / 0 | 0 / 0 | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |

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

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.75 FT.

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

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

TOTAL LOAD CASES: (4)

| C H O R D S |                           |                           |                  | W E B S            |       |                           |                  |
|-------------|---------------------------|---------------------------|------------------|--------------------|-------|---------------------------|------------------|
| MEMB.       | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 CSI (LC) |
| FR-TO       |                           | FROM TO                   |                  |                    | FR-TO |                           |                  |
| A-B         | 0 / 28                    | -77.4                     | -77.4 0.09 (1)   | 10.00              | R-C   | -120 / 67                 | 0.05 (1)         |
| B-C         | -1650 / 0                 | -77.4                     | -77.4 0.40 (1)   | 4.75               | C-Q   | -383 / 0                  | 0.46 (1)         |
| C-D         | -1362 / 0                 | -77.4                     | -77.4 0.37 (1)   | 5.15               | Q-D   | 0 / 325                   | 0.07 (1)         |
| D-E         | -1152 / 0                 | -77.4                     | -77.4 0.08 (1)   | 5.86               | D-P   | 0 / 158                   | 0.04 (1)         |
| E-F         | -1377 / 0                 | -77.4                     | -77.4 0.13 (1)   | 5.42               | P-E   | 0 / 538                   | 0.12 (1)         |
| F-G         | -1475 / 0                 | -77.4                     | -77.4 0.13 (1)   | 5.27               | P-F   | -722 / 0                  | 0.79 (1)         |
| G-H         | -1538 / 0                 | -77.4                     | -77.4 0.19 (1)   | 5.13               | N-F   | -382 / 0                  | 0.31 (1)         |
| H-I         | -1610 / 0                 | -77.4                     | -77.4 0.20 (1)   | 5.04               | N-G   | 0 / 482                   | 0.11 (1)         |
| I-J         | 0 / 28                    | -77.4                     | -77.4 0.09 (1)   | 10.00              | M-G   | 0 / 164                   | 0.04 (1)         |
| S-B         | -1449 / 0                 | 0.0                       | 0.0 0.15 (1)     | 6.79               | M-H   | -131 / 0                  | 0.07 (1)         |
| K-I         | -1459 / 0                 | 0.0                       | 0.0 0.15 (1)     | 6.77               | L-H   | -246 / 0                  | 0.07 (1)         |
|             |                           |                           |                  |                    | B-R   | 0 / 1418                  | 0.32 (1)         |
|             |                           |                           |                  |                    | L-I   | 0 / 1395                  | 0.31 (1)         |
| S-R         | 0 / 0                     | -18.2                     | -18.2 0.16 (4)   | 10.00              |       |                           |                  |
| R-P         | 0 / 1398                  | -18.2                     | -18.2 0.30 (1)   | 10.00              |       |                           |                  |
| P-Q         | 0 / 1111                  | -18.2                     | -18.2 0.22 (1)   | 10.00              |       |                           |                  |
| Q-O         | 0 / 1481                  | -18.2                     | -18.2 0.27 (1)   | 10.00              |       |                           |                  |
| O-N         | 0 / 1481                  | -18.2                     | -18.2 0.27 (1)   | 10.00              |       |                           |                  |
| N-M         | 0 / 1263                  | -18.2                     | -18.2 0.23 (1)   | 10.00              |       |                           |                  |
| M-L         | 0 / 1356                  | -18.2                     | -18.2 0.25 (1)   | 10.00              |       |                           |                  |
| L-K         | 0 / 0                     | -18.2                     | -18.2 0.07 (4)   | 10.00              |       |                           |                  |

SPECIFIED LOADS:

|            |    |   |      |          |
|------------|----|---|------|----------|
| TOP CH.    | LL | = | 23.3 | PSF      |
|            | DL | = | 3.0  | PSF      |
| BOT CH.    | LL | = | 0.0  | PSF      |
|            | DL | = | 7.3  | PSF      |
| TOTAL LOAD |    |   | =    | 33.6 PSF |

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012 , CBC 2012 , ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")  
ALLOWABLE DEFL.(TL)= L/360 (0.97")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=0.40/1.00 (B-C:1), BC=0.30/1.00 (Q-R:1),  
WB=0.79/1.00 (F-P: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 = 0.50

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        | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0,250 inches

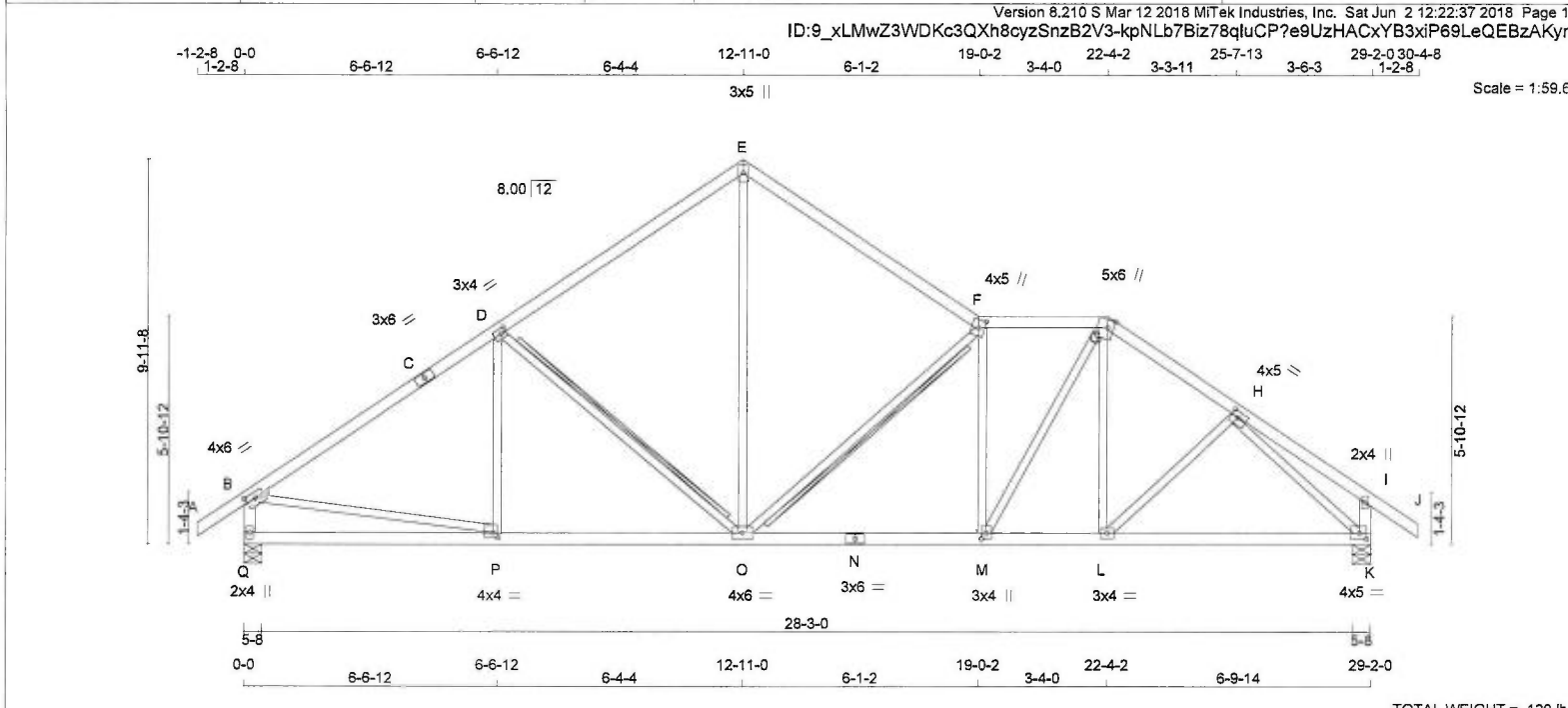
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.87 (G) (INPUT = 0.90 )  
JSI METAL= 0.52 (R) (INPUT = 1.00 )



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





TOTAL WEIGHT = 129 [M]F

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

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-t  | MT20   | 4.0 | 6.0 | 1.75 | 3.00 |
| C  | TS-t    | MT20   | 3.0 | 6.0 |      |      |
| D  | TMVW-t  | MT20   | 3.0 | 4.0 | 1.50 | 1.50 |
| E  | TTW+p   | MT20   | 3.0 | 5.0 |      |      |
| F  | TTVW+m  | MT20   | 4.0 | 5.0 | 2.50 | 1.75 |
| G  | TTVW+m  | MT20   | 5.0 | 6.0 | Edge | 1.75 |
| H  | TMVW-t  | MT20   | 4.0 | 5.0 | 1.75 | 2.25 |
| I  | TMV+p   | MT20   | 2.0 | 4.0 |      |      |
| K  | BMVW1-t | MT20   | 4.0 | 5.0 | 1.75 | 2.25 |
| L  | BMVW-t  | MT20   | 3.0 | 4.0 |      |      |
| M  | BMVW+t  | MT20   | 3.0 | 4.0 | 1.75 | 1.50 |
| N  | BS-t    | MT20   | 3.0 | 6.0 |      |      |
| O  | BMVW-t  | MT20   | 4.0 | 6.0 |      |      |
| P  | BMVW-t  | MT20   | 4.0 | 4.0 | 1.50 | 1.50 |
| Q  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |

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

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

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

| JT | FACTORED GROSS REACTION |      | MAXIMUM FACTORED GROSS REACTION |      | INPUT BRG | REQRD BRG |
|----|-------------------------|------|---------------------------------|------|-----------|-----------|
|    | VERT                    | HORZ | DOWN                            | HORZ |           |           |
| Q  | 1494                    | 0    | 1494                            | 0    | 5-8       | 5-8       |
| K  | 1494                    | 0    | 1494                            | 0    | 5-8       | 5-8       |

UNFACTORED REACTIONS

| JT | 1ST LCASE |         | MAX./MIN. COMPONENT REACTIONS |           |       |         | DEAD  | SOIL |
|----|-----------|---------|-------------------------------|-----------|-------|---------|-------|------|
|    | COMBINED  | SNOW    | LIVE                          | PERM.LIVE | WIND  |         |       |      |
| Q  | 1047      | 739 / 0 | 0 / 0                         | 0 / 0     | 0 / 0 | 308 / 0 | 0 / 0 |      |
| K  | 1047      | 739 / 0 | 0 / 0                         | 0 / 0     | 0 / 0 | 308 / 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 = 4.62 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT D-O, F-O

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

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

LOADING

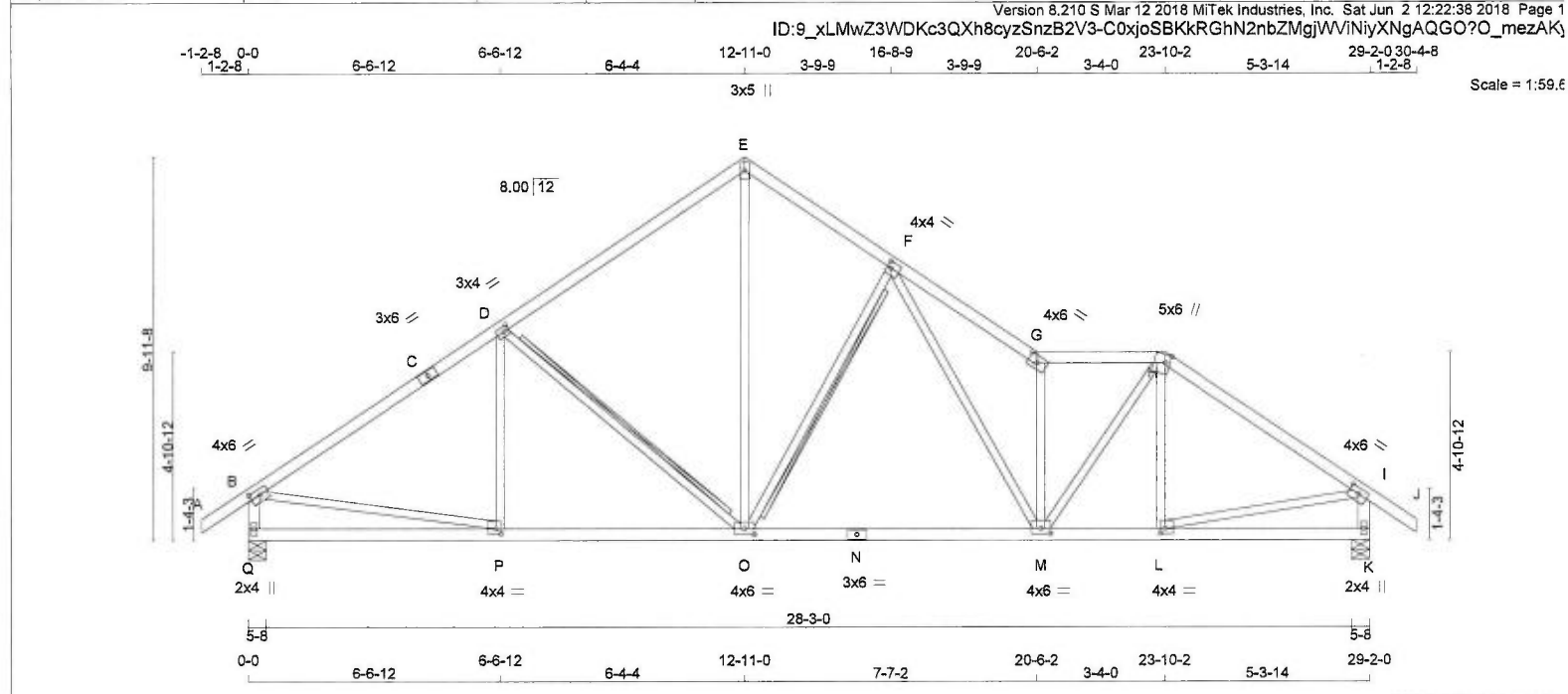
TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |               | WEBS     |                           |               |               |
|--------|---------------------------|---------------------------|---------------|----------|---------------------------|---------------|---------------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX. LC1 (LC) | MEMB.    | MAX. FACTORED FORCE (LBS) | MAX. LC1 (LC) | UNBRAC LENGTH |
| FR-TO  |                           | FROM                      | TO            | FR-TO    |                           |               |               |
| A-B    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | P-D                       | -90 / 82      | 0.05 (1)      |
| B-C    | -1646 / 0                 | -77.4                     | -77.4         | 0.50 (1) | D-O                       | -459 / 0      | 0.24 (1)      |
| C-D    | -1646 / 0                 | -77.4                     | -77.4         | 0.50 (1) | O-E                       | 0 / 974       | 0.22 (1)      |
| D-E    | -1293 / 0                 | -77.4                     | -77.4         | 0.46 (1) | E-F                       | -822 / 0      | 0.43 (1)      |
| E-F    | -1258 / 0                 | -77.4                     | -77.4         | 0.41 (1) | F-G                       | -505 / 0      | 0.27 (1)      |
| F-G    | -1644 / 0                 | -77.4                     | -77.4         | 0.14 (1) | G-H                       | 0 / 653       | 0.15 (1)      |
| G-H    | -1599 / 0                 | -77.4                     | -77.4         | 0.13 (1) | H-I                       | 0 / 88        | 0.03 (4)      |
| H-I    | 0 / 15                    | -77.4                     | -77.4         | 0.12 (1) | I-J                       | 0 / 64        | 0.02 (4)      |
| I-J    | 0 / 28                    | -77.4                     | -77.4         | 0.09 (1) | J-K                       | 0 / 1414      | 0.32 (1)      |
| Q-B    | -1444 / 0                 | 0.0                       | 0.0           | 0.15 (1) | K-L                       | -1777 / 0     | 0.64 (1)      |
| K-I    | -205 / 0                  | 0.0                       | 0.0           | 0.02 (1) |                           |               |               |
| Q-P    | 0 / 0                     | -18.2                     | -18.2         | 0.18 (4) |                           |               |               |
| P-O    | 0 / 1397                  | -18.2                     | -18.2         | 0.31 (1) |                           |               |               |
| O-N    | 0 / 1653                  | -18.2                     | -18.2         | 0.35 (1) |                           |               |               |
| N-M    | 0 / 1653                  | -18.2                     | -18.2         | 0.35 (1) |                           |               |               |
| M-L    | 0 / 1317                  | -18.2                     | -18.2         | 0.31 (1) |                           |               |               |
| L-K    | 0 / 1277                  | -18.2                     | -18.2         | 0.31 (1) |                           |               |               |



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



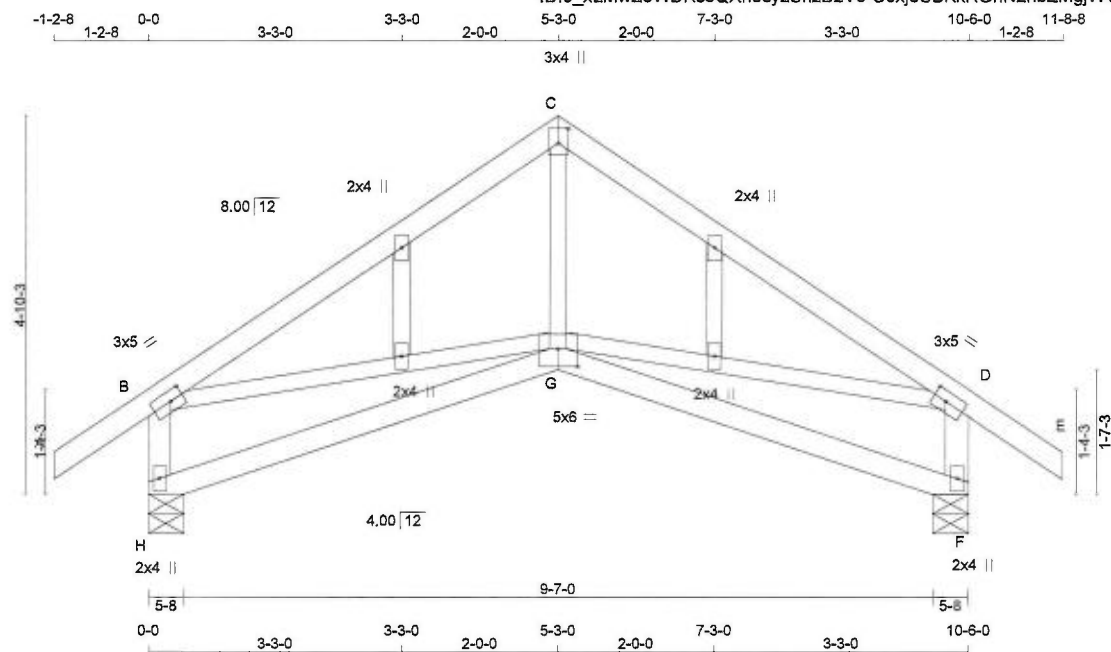


|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      |                                                                                                                                               |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|----------------------------------------------------------|--------|--------|------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------|----------|---------|-------|------------|-------|---------|-------|
| <b>LUMBER</b><br>N. L. G. A. RULES<br>CHORDS SIZE LUMBER |        |        |      | <b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b><br><b>BEARINGS</b> |                                                                        |      |                                                                                                                                                                      | <b>DESIGN CRITERIA</b>                                                                                                                        |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
| A - C                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | FACTORED MAXIMUM FACTORED INPUT REQD                                   |      |                                                                                                                                                                      |                                                                                                                                               | SPECIFIED LOADS:      |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
| C - E                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | GROSS REACTION GROSS REACTION BRG                                      |      |                                                                                                                                                                      |                                                                                                                                               | TOP CH. LL = 23.3 PSF |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
| E - G                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | JT                                                                     | VERT | HORZ                                                                                                                                                                 | DOWN                                                                                                                                          | HORZ                  | UPLIFT | IN-SX                                                                                              | IN-SX                                                                                      | DL = 3.0 PSF                  |          |         |       |            |       |         |       |
| G - H                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | Q                                                                      | 1494 | 0                                                                                                                                                                    | 1494                                                                                                                                          | 0                     | 0      | 5-8                                                                                                | 5-8                                                                                        | BOT CH. LL = 0.0 PSF          |          |         |       |            |       |         |       |
| H - J                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | K                                                                      | 1494 | 0                                                                                                                                                                    | 1494                                                                                                                                          | 0                     | 0      | 5-8                                                                                                | 5-8                                                                                        | DL = 7.3 PSF                  |          |         |       |            |       |         |       |
| Q - B                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | <b>UNFACTORED REACTIONS</b><br>1ST LCASE MAX./MIN. COMPONENT REACTIONS |      |                                                                                                                                                                      |                                                                                                                                               |                       |        |                                                                                                    |                                                                                            | <b>SPACING = 24.0 IN. C/C</b> |          |         |       |            |       |         |       |
| K - I                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     |                                                                        |      |                                                                                                                                                                      |                                                                                                                                               |                       |        |                                                                                                    |                                                                                            | JT                            | COMBINED | SNOW    | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
| Q - N                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     |                                                                        |      |                                                                                                                                                                      |                                                                                                                                               |                       |        |                                                                                                    |                                                                                            | Q                             | 1047     | 739 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 308 / 0 | 0 / 0 |
| N - K                                                    | 2x4    | DRY    | No.2 | SPF                                                                                                                     | K                                                                      | 1047 | 739 / 0                                                                                                                                                              | 0 / 0                                                                                                                                         | 0 / 0                 | 0 / 0  | 308 / 0                                                                                            | 0 / 0                                                                                      | TOTAL LOAD = 33.6 PSF         |          |         |       |            |       |         |       |
| ALL WEBS 2x3 DRY No.2 SPF                                |        |        |      | DESCR.                                                                                                                  |                                                                        |      |                                                                                                                                                                      | BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) Q, K                                                                                    |                       |        |                                                                                                    | LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM                           |                               |          |         |       |            |       |         |       |
| EXCEPT                                                   |        |        |      | DRY: SEASONED LUMBER.                                                                                                   |                                                                        |      |                                                                                                                                                                      | TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.41 FT.<br>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED. |                       |        |                                                                                                    | THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010 |                               |          |         |       |            |       |         |       |
| PLATES (table is in inches)                              |        |        |      | BRACING                                                                                                                 |                                                                        |      |                                                                                                                                                                      | THIS DESIGN COMPLIES WITH:                                                                                                                    |                       |        |                                                                                                    | TOTAL WEIGHT = 130 Lbs                                                                     |                               |          |         |       |            |       |         |       |
| JT                                                       | TYPE   | PLATES | W    | LEN                                                                                                                     | Y                                                                      | X    | ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.                                                                                           |                                                                                                                                               |                       |        | - PART 9 OF OBC 2012, BCBC 2012, ABC 2014                                                          |                                                                                            |                               |          |         |       |            |       |         |       |
| B                                                        | TMVW-t | MT20   | 4.0  | 6.0                                                                                                                     | 1.75                                                                   | 3.00 | 2x4 DRY SPF No.2 T-BRACE AT D-O, F-O                                                                                                                                 |                                                                                                                                               |                       |        | - CSA 086-09                                                                                       |                                                                                            |                               |          |         |       |            |       |         |       |
| C                                                        | TS-t   | MT20   | 3.0  | 6.0                                                                                                                     |                                                                        |      | 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. |                                                                                                                                               |                       |        | - TPIC 2011                                                                                        |                                                                                            |                               |          |         |       |            |       |         |       |
| D                                                        | TMVW-t | MT20   | 3.0  | 4.0                                                                                                                     | 1.50                                                                   | 1.50 | END VERTICAL(S) MUST BE SHEATHED OR HAVE BRACES AS INDICATED IN THE MAX. UNBRACED LENGTH COLUMN OF THE TABLE BELOW                                                   |                                                                                                                                               |                       |        | (55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD |                                                                                            |                               |          |         |       |            |       |         |       |
| E                                                        | TTW+p  | MT20   | 3.0  | 5.0                                                                                                                     |                                                                        |      | LOADING                                                                                                                                                              |                                                                                                                                               |                       |        | ALLOWABLE DEFL.(LL)= L/360 (0.97")                                                                 |                                                                                            |                               |          |         |       |            |       |         |       |
| F                                                        | TMVW-t | MT20   | 4.0  | 4.0                                                                                                                     | 2.00                                                                   | 1.25 | TOTAL LOAD CASES: (4)                                                                                                                                                |                                                                                                                                               |                       |        | CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")                                                        |                                                                                            |                               |          |         |       |            |       |         |       |
| G                                                        | TTW-h  | MT20   | 4.0  | 6.0                                                                                                                     | 2.25                                                                   | 3.00 | CHORDS                                                                                                                                                               |                                                                                                                                               |                       |        | ALLOWABLE DEFL.(TL)= L/360 (0.97")                                                                 |                                                                                            |                               |          |         |       |            |       |         |       |
| H                                                        | TTW+m  | MT20   | 5.0  | 6.0                                                                                                                     | 2.50                                                                   | 1.50 | MEMB. MAX. FACTORED FORCE (LBS)                                                                                                                                      |                                                                                                                                               |                       |        | CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")                                                        |                                                                                            |                               |          |         |       |            |       |         |       |
| I                                                        | TMVW-t | MT20   | 4.0  | 6.0                                                                                                                     | 1.75                                                                   | 3.00 | VERT. LOAD LC1 MAX. UNBRAC LENGTH                                                                                                                                    |                                                                                                                                               |                       |        | CSI: TC=0.50/1.00 (B-D:1) , BC=0.35/1.00 (M-O:1) , WB=0.52/1.00 (G-M:1) , SSI=0.20/1.00 (B-D:1)    |                                                                                            |                               |          |         |       |            |       |         |       |
| K                                                        | BMV1+p | MT20   | 2.0  | 4.0                                                                                                                     |                                                                        |      | FROM TO                                                                                                                                                              |                                                                                                                                               |                       |        | DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10 COMP=1.10 SHEAR=1.10 TENS= 1.10                             |                                                                                            |                               |          |         |       |            |       |         |       |
| L                                                        | BMVW-t | MT20   | 4.0  | 6.0                                                                                                                     | 1.50                                                                   | 1.50 | FR-TO                                                                                                                                                                |                                                                                                                                               |                       |        | COMPANION LIVE LOAD FACTOR = 0.50                                                                  |                                                                                            |                               |          |         |       |            |       |         |       |
| M                                                        | BMVW-t | MT20   | 4.0  | 6.0                                                                                                                     | 1.50                                                                   | 3.00 | A-B -1645 / 0 -77.4 -77.4 0.09 (1) 10.00                                                                                                                             |                                                                                                                                               |                       |        | TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT . |                                                                                            |                               |          |         |       |            |       |         |       |
| N                                                        | BS-t   | MT20   | 3.0  | 6.0                                                                                                                     |                                                                        |      | B-C -1645 / 0 -77.4 -77.4 0.50 (1) 4.63                                                                                                                              |                                                                                                                                               |                       |        | NAIL VALUES                                                                                        |                                                                                            |                               |          |         |       |            |       |         |       |
| O                                                        | BMVW-t | MT20   | 4.0  | 6.0                                                                                                                     | 1.75                                                                   | 3.00 | C-D -1296 / 0 -77.4 -77.4 0.46 (1) 5.12                                                                                                                              |                                                                                                                                               |                       |        | PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI)                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
| P                                                        | BMVW-t | MT20   | 4.0  | 4.0                                                                                                                     | 1.50                                                                   | 1.50 | D-E -1282 / 0 -77.4 -77.4 0.16 (1) 5.53                                                                                                                              |                                                                                                                                               |                       |        | MAX MIN MAX MIN MAX MIN                                                                            |                                                                                            |                               |          |         |       |            |       |         |       |
| Q                                                        | BMV1+p | MT20   | 2.0  | 4.0                                                                                                                     |                                                                        |      | E-F -1282 / 0 -77.4 -77.4 0.16 (1) 5.53                                                                                                                              |                                                                                                                                               |                       |        | MT20 618 354 1667 822 2284 1656                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | F-G -2230 / 0 -77.4 -77.4 0.21 (1) 4.41                                                                                                       |                       |        |                                                                                                    | PLATE PLACEMENT TOL. = 0.250 inches                                                        |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | G-H -1842 / 0 -77.4 -77.4 0.15 (1) 4.82                                                                                                       |                       |        |                                                                                                    | PLATE ROTATION TOL. = 5.0 Deg.                                                             |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | H-I -1606 / 0 -77.4 -77.4 0.33 (1) 4.89                                                                                                       |                       |        |                                                                                                    | JSI GRIP= 0.89 (M) (INPUT = 0.90 )                                                         |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | I-J 0 / 28 -77.4 -77.4 0.09 (1) 10.00                                                                                                         |                       |        |                                                                                                    | JSI METAL= 0.55 (G) (INPUT = 1.00 )                                                        |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | Q-B -1443 / 0 0.0 0.0 0.15 (1) 6.81                                                                                                           |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | K-I -1451 / 0 0.0 0.0 0.15 (1) 6.79                                                                                                           |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | Q-P 0 / 0 -18.2 -18.2 0.17 (4) 10.00                                                                                                          |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | P-O 0 / 1396 -18.2 -18.2 0.35 (1) 10.00                                                                                                       |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | O-N 0 / 1409 -18.2 -18.2 0.35 (1) 10.00                                                                                                       |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | N-M 0 / 1409 -18.2 -18.2 0.35 (1) 10.00                                                                                                       |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | M-L 0 / 1331 -18.2 -18.2 0.27 (1) 10.00                                                                                                       |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |
|                                                          |        |        |      |                                                                                                                         |                                                                        |      |                                                                                                                                                                      | L-K 0 / 0 -18.2 -18.2 0.12 (4) 10.00                                                                                                          |                       |        |                                                                                                    |                                                                                            |                               |          |         |       |            |       |         |       |

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

LICENSED PROFESSIONAL ENGINEER  
N.A. EL-MASRI  
Jun 02, 2018

KOTT



Scale = 1:29.5

TOTAL WEIGHT = 46 lb

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

|                                                |     |     |      |     |
|------------------------------------------------|-----|-----|------|-----|
| ALL WEBS<br>EXCEPT                             | 2x3 | DRY | No.2 | SPF |
| ALL GABLE WEBS<br>2x3<br>DRY: SEASONED LUMBER. |     | DRY | No.2 | SPF |
| GABLE STUDS SPACED AT 2-0-0 OC.                |     |     |      |     |

| PLATES (table is in inches) |          |        |     |     |      |      |
|-----------------------------|----------|--------|-----|-----|------|------|
| JT                          | TYPE     | PLATES | W   | LEN | Y    | X    |
| B                           | TTVVV-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| C                           | TTVW+p   | MT20   | 3.0 | 4.0 | 2.25 | 1.50 |
| D                           | TTVVV-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| F                           | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| G                           | BBVVVV-p | MT20   | 5.0 | 6.0 | 2.75 | 3.00 |
| H                           | BMV1+p   | MT20   | 2.0 | 4.0 |      |      |
| I, J, K, L                  |          |        |     |     |      |      |
| I                           | NP+w     | 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        |
| H  | 602                        | 0    | 602                                | 0    | 0      | 5-8          | 5-8          |
| F  | 602                        | 0    | 602                                | 0    | 0      | 5-8          | 5-8          |

### UNFACTORED REACTIONS

| 1ST LCASE |          | MAX./MIN. COMPONENT REACTIONS |       |           |       |         |       |
|-----------|----------|-------------------------------|-------|-----------|-------|---------|-------|
| JT        | COMBINED | SNOW                          | LIVE  | PERM.LIVE | WIND  | DEAD    | SOIL  |
| H         | 420      | 305 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 116 / 0 | 0 / 0 |
| F         | 420      | 305 / 0                       | 0 / 0 | 0 / 0     | 0 / 0 | 116 / 0 | 0 / 0 |

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

## BRACING

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

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

## LOADING

**TOTAL LOAD CASES: (4)**

| CHORDS        |             |                  |                  | WEBS               |       |             |              |
|---------------|-------------|------------------|------------------|--------------------|-------|-------------|--------------|
| 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 / 28      | -77.4            | -77.4 0.09 (1)   | 10.00              | G-C   | 0 / 195     | 0.05 (4)     |
| B-C           | -542 / 0    | -77.4            | -77.4 0.28 (1)   | 6.25               | B-G   | 0 / 454     | 0.10 (1)     |
| C-D           | -542 / 0    | -77.4            | -77.4 0.28 (1)   | 6.25               | G-D   | 0 / 454     | 0.10 (1)     |
| D-E           | 0 / 28      | -77.4            | -77.4 0.09 (1)   | 10.00              |       |             |              |
| H-B           | -554 / 0    | 0.0              | 0.0 0.06 (1)     | 7.81               |       |             |              |
| F-D           | -554 / 0    | 0.0              | 0.0 0.06 (1)     | 7.81               |       |             |              |
| H-G           | 0 / 0       | -18.2            | -18.2 0.15 (4)   | 10.00              |       |             |              |
| G-F           | 0 / 0       | -18.3            | -18.3 0.15 (4)   | 10.00              |       |             |              |

## DESIGN CRITERIA

**SPECIFIED LOADS:**

|            |      |      |     |
|------------|------|------|-----|
| TOP CH.    | LL = | 23.3 | PSF |
|            | DL = | 3.0  | PSF |
| BOT CH.    | LL = | 0.0  | PSF |
|            | DL = | 7.3  | PSF |
| TOTAL LOAD | =    | 33.6 | PSF |

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL  
OR SMALL BUILDING REQUIREMENTS OF  
PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.35")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CSI: TC=0.28/1.00 (C-D:1), BC=0.15/1.00 (F-G:4),  
WB=0.10/1.00 (D-G:1), SS=0.13/1.00 (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 = 0.50

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  | 618       | 354 | 1667  | 822 | 2284    | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

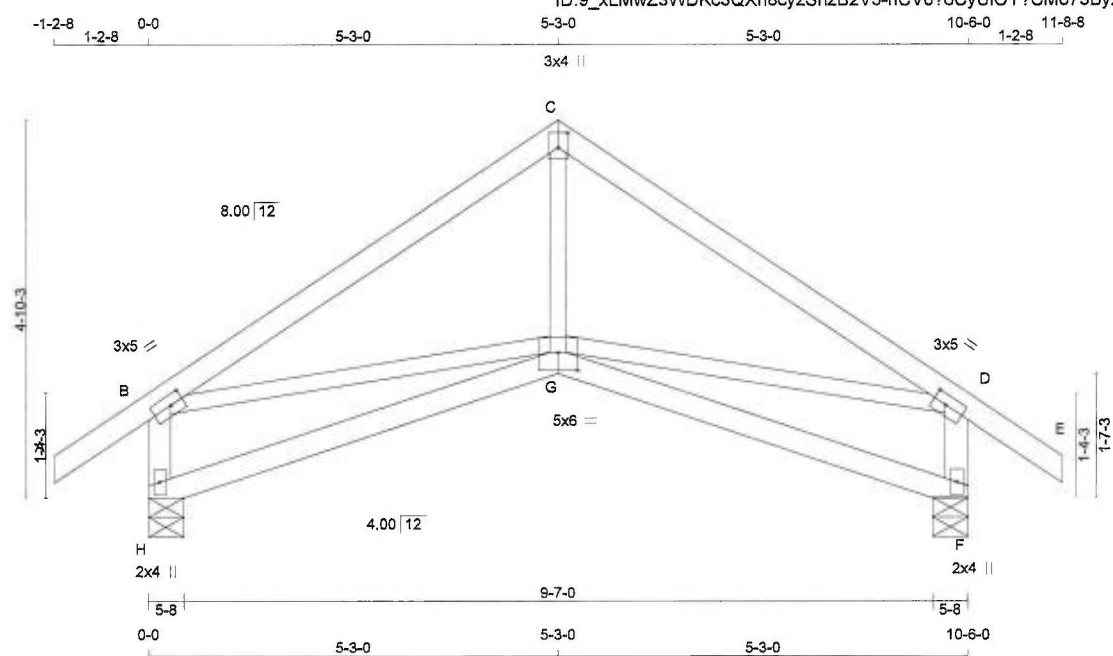
PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.54 (B) (INPUT = 0.90 )  
JSI METAL= 0.21 (D) (INPUT = 1.00 )



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





TOTAL WEIGHT = 43 lb  
[M]F

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

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

EXCEPT

SPF

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE    | PLATES | W   | LEN | Y    | X    |
|----|---------|--------|-----|-----|------|------|
| B  | TMVW-I  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| C  | TTW+p   | MT20   | 3.0 | 4.0 | 2.25 | 1.50 |
| D  | TMVW-I  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| F  | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| G  | BBWWW-p | MT20   | 5.0 | 6.0 | 2.75 | 3.00 |
| H  | 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                            | UPLIFT    | IN-SX     |
| H  | 602                     | 0                               | 0         | 5-8       |
| F  | 602                     | 0                               | 0         | 5-8       |

**UNFACTORED REACTIONS**

| JT | COMBINED | 1ST CASE | SNOW | LIVE | PERM. LIVE | WIND | DEAD | SOIL |
|----|----------|----------|------|------|------------|------|------|------|
| H  | 420      | 305      | 0    | 0    | 0          | 0    | 116  | 0    |
| F  | 420      | 305      | 0    | 0    | 0          | 0    | 116  | 0    |

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

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

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

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

| CHORDS |                           |                           |                | WEBS  |                           |                    |          |
|--------|---------------------------|---------------------------|----------------|-------|---------------------------|--------------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | LC1 MAX (LC)   | MEMB. | MAX. FACTORED FORCE (LBS) | MAX. FACTORED (LC) |          |
| FR-TO  |                           | FROM                      | TO             | FR-TO |                           |                    |          |
| A-B    | 0 / 28                    | -77.4                     | -77.4 0.09 (1) | 10.00 | G-C                       | 0 / 195            | 0.05 (4) |
| B-C    | -542 / 0                  | -77.4                     | -77.4 0.28 (1) | 6.25  | B-G                       | 0 / 454            | 0.10 (1) |
| C-D    | -542 / 0                  | -77.4                     | -77.4 0.28 (1) | 6.25  | G-D                       | 0 / 454            | 0.10 (1) |
| D-E    | 0 / 28                    | -77.4                     | -77.4 0.09 (1) | 10.00 |                           |                    |          |
| H-B    | -554 / 0                  | 0.0                       | 0.0 0.06 (1)   | 7.81  |                           |                    |          |
| F-D    | -554 / 0                  | 0.0                       | 0.0 0.06 (1)   | 7.81  |                           |                    |          |
| H-G    | 0 / 0                     | -18.2                     | -18.2 0.15 (4) | 10.00 |                           |                    |          |
| G-F    | 0 / 0                     | -18.3                     | -18.3 0.15 (4) | 10.00 |                           |                    |          |

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
TOP CH. LL = 23.3 PSF  
DL = 3.0 PSF  
BOT CH. LL = 0.0 PSF  
DL = 7.3 PSF  
TOTAL LOAD = 33.6 PSF

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

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBC 2010

THIS DESIGN COMPLIES WITH:  
- PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
- CSA 086-09  
- TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")  
ALLOWABLE DEFL.(TL)= L/360 (0.35")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.05")

CSI: TC=0.28/1.00 (C-D:1) , BC=0.15/1.00 (F-G:4) , WB=0.10/1.00 (D-G:1) , SSI=0.13/1.00 (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 = 0.50

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

**NAIL VALUES**

| PLATE | GRIP(DRY) (PSI) | SHEAR (PLI) | SECTION (PLI)      |
|-------|-----------------|-------------|--------------------|
|       | MAX             | MIN         | MAX                |
| MT20  | 618             | 354         | 1667 822 2284 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

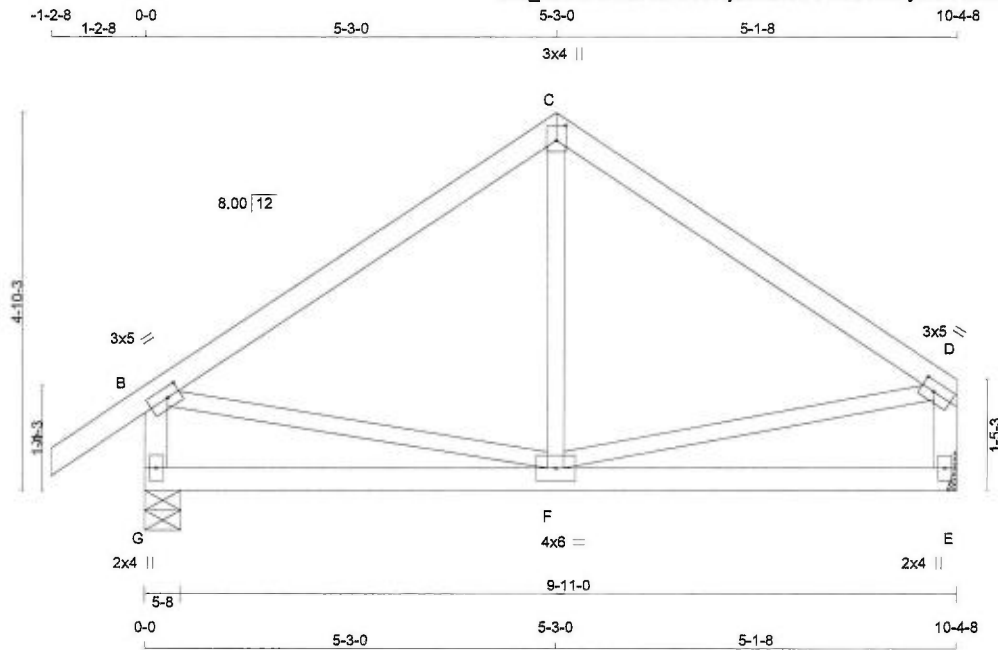
JSI GRIP= 0.54 (B) (INPUT = 0.90)  
JSI METAL= 0.21 (D) (INPUT = 1.00)



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



Version 8.210 S Mar 12 2018 MiTek Industries, Inc. Sat Jun 2 12:22:39 2018 Page 1  
 ID:9\_xLMwZ3WDKc3QXh8cyzSnzB2V3-hCV6?oCyUIOY?CMo73By2iFa0MwsPkmPdf7XJ4zAKy



Scale = 1:29.5

TOTAL WEIGHT = 3 X 42 = 125 lb  
 [M]F

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

ALL WEBS 2x3 DRY No.2 SPF  
 EXCEPT

DRY: SEASONED LUMBER.

| PLATES (table is in inches) |         |        |     |     |      |      |
|-----------------------------|---------|--------|-----|-----|------|------|
| JT                          | TYPE    | PLATES | W   | LEN | Y    | X    |
| B                           | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| C                           | TTW+p   | MT20   | 3.0 | 4.0 | 2.25 | 1.50 |
| D                           | TMVW-t  | MT20   | 3.0 | 5.0 | 1.50 | 2.00 |
| E                           | BMV1+p  | MT20   | 2.0 | 4.0 |      |      |
| F                           | BMVWW-t | MT20   | 4.0 | 6.0 |      |      |
| G                           | 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 |
|----------|----------------|----------------|------------------|------------|-------|
| JT       | GROSS REACTION | GROSS REACTION | DOWN             | BRG        | BRG   |
| G        | 596 0          | 596 0          | 0 0              | 5-8        | 5-8   |
| E        | 496 0          | 496 0          | 0 0              | MECHANICAL |       |

A SUITABLE MECHANICAL CONNECTION IS REQUIRED AT JOINT E TO RESIST THE MAX FACTORED REACTIONS.

**UNFACTORED REACTIONS**

| JT | 1ST CASE | MAX/MIN. COMPONENT REACTIONS | SNOW  | LIVE  | PERM. LIVE | WIND  | DEAD    | SOIL  |
|----|----------|------------------------------|-------|-------|------------|-------|---------|-------|
| G  | 416      | 302 / 0                      | 0 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 115 / 0 | 0 / 0 |
| E  | 348      | 242 / 0                      | 0 / 0 | 0 / 0 | 0 / 0      | 0 / 0 | 107 / 0 | 0 / 0 |

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (4)

| CHORDS |                           |                           |              | WEBS  |                           |              |          |
|--------|---------------------------|---------------------------|--------------|-------|---------------------------|--------------|----------|
| MEMB.  | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) | MAX LC1 (LC) | MEMB. | MAX. FACTORED FORCE (LBS) | MAX LC1 (LC) |          |
| FR-TO  |                           | FROM TO                   |              | FR-TO |                           |              |          |
| A-B    | 0 / 28                    | -77.4 -77.4               | 0.09 (1)     | 10.00 | F-C                       | -6 / 90      | 0.03 (4) |
| B-C    | -357 / 0                  | -77.4 -77.4               | 0.27 (1)     | 6.25  | B-F                       | 0 / 302      | 0.07 (1) |
| C-D    | -357 / 0                  | -77.4 -77.4               | 0.26 (1)     | 6.25  | F-D                       | 0 / 304      | 0.07 (1) |
| G-B    | -559 / 0                  | 0.0 0.0                   | 0.06 (1)     | 7.81  |                           |              |          |
| E-D    | -460 / 0                  | 0.0 0.0                   | 0.05 (1)     | 7.81  |                           |              |          |
| G-F    | 0 / 0                     | -18.2 -18.2               | 0.14 (4)     | 10.00 |                           |              |          |
| F-E    | 0 / 0                     | -18.2 -18.2               | 0.14 (4)     | 10.00 |                           |              |          |

**DESIGN CRITERIA**

SPECIFIED LOADS:  
 TOP CH. LL = 23.3 PSF  
 DL = 3.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.3 PSF  
 TOTAL LOAD = 33.6 PSF

SPACING = 24.0 IN. C/C

THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2010

THIS DESIGN COMPLIES WITH:  
 - PART 9 OF OBC 2012, BCBC 2012, ABC 2014  
 - CSA 086-09  
 - TPIC 2011

(55 % OF 27.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 23.3 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")  
 CALCULATED VERT. DEFL.(LL) = L/ 999 (0.00")  
 ALLOWABLE DEFL.(TL)= L/360 (0.35")  
 CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.27/1.00 (B-C:1) , BC=0.14/1.00 (E-F:4) , WB=0.07/1.00 (D-F:1) , SSI=0.13/1.00 (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 = 0.50

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 618 354 1667 822 2284 1656

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.51 (B) (INPUT = 0.90 )  
 JSI METAL= 0.16 (B) (INPUT = 1.00 )



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



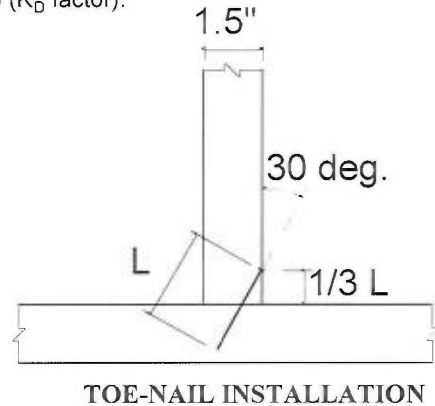
## BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

B37579H1

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

## NOTES:

1. Rafter and ceiling members may be anchored to top and bottom chords of girder truss by toe-nailing rafter and ceiling members to girder chords provided the reaction does not exceed the lateral capacities in the table. Hangers (specified by others) are required for reactions higher than the maximum toe-nail capacity. Reactions are based on factored loads.
2. Toe nail capacities shown in the table are for one toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor  $J_A$  in CSA O86-09, section 10.9.4.1.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in tables below.
5. Nail values in table are based on the following relative lumber densities: G = 0.42 (SPF), G = 0.49 (D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See next page for nailing on bearing plate).
7. For loads due to wind the nail lateral capacity in this table may be multiplied by 1.15 ( $K_D$  factor).
8. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
9. Nail values in this table comply with CSA O86-09, section 10.9.4
10. This design is not valid after April 30, 2019.



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



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PEO  
Certificate No. 10889485



April 26, 2017

## BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B37579H2

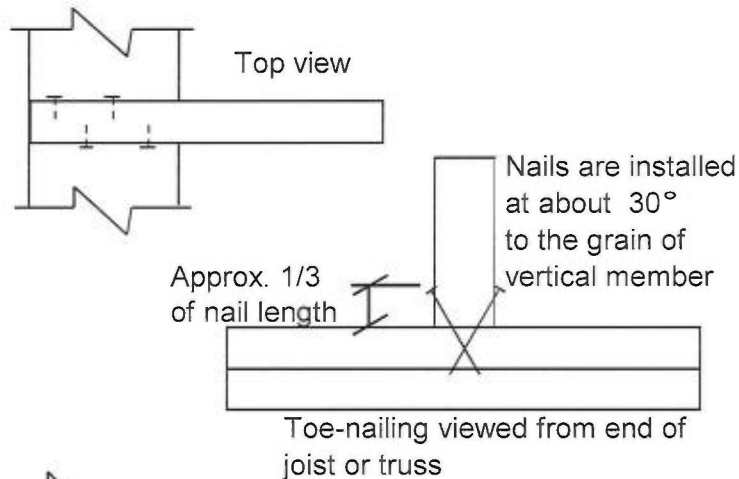
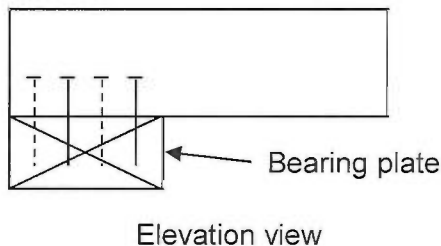
| NAIL TYPE      | LENGTH<br>(IN) | DIAMETER<br>(IN) | NAIL WITHDRAWAL CAPACITY (LB) |        |
|----------------|----------------|------------------|-------------------------------|--------|
|                |                |                  | S-P-F                         | D. FIR |
| COMMON<br>WIRE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

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

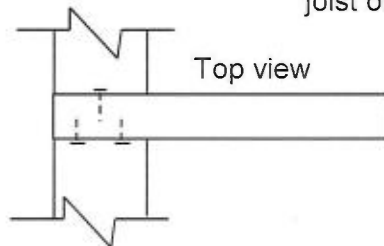
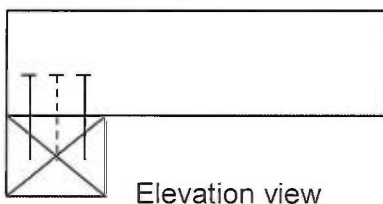
## NOTES:

1. Truss chord, rafter, or ceiling members may be anchored to bearing plate by toe-nails, provided that the actual factored uplift force due to **wind or earthquake** load does not exceed the withdrawal capacities in the table. Hangers (specified by others) are required for uplift forces that are higher than the maximum toe-nail withdrawal capacity.
2. Toe nail capacities shown in the table are for **one** toe-nail. For additional toe-nails multiply values in table by the number of toe-nails used. Toe-nail capacities take into account toe-nailing factor  $J_A$  in CSA O86-09, section 10.9.5.2.
3. For 9- 3/4 gauge 3.25" common wire gun nails (diameter = 0.120") use 3" common spiral nail values.
4. Maximum number of toe-nails allowed depends on the lumber size & species to be toe-nailed to supporting member and nail diameter, as shown in table above.
5. Nail values in table are based on the following relative lumber densities: G = 0.42(SPF), G = 0.49(D. Fir).
6. Toe-nails shall be driven at approximately 1/3 the nail length from the edge of the joist/truss chord and driven at an angle of 30° to the grain of the member (See drawing on detail B37579H1).
7. Lumber must be dry ( < 19% moisture content ) at the time of nail installation.
8. Nail values in this table comply with CSA O86-09, section 10.9.5
9. This design is not valid after April 30, 2019

## Toe-nailing on 2x6 Bearing Plate



## Toe-nailing on 2x4 Bearing Plate



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