MiTek Canada, Inc.
100 Industrial Road
Bradford, ON, Canada L3Z 3G7
Phone (905) 952-2900
Toll Free (800) 268-3434
Fax (905) 952-2901

July 3,2019

Re: 1904-0607
Communal Building Fire Reconstruction

The truss drawing(s) referenced below have been prepared by or for MiTek Canada, Inc. under my direct supervision based on the parameters provided by Locke Truss Div of 976711 Ont Inc..

Pages or sheets covered by this seal: P5836389 thru P5836438

PEO
Certificate No. 10889485


**REVIEWED**
**By Farah Bano at 1:33 pm, Jul 10, 2019**

The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with TPIC. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek. Any project specific information included is for MiTek's customer's file reference purpose only, and was not taken into account in the preparation of these designs. MiTek has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design. Engineering Services provided by MiTek Canada Inc.

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A01 | 7 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836389 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:51:59 2019 Page 1

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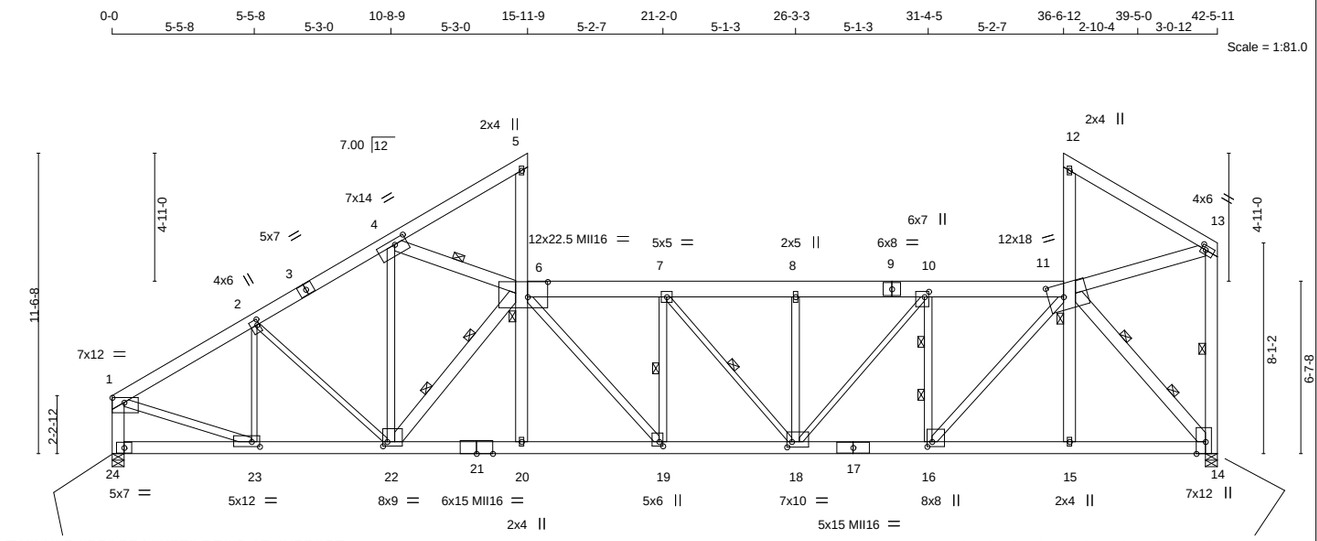
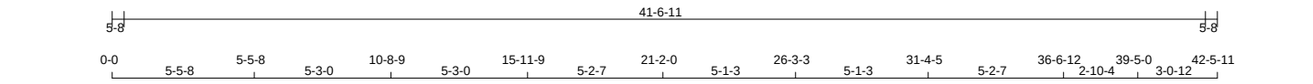



TWO USP SBP6 BRACKETS REQ'D AT SUPPORT.
INSTALL AS PER USP SPECIFICATIONS.

TWO USP SBP6 BRACKETS REQ'D AT SUPPORT.
INSTALL AS PER USP SPECIFICATIONS.




TOTAL WEIGHT = 7 X 342 = 2392 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 5 | 2x6 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | 2100F 1.8E | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x6 | DRY | No.2 | SPF |
| 23 - 2 | 2x3 | DRY | No.2 | SPF |
| 2 - 22 | 2x3 | DRY | No.2 | SPF |
| 22 - 4 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 19 | 2x4 | DRY | 2100F 1.8E | SPF |
| 19 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 18 | 2x3 | DRY | No.2 | SPF |
| 18 - 8 | 2x4 | DRY | No.2 | SPF |
| 18 - 10 | 2x3 | DRY | No.2 | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | 2100F 1.8E | SPF |
| 1 - 23 | 2x4 | DRY | 2100F 1.8E | SPF |
| 11 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-p | MT20 | 7.0 | 12.0 | 2.25 | Edge |
| 2 | TMWW+t | MT20 | 4.0 | 6.0 | 2.50 | 1.00 |
| 3 | TS-t | MT20 | 5.0 | 7.0 | | |
| 4 | TMWW-t | MT20 | 7.0 | 14.0 | 2.25 | 5.50 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*-l | MII16 | 12.0 | 22.5 | 7.00 | 9.25 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 8.0 | | |
| 10 | TMWW+t | MT20 | 6.0 | 7.0 | 2.50 | 2.00 |
| 11 | TMWWWW*+w | MT20 | 12.0 | 18.0 | 7.00 | 6.00 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BVMW1+p | MT20 | 7.0 | 12.0 | Edge | 4.25 |
| 15 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 16 | BMWW+t | MT20 | 8.0 | 8.0 | 2.25 | 2.25 |
| 17 | BS-t | MII16 | 5.0 | 15.0 | | |
| 18 | BMWWW-t | MT20 | 7.0 | 10.0 | 2.50 | 2.25 |
| 19 | BMWW+t | MT20 | 5.0 | 6.0 | 2.00 | 1.75 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MII16 | 6.0 | 15.0 | | |
| 22 | BMWWW-t | MT20 | 8.0 | 9.0 | 2.00 | 2.00 |
| 23 | BMWW-t | MT20 | 5.0 | 12.0 | 2.25 | 3.75 |
| 24 | BVM1-l | MT20 | 5.0 | 7.0 | | |

PEO
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July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 6519 | 0 | 6862 | 522 | -388 | 5-8 | 5-8 |
| 14 | 7902 | 0 | 7902 | 0 | -211 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 388 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 14 FOR 211 LBS FACTORED UPLIFT

PROVIDE FOR 522 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 4790 | 3631 / 0 | 425 / 0 | 0 / 0 | 116 / -896 | 962 / 0 | 0 / 0 |
| 14 | 5737 | 4201 / 0 | 425 / 0 | 0 / 0 | 52 / -865 | 1111 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 373 / -284 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14
BEARING SIZE FACTOR = 1.15 AT JNT(S) 24, 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 2.17 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 7-18, 12-15, 13-14. DBS = 20-0-0 . CBF = 130 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-19. DBS = 14-0-0 . CBF = 219 LBS.
2 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 10-16. DBS = 6-0-0 . CBF = 211 LBS.
2 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 209 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6. DBS = 4-0-0 . CBF = 202 LBS.
2 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 250 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -8048 / 456 | -174.6 | -174.6 | 0.94 (2) | 2.17 | 23- 2 | -2093 / 171 | 0.82 (2) |
| 2- 3 | -8795 / 538 | -174.6 | -174.6 | 0.88 (2) | 2.19 | 2-22 | -76 / 1225 | 0.30 (3) |
| 3- 4 | -8795 / 538 | -174.6 | -174.6 | 0.88 (2) | 2.19 | 22- 4 | -340 / 6039 | 0.50 (2) |
| 4- 5 | -131 / 0 | -174.6 | -174.6 | 0.27 (2) | 6.25 | 20- 6 | 0 / 237 | 0.18 (2) |
| 6- 7 | -14853 / 877 | -452.9 | -452.9 | 0.63 (2) | 2.74 | 6- 5 | -338 / 120 | 0.19 (2) |
| 7- 8 | -14186 / 774 | -452.9 | -452.9 | 0.56 (1) | 2.87 | 6-19 | -215 / 3636 | 0.30 (3) |
| 8- 9 | -14186 / 774 | -452.9 | -452.9 | 0.59 (2) | 2.84 | 19- 7 | -2506 / 227 | 0.47 (3) |
| 9-10 | -14186 / 774 | -452.9 | -452.9 | 0.59 (2) | 2.84 | 7-18 | -1040 / 160 | 0.43 (2) |
| 10-11 | -11906 / 666 | -452.9 | -452.9 | 0.50 (1) | 3.19 | 18- 8 | -2030 / 73 | 0.88 (1) |
| 12-13 | -110 / 9 | -174.6 | -174.6 | 0.59 (3) | 6.25 | 18-10 | -168 / 3736 | 0.92 (2) |
| 24- 1 | -6780 / 413 | 0.0 | 0.0 | 0.59 (2) | 4.01 | 16-10 | -5617 / 228 | 0.76 (2) |
| 14-13 | -598 / 0 | 0.0 | 0.0 | 0.16 (11) | 6.25 | 16-11 | -225 / 7825 | 0.65 (2) |
| | | | | | | 15-11 | 0 / 295 | 0.09 (1) |
| 24-23 | -492 / 384 | -27.5 | -27.5 | 0.06 (17) | 6.25 | 11-12 | -556 / 176 | 0.13 (3) |
| 23-22 | -477 / 6985 | -27.5 | -27.5 | 0.41 (2) | 6.25 | 1-23 | -294 / 7329 | 0.60 (2) |
| 22-21 | -565 / 12918 | -27.5 | -27.5 | 0.73 (2) | 6.25 | 22- 6 | -8349 / 351 | 0.87 (2) |
| 21-20 | -565 / 12918 | -27.5 | -27.5 | 0.73 (2) | 6.25 | 4- 6 | -8085 / 778 | 0.86 (2) |
| 20-19 | -567 / 12955 | -27.5 | -27.5 | 0.74 (2) | 6.25 | 11-14 | -9991 / 381 | 0.65 (1) |
| 19-18 | -486 / 14853 | -27.5 | -27.5 | 0.87 (2) | 6.25 | 11-13 | -82 / 340 | 0.04 (14) |
| 18-17 | -275 / 11906 | -27.5 | -27.5 | 0.71 (1) | 6.25 | | | |
| 17-16 | -275 / 11906 | -27.5 | -27.5 | 0.71 (1) | 6.25 | | | |
| 16-15 | -125 / 6815 | -27.5 | -27.5 | 0.40 (1) | 6.25 | | | |
| 15-14 | -125 / 6799 | -27.5 | -27.5 | 0.39 (1) | 6.25 | | | |

[M]

**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 = | 49.9 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 963 (0.53")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 757 (0.67")

CSI: TC=0.94/1.00 (1-2:2) , BC=0.87/1.00 (18-19:2) , WB=0.92/1.00 (10-18:2) , SSI=0.85/1.00 (10-11:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

| PLATE | GRIP(DRY) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (21) (INPUT = 0.90 )
JSI METAL= 1.00 (22) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A01 | 7 | 1 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836389 |



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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A02-GT | 1 | 2 | Communal Building Fire Reconstruction | P5836390 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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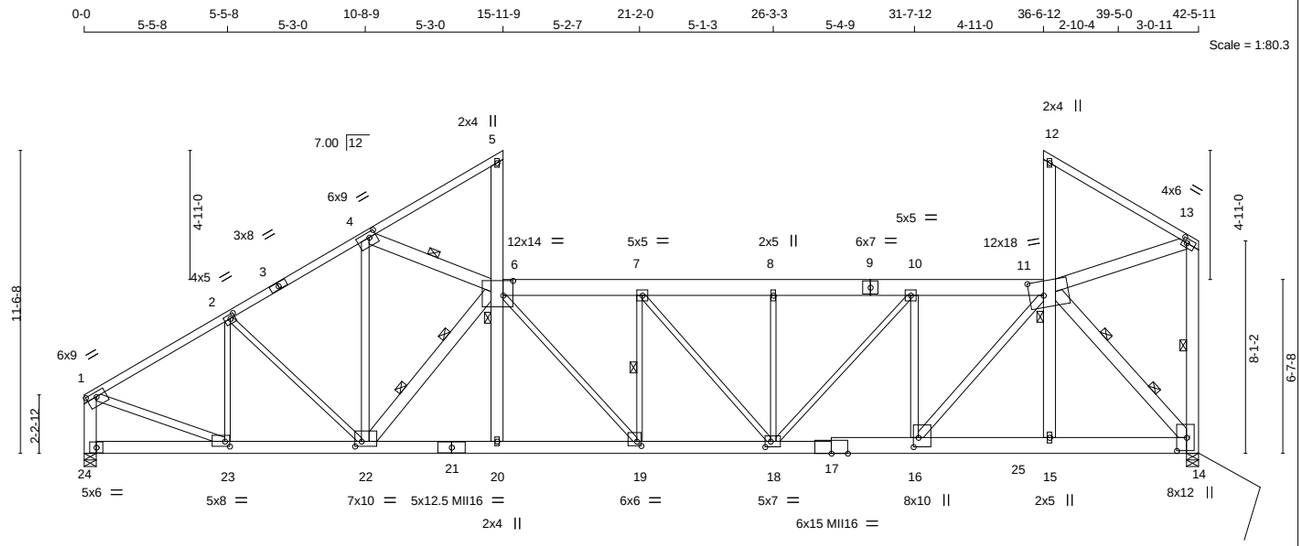


TOTAL WEIGHT = 2 X 328 = 656 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | 2100F 1.8E | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x8 | DRY | 1950F 1.7E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 22 - 4 | 2x4 | DRY | No.2 | SPF |
| 20 - 5 | 2x6 | DRY | No.2 | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | 2100F 1.8E | SPF |
| 15 - 12 | 2x6 | DRY | No.2 | SPF |
| 1 - 23 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x6 | DRY | No.2 | SPF |
| 22 - 6 | 2x6 | DRY | No.2 | SPF |
| 11 - 13 | 2x6 | DRY | No.2 | SPF |
| 11 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 5 | 1 | 12 | TOP |
| 12- 13 | 1 | 12 | TOP |
| 6- 9 | 2 | 12 | TOP |
| 9- 11 | 2 | 12 | TOP |
| 24- 1 | 2 | 12 | TOP |
| 14- 13 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 24- 21 | 2 | 12 | TOP |
| 21- 17 | 2 | 12 | TOP |
| 17- 14 | 2 | 12 | SIDE(210.5) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 10- 16 | 2 | 3 | SIDE(1868.1) |
| 2x4 | 1 | 6 | |
| 2x6 | 2 | 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 PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 8869 | 0 | 9211 | 527 | -600 | 5-8 | 5-8 |
| 14 | 15491 | 0 | 15491 | 0 | -1072 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 600 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 14 FOR 1072 LBS FACTORED UPLIFT

PROVIDE FOR 527 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 6474 | 4903 / 0 | 522 / 0 | 0 / 0 | 218 / -1249 | 1276 / 0 | 0 / 0 |
| 14 | 11173 | 8311 / 0 | 738 / 0 | 0 / 0 | 450 / -2131 | 2124 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 376 / -288 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

BEARING SIZE FACTOR = 1.15 AT JNT(S) 24, 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.10 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 12-15, 13-14. DBS = 20-0-0 . CBF = 126 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-19. DBS = 6-0-0 . CBF = 180 LBS.

1 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6. DBS = 4-0-0 . CBF = 284 LBS.

2 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 329 LBS.

2 - 2x10 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 515 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: (18)

C H O R D S

| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM-TO (PLF) | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|
| 1- 2 | -10855 / 718 | -174.6 -174.6 | 0.59 (2) | 3.38 |
| 2- 3 | -12290 / 861 | -174.6 -174.6 | 0.69 (2) | 3.10 |
| 3- 4 | -12290 / 861 | -174.6 -174.6 | 0.69 (2) | 3.10 |
| 4- 5 | -149 / 0 | -174.6 -174.6 | 0.29 (2) | 6.25 |
| 6- 7 | -22941 / 1621 | -452.9 -452.9 | 0.36 (2) | 3.42 |
| 7- 8 | -24299 / 1692 | -452.9 -452.9 | 0.31 (1) | 3.38 |
| 8- 9 | -24299 / 1692 | -452.9 -452.9 | 0.35 (1) | 3.34 |
| 9-10 | -24299 / 1692 | -452.9 -452.9 | 0.35 (1) | 3.34 |
| 10-11 | -24019 / 1790 | -452.9 -452.9 | 0.36 (1) | 3.34 |
| 12-13 | -109 / 5 | -174.6 -174.6 | 0.61 (3) | 6.25 |
| 24- 1 | -9120 / 624 | 0.0 0.0 | 0.43 (2) | 5.00 |
| 14-13 | -615 / 0 | 0.0 0.0 | 0.08 (11) | 6.25 |
| 24-23 | -495 / 386 | -27.5 -27.5 | 0.03 (17) | 6.25 |
| 23-22 | -704 / 9416 | -27.5 -27.5 | 0.28 (2) | 6.25 |
| 22-21 | -1119 / 18943 | -27.5 -27.5 | 0.52 (2) | 6.25 |
| 21-20 | -1119 / 18943 | -27.5 -27.5 | 0.52 (2) | 6.25 |
| 20-19 | -1123 / 19003 | -27.5 -27.5 | 0.53 (2) | 6.25 |
| 19-18 | -1228 / 22941 | -27.5 -27.5 | 0.65 (2) | 6.25 |
| 18-17 | -1398 / 24021 | -27.5 -27.5 | 0.71 (1) | 6.25 |
| 17-16 | -1398 / 24021 | -27.5 -27.5 | 0.71 (1) | 6.25 |
| 16-25 | -978 / 14153 | -27.5 -27.5 | 0.50 (1) | 6.25 |
| 25-15 | -978 / 14153 | -27.5 -27.5 | 0.50 (1) | 6.25 |
| 15-14 | -973 / 14115 | -27.5 -27.5 | 0.41 (1) | 6.25 |

W E B S

| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 23- 2 | -3034 / 252 | 0.64 (2) |
| 2-22 | -146 / 2013 | 0.25 (3) |
| 22- 4 | -632 / 9172 | 0.81 (2) |
| 20- 6 | 0 / 254 | 0.14 (2) |
| 6- 5 | -345 / 121 | 0.14 (2) |
| 6-19 | -494 / 6676 | 0.83 (3) |
| 19- 7 | -4802 / 429 | 0.64 (3) |
| 7-18 | -442 / 2886 | 0.36 (3) |
| 18- 8 | -2312 / 91 | 0.70 (3) |
| 18-10 | -231 / 615 | 0.15 (10) |
| 16-10 | -2976 / 0 | 0.61 (2) |
| 16-11 | -644 / 15337 | 0.63 (2) |
| 15-11 | -490 / 2016 | 0.20 (1) |
| 11-12 | -552 / 176 | 0.08 (3) |
| 1-23 | -532 / 9931 | 0.88 (2) |
| 4- 6 | -11355 / 1084 | 0.62 (2) |
| 22- 6 | -13144 / 787 | 0.69 (2) |
| 11-13 | -79 / 342 | 0.02 (14) |
| 11-14 | -20606 / 1617 | 0.66 (1) |

[M]

**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 = | 49.9 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.42")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 954 (0.53")

CSI: TC=0.69/1.00 (2-4:2) , BC=0.71/1.00 (16-18:1) , WB=0.88/1.00 (1-23:2) , SSI=0.53/1.00 (15-16:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

| PLATE | GRIP(DRY) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (4) (INPUT = 0.90 )
JSI METAL= 0.97 (11) (INPUT = 1.00 )

CONTINUED ON PAGE 2



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Bradford, ON L3Z 3G7

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 6.0 | 9.0 | 2.00 | 4.50 |
| 2 | TMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 2.25 |
| 3 | TS-t | MT20 | 3.0 | 8.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 9.0 | 2.25 | 3.25 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*-l | MT20 | 12.0 | 14.0 | 6.75 | 4.50 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 7.0 | | |
| 10 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 11 | TWMWWW*m | MT20 | 12.0 | 18.0 | 6.50 | 6.50 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BVMW1+p | MT20 | 8.0 | 12.0 | 6.00 | 4.50 |
| 15 | BMW+w | MT20 | 2.0 | 5.0 | | |
| 16 | BMWW+t | MT20 | 8.0 | 10.0 | 4.25 | 2.25 |
| 17 | BS-t | MII16 | 6.0 | 15.0 | | |
| 18 | BMWWW-t | MT20 | 5.0 | 7.0 | 2.50 | 2.50 |
| 19 | BMWW-t | MT20 | 6.0 | 6.0 | 2.00 | 2.00 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MII16 | 5.0 | 12.5 | | |
| 22 | BMWWW-t | MT20 | 7.0 | 10.0 | 2.25 | 3.00 |
| 23 | BMWW-t | MT20 | 5.0 | 8.0 | 2.25 | 2.25 |
| 24 | BVM1-l | MT20 | 5.0 | 6.0 | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 31-7-12 | -7863 | -7863 | 400 | BACK | VERT | TOTAL | --- | C1 |
| 25 | 35-7-0 | -2050 | -2121 | 670 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING
AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019




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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A02A-GT | 1 | 2 | Communal Building Fire Reconstruction | P5836391 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:01 2019 Page 1

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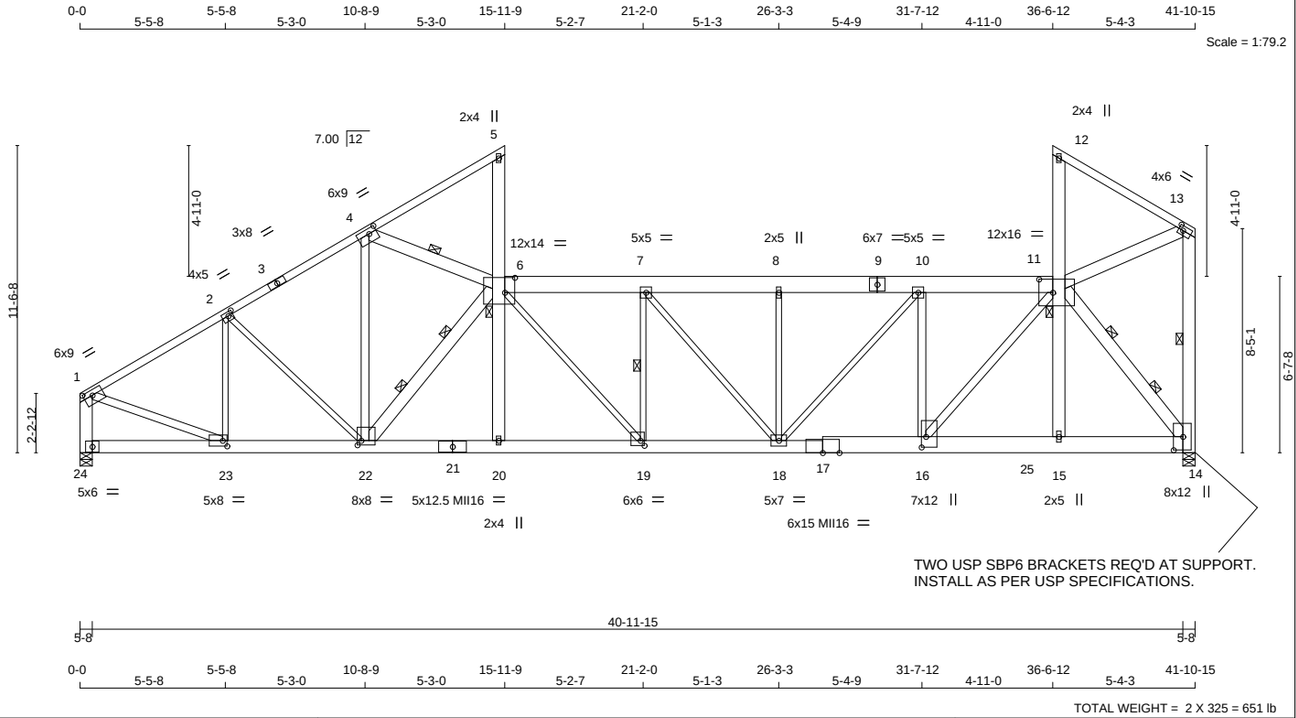


TOTAL WEIGHT = 2 X 325 = 651 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | 2100F 1.8E | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x8 | DRY | 1950F 1.7E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 22 - 4 | 2x4 | DRY | No.2 | SPF |
| 20 - 5 | 2x6 | DRY | No.2 | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | 2100F 1.8E | SPF |
| 15 - 12 | 2x6 | DRY | No.2 | SPF |
| 1 - 23 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x6 | DRY | No.2 | SPF |
| 11 - 13 | 2x6 | DRY | No.2 | SPF |
| 22 - 6 | 2x6 | DRY | No.2 | SPF |
| 11 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 5 | 1 | 12 | TOP |
| 12- 13 | 1 | 12 | TOP |
| 6- 9 | 2 | 12 | TOP |
| 9- 11 | 2 | 12 | TOP |
| 24- 1 | 2 | 12 | TOP |
| 14- 13 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 24- 21 | 2 | 12 | TOP |
| 21- 17 | 2 | 12 | TOP |
| 17- 14 | 2 | 12 | SIDE(210.5) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 10- 16 | 2 | 3 | SIDE(1868.4) |
| 2x4 | 1 | 6 | |
| 2x6 | 2 | 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 PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

PEO
Certificate No. 10889485




July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 8662 | 0 | 9013 | 533 | -561 | 5-8 | 5-8 |
| 14 | 15581 | 0 | 15581 | 0 | -978 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 561 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 14 FOR 978 LBS FACTORED UPLIFT

PROVIDE FOR 533 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 6324 | 4798 / 0 | 513 / 0 | 0 / 0 | 198 / -1203 | 1248 / 0 | 0 / 0 |
| 14 | 11234 | 8365 / 0 | 736 / 0 | 0 / 0 | 372 / -2070 | 2133 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 381 / -288 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

BEARING SIZE FACTOR = 1.15 AT JNT(S) 24, 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.16 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 12-15, 13-14. DBS = 20-0-0 . CBF = 127 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-19. DBS = 8-0-0 . CBF = 231 LBS.

1 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6. DBS = 4-0-0 . CBF = 277 LBS.

2 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 319 LBS.

2 - 2x10 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 498 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: (18)

C H O R D S

| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | -10605 / 669 | -174.6 | -174.6 | 0.58 (2) | 3.43 |
| 2- 3 | -11986 / 802 | -174.6 | -174.6 | 0.67 (2) | 3.16 |
| 3- 4 | -11986 / 802 | -174.6 | -174.6 | 0.67 (2) | 3.16 |
| 4- 5 | -146 / 0 | -174.6 | -174.6 | 0.29 (2) | 6.25 |
| 6- 7 | -22252 / 1487 | -452.9 | -452.9 | 0.35 (2) | 3.47 |
| 7- 8 | -23449 / 1527 | -452.9 | -452.9 | 0.30 (2) | 3.44 |
| 8- 9 | -23449 / 1527 | -452.9 | -452.9 | 0.33 (2) | 3.41 |
| 9-10 | -23449 / 1527 | -452.9 | -452.9 | 0.33 (2) | 3.41 |
| 10-11 | -22940 / 1588 | -452.9 | -452.9 | 0.34 (1) | 3.43 |
| 12-13 | -98 / 4 | -174.6 | -174.6 | 0.49 (3) | 6.25 |
| 24- 1 | -8922 / 585 | 0.0 | 0.0 | 0.42 (2) | 5.05 |
| 14-13 | -559 / 0 | 0.0 | 0.0 | 0.09 (11) | 6.25 |
| 24-23 | -501 / 385 | -27.5 | -27.5 | 0.03 (17) | 6.25 |
| 23-22 | -663 / 9201 | -27.5 | -27.5 | 0.27 (2) | 6.25 |
| 22-21 | -1021 / 18433 | -27.5 | -27.5 | 0.51 (2) | 6.25 |
| 21-20 | -1021 / 18433 | -27.5 | -27.5 | 0.51 (2) | 6.25 |
| 20-19 | -1024 / 18492 | -27.5 | -27.5 | 0.52 (2) | 6.25 |
| 19-18 | -1095 / 22252 | -27.5 | -27.5 | 0.63 (2) | 6.25 |
| 18-17 | -1197 / 22942 | -27.5 | -27.5 | 0.71 (1) | 6.25 |
| 17-16 | -1197 / 22942 | -27.5 | -27.5 | 0.71 (1) | 6.25 |
| 16-25 | -808 / 12916 | -27.5 | -27.5 | 0.47 (1) | 6.25 |
| 25-15 | -808 / 12916 | -27.5 | -27.5 | 0.47 (1) | 6.25 |
| 15-14 | -805 / 12882 | -27.5 | -27.5 | 0.39 (1) | 6.25 |

W E B S

| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 23- 2 | -2961 / 238 | 0.63 (2) |
| 2-22 | -134 / 1945 | 0.24 (3) |
| 22- 4 | -582 / 8917 | 0.79 (2) |
| 20- 6 | 0 / 255 | 0.14 (2) |
| 6- 5 | -347 / 122 | 0.14 (2) |
| 6-19 | -448 / 6404 | 0.79 (3) |
| 19- 7 | -4611 / 396 | 0.61 (3) |
| 7-18 | -397 / 2628 | 0.33 (3) |
| 18- 8 | -2305 / 89 | 0.70 (3) |
| 18-10 | 0 / 892 | 0.11 (2) |
| 16-10 | -3189 / 15 | 0.65 (2) |
| 16-11 | -597 / 15587 | 0.64 (2) |
| 15-11 | -451 / 2034 | 0.20 (1) |
| 11-12 | -495 / 159 | 0.08 (3) |
| 1-23 | -488 / 9705 | 0.86 (2) |
| 4- 6 | -11073 / 1030 | 0.60 (2) |
| 11-13 | -81 / 337 | 0.02 (14) |
| 22- 6 | -12755 / 712 | 0.67 (2) |
| 11-14 | -19912 / 1461 | 0.60 (1) |

[M]

**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 = | 49.9 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.40")
ALLOWABLE DEFL.(TL)= L/180 (2.79")
CALCULATED VERT. DEFL.(TL) = L/ 993 (0.51")

CSI: TC=0.67/1.00 (2-4:2) , BC=0.71/1.00 (16-18:1) , WB=0.86/1.00 (1-23:2) , SSI=0.53/1.00 (15-16:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

| PLATE | GRIP(DRY) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (16) (INPUT = 0.90 )
JSI METAL= 0.99 (11) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A02A-GT | 1 | 2 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836391 |



**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 6.0 | 9.0 | 2.25 | 4.00 |
| 2 | TMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 2.25 |
| 3 | TS-t | MT20 | 3.0 | 8.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 9.0 | 2.25 | 3.50 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*-l | MT20 | 12.0 | 14.0 | 6.75 | 4.50 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 7.0 | | |
| 10 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 11 | TWMWWW*-l | MT20 | 12.0 | 16.0 | 6.00 | 6.25 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BVMW1+p | MT20 | 8.0 | 12.0 | 6.00 | 4.25 |
| 15 | BMW+w | MT20 | 2.0 | 5.0 | | |
| 16 | BMWW+t | MT20 | 7.0 | 12.0 | 4.75 | 2.00 |
| 17 | BS-t | MII16 | 6.0 | 15.0 | | |
| 18 | BMWWW-t | MT20 | 5.0 | 7.0 | | |
| 19 | BMWW-t | MT20 | 6.0 | 6.0 | 2.25 | 1.75 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MII16 | 5.0 | 12.5 | | |
| 22 | BMWWW-t | MT20 | 8.0 | 8.0 | 2.00 | 1.75 |
| 23 | BMWW-t | MT20 | 5.0 | 8.0 | 2.50 | 2.00 |
| 24 | BVM1-l | MT20 | 5.0 | 6.0 | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 31-7-12 | -7864 | -7864 | 339 | FRONT | VERT | TOTAL | --- | C1 |
| 25 | 35-7-0 | -2051 | -2104 | 609 | FRONT | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING
AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A02B-GT | 2 | 2 | Communal Building Fire Reconstruction | | P5836392 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:03 2019 Page 1

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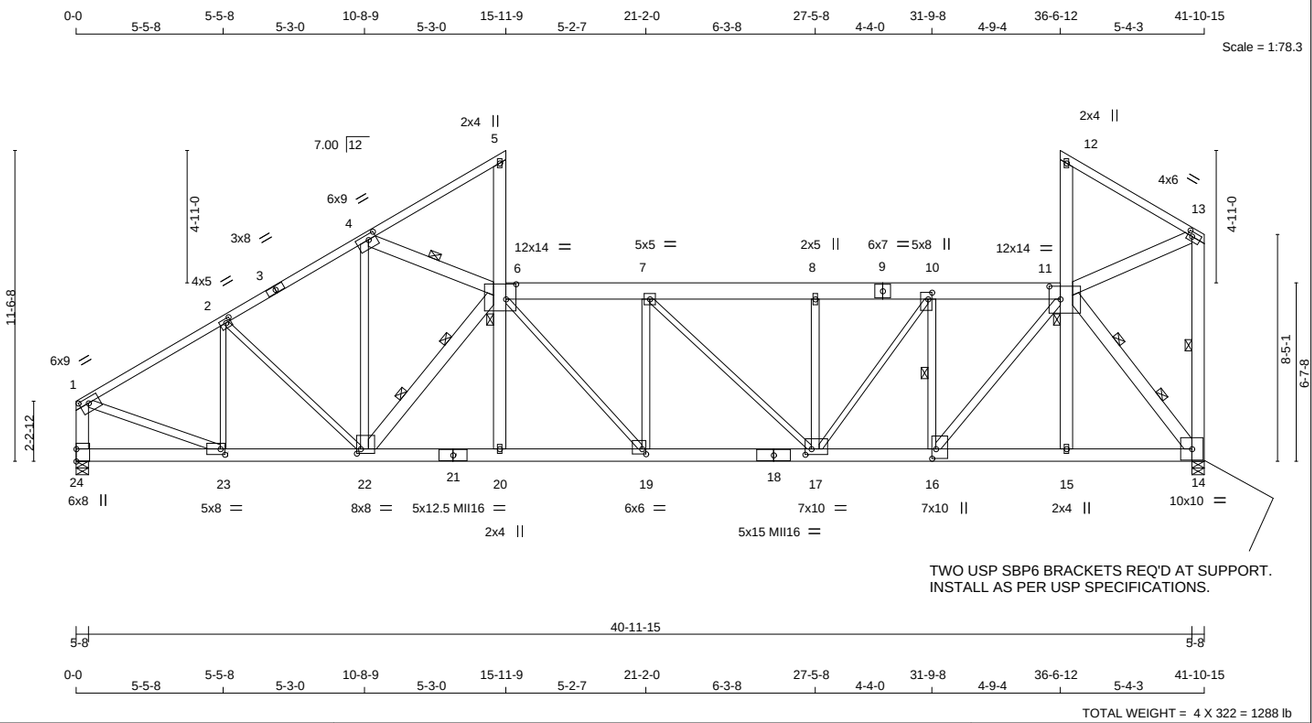





TOTAL WEIGHT = 4 X 322 = 1288 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | 2100F 1.8E | SPF |
| 21 - 18 | 2x6 | DRY | 2100F 1.8E | SPF |
| 18 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x6 | DRY | No.2 | SPF |
| 23 - 2 | 2x3 | DRY | No.2 | SPF |
| 2 - 22 | 2x3 | DRY | No.2 | SPF |
| 22 - 4 | 2x4 | DRY | No.2 | SPF |
| 6 - 19 | 2x3 | DRY | No.2 | SPF |
| 19 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 17 | 2x3 | DRY | No.2 | SPF |
| 17 - 8 | 2x4 | DRY | No.2 | SPF |
| 17 - 10 | 2x3 | DRY | No.2 | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | 2100F 1.8E | SPF |
| 1 - 23 | 2x4 | DRY | No.2 | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 5 | 1 | 12 | TOP |
| 12- 13 | 1 | 12 | TOP |
| 6- 9 | 2 | 12 | TOP |
| 9- 11 | 2 | 12 | TOP |
| 24- 1 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 24- 21 | 2 | 12 | TOP |
| 21- 18 | 2 | 12 | TOP |
| 18- 14 | 2 | 12 | SIDE(227.4) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 8- 17 | 1 | 4 | SIDE(801.0) |
| 10- 16 | 1 | 6 | SIDE(371.2) |
| 2x4 | 1 | 6 | |
| 2x6 | 2 | 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 PLIES FOR THE LOAD TO BE TRANSFERRED TO EACH PLY.

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 8645 | 0 | 8999 | 518 | -129 | 5-8 | 5-8 |
| 14 | 13164 | 0 | 13164 | 0 | 0 | 5-8 | 6-3 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 518 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

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

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 6360 | 4456 / 0 | 479 / 0 | 0 / 0 | 248 / -1159 | 1661 / 0 | 0 / 0 |
| 14 | 9617 | 6233 / 0 | 555 / 0 | 0 / 0 | 374 / -1591 | 2829 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 370 / -288 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

BEARING SIZE FACTOR = 1.15 AT JNT(S) 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.16 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 12-15, 13-14. DBS = 20-0-0 . CBF = 67 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 10-16. DBS = 4-0-0 . CBF = 221 LBS.

2 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 318 LBS.

1 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6. DBS = 4-0-0 . CBF = 276 LBS.

2 - 2x8 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 404 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -10588 / 126 | -174.6 | -174.6 | 0.58 (2) | 3.43 | 23- 2 | -2958 / 80 | 0.63 (2) |
| 2- 3 | -11965 / 140 | -174.6 | -174.6 | 0.67 (2) | 3.16 | 2-22 | 0 / 1942 | 0.24 (3) |
| 3- 4 | -11965 / 140 | -174.6 | -174.6 | 0.67 (2) | 3.16 | 22- 4 | -26 / 8900 | 0.79 (2) |
| 4- 5 | -146 / 0 | -174.6 | -174.6 | 0.29 (2) | 6.25 | 20- 6 | 0 / 232 | 0.14 (2) |
| 6- 7 | -22285 / 0 | -452.9 | -452.9 | 0.33 (2) | 3.49 | 6- 5 | -347 / 125 | 0.14 (2) |
| 7- 8 | -23326 / 0 | -452.9 | -452.9 | 0.38 (2) | 3.38 | 6-19 | 0 / 6511 | 0.81 (3) |
| 8- 9 | -23326 / 0 | -802.9 | -802.9 | 0.34 (2) | 3.41 | 19- 7 | -4591 / 0 | 1.00 (3) |
| 9-10 | -23326 / 0 | -802.9 | -802.9 | 0.34 (2) | 3.41 | 7-17 | 0 / 2314 | 0.28 (3) |
| 10-11 | -19364 / 0 | -452.9 | -452.9 | 0.26 (1) | 3.78 | 17- 8 | -2941 / 0 | 0.64 (1) |
| 12-13 | -98 / 0 | -174.6 | -174.6 | 0.45 (3) | 6.25 | 17-10 | -10 / 6953 | 0.86 (2) |
| 24- 1 | -8909 / 154 | 0.0 | 0.0 | 0.36 (2) | 5.05 | 16-10 | -8847 / 0 | 0.84 (2) |
| | | | | | | 16-11 | 0 / 14698 | 0.61 (2) |
| 24-23 | -486 / 102 | -27.5 | -27.5 | 0.04 (17) | 6.25 | 15-11 | 0 / 253 | 0.07 (1) |
| 23-22 | -480 / 9186 | -27.5 | -27.5 | 0.27 (2) | 6.25 | 11-12 | -471 / 153 | 0.08 (3) |
| 22-21 | -197 / 18394 | -27.5 | -27.5 | 0.51 (2) | 6.25 | 1-23 | 0 / 9689 | 0.86 (2) |
| 21-20 | -197 / 18394 | -27.5 | -27.5 | 0.51 (2) | 6.25 | 14-13 | -538 / 0 | 0.06 (3) |
| 20-19 | -197 / 18453 | -27.5 | -27.5 | 0.51 (2) | 6.25 | 22- 6 | -12723 / 0 | 0.67 (2) |
| 19-18 | 0 / 22285 | -27.5 | -27.5 | 0.69 (2) | 10.00 | 4- 6 | -11055 / 417 | 0.60 (2) |
| 18-17 | 0 / 22285 | -27.5 | -27.5 | 0.69 (2) | 10.00 | 11-13 | -13 / 185 | 0.01 (14) |
| 17-16 | 0 / 19364 | -27.5 | -27.5 | 0.61 (1) | 10.00 | 11-14 | -16172 / 0 | 0.83 (1) |
| 16-15 | 0 / 10135 | -27.5 | -27.5 | 0.30 (1) | 10.00 | | | |
| 15-14 | 0 / 10104 | -27.5 | -27.5 | 0.28 (1) | 10.00 | | | |

[M]

**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 = | 49.9 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.39")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.38")
ALLOWABLE DEFL.(TL)= L/180 (2.78")
CALCULATED VERT. DEFL.(TL) = L/ 901 (0.56")

CSI: TC=0.67/1.00 (2-4:2) , BC=0.69/1.00 (17-19:2) , WB=1.00/1.00 (7-19:3) , SSI=0.54/1.00 (8-10:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (14) (INPUT = 0.90 )
JSI METAL= 0.95 (18) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 6.0 | 9.0 | 2.25 | 4.00 |
| 2 | TMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 2.25 |
| 3 | TS-t | MT20 | 3.0 | 8.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 9.0 | 2.25 | 3.50 |
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*-l | MT20 | 12.0 | 14.0 | 6.75 | 4.50 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 7.0 | | |
| 10 | TMWW+t | MT20 | 5.0 | 8.0 | 3.00 | 1.75 |
| 11 | TWMWWW*-l | MT20 | 12.0 | 14.0 | 5.75 | 5.00 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMWW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BWMW1*-l | MT20 | 10.0 | 10.0 | | |
| 15 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 16 | BMWW+t | MT20 | 7.0 | 10.0 | 4.25 | 1.75 |
| 17 | BMWWW-t | MT20 | 7.0 | 10.0 | 2.50 | 2.75 |
| 18 | BS-t | MII16 | 5.0 | 15.0 | | |
| 19 | BMWW-t | MT20 | 6.0 | 6.0 | 2.25 | 1.75 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MII16 | 5.0 | 12.5 | | |
| 22 | BMWWW-t | MT20 | 8.0 | 8.0 | 2.00 | 1.75 |
| 23 | BMWW-t | MT20 | 5.0 | 8.0 | 2.50 | 2.00 |
| 24 | BMV1+t | MT20 | 6.0 | 8.0 | 5.50 | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 31-9-7 | -2181 | -2235 | 182 | BACK | VERT | TOTAL | --- | C1 |
| 17 | 27-5-8 | -3829 | -3851 | 131 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING
AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire Reconstruction | DRWG NO. | P5836393 |
|---|---|---|---|---|---|---|---|
| 1904-0607 | A02C-GT | 2 | 2 | TRUSS DESC. | | | |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:04 2019 Page 1

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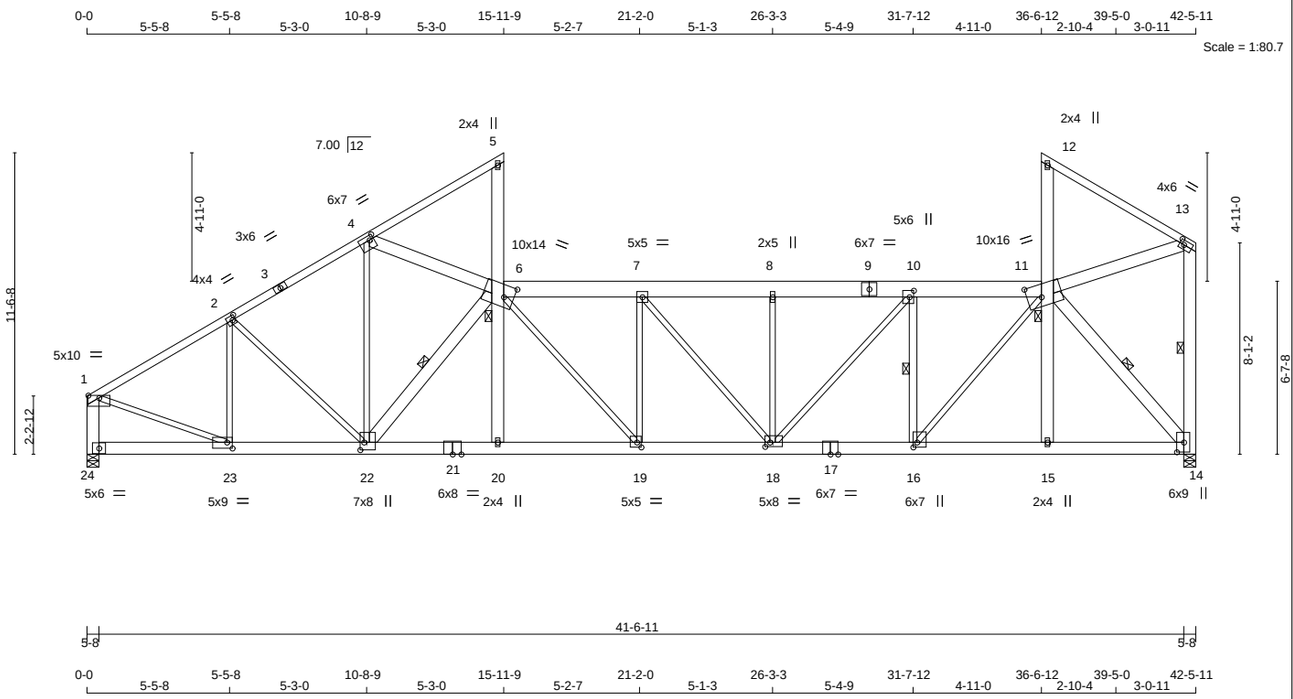


TOTAL WEIGHT = 4 X 314 = 1257 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | No.2 | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 20 - 5 | 2x6 | DRY | No.2 | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x6 | DRY | No.2 | SPF |
| 4 - 6 | 2x6 | DRY | No.2 | SPF |
| 22 - 6 | 2x6 | DRY | No.2 | SPF |
| 11 - 13 | 2x6 | DRY | No.2 | SPF |
| 11 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 5 | 1 | 12 | TOP |
| 12- 13 | 1 | 12 | TOP |
| 6- 9 | 2 | 12 | TOP |
| 9- 11 | 2 | 12 | TOP |
| 24- 1 | 2 | 12 | TOP |
| 14- 13 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 24- 21 | 2 | 12 | TOP |
| 21- 17 | 2 | 12 | TOP |
| 17- 14 | 2 | 12 | TOP |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 2x4 | 1 | 6 | |
| 2x6 | 2 | 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.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-p | MT20 | 5.0 | 10.0 | Edge | |
| 2 | TMWW-t | MT20 | 4.0 | 4.0 | 2.00 | 1.50 |
| 3 | TS-t | MT20 | 3.0 | 6.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 7.0 | 2.00 | 2.00 |

PEO
Certificate No. 10889485

LICENSED PROFESSIONAL ENGINEER
P. OJO-OLAJIRE
100227197
PROVINCE OF ONTARIO

July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 7065 | 0 | 7407 | 528 | -7 | 5-8 | 5-8 |
| 14 | 8457 | 0 | 8457 | 0 | 0 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 528 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 5224 | 3639 / 0 | 425 / 0 | 0 / 0 | 116 / -897 | 1388 / 0 | 0 / 0 |
| 14 | 6178 | 4214 / 0 | 425 / 0 | 0 / 0 | 51 / -868 | 1539 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 377 / -288 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

BEARING SIZE FACTOR = 1.15 AT JNT(S) 24, 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.63 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 12-15, 13-14. DBS = 20-0-0 . CBF = 75 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 10-16. DBS = 6-0-0 . CBF = 221 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 227 LBS.

1 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 267 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: (18)

| CHORDS MEMB. | FR-TO | FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) TO | | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| | 1- 2 | -8517 / 24 | -174.6 | -174.6 | 0.48 (2) | 3.85 | 23- 2 | -2205 / 157 | 0.47 (2) |
| | 2- 3 | -9329 / 95 | -174.6 | -174.6 | 0.53 (2) | 3.63 | 2-22 | -57 / 1268 | 0.16 (3) |
| | 3- 4 | -9329 / 95 | -174.6 | -174.6 | 0.53 (2) | 3.63 | 22- 4 | 0 / 6672 | 0.83 (2) |
| | 4- 5 | -135 / 0 | -174.6 | -174.6 | 0.29 (2) | 6.25 | 20- 6 | 0 / 382 | 0.13 (2) |
| | 6- 7 | -15795 / 222 | -452.9 | -452.9 | 0.25 (2) | 4.13 | 6- 5 | -352 / 125 | 0.12 (2) |
| | 7- 8 | -15117 / 153 | -452.9 | -452.9 | 0.20 (2) | 4.25 | 6-19 | -151 / 3679 | 0.46 (3) |
| | 8- 9 | -15117 / 153 | -452.9 | -452.9 | 0.20 (2) | 4.25 | 19- 7 | -2443 / 273 | 0.74 (3) |
| | 9-10 | -15117 / 153 | -452.9 | -452.9 | 0.20 (2) | 4.25 | 7-18 | -1057 / 107 | 0.65 (2) |
| | 10-11 | -12388 / 160 | -452.9 | -452.9 | 0.19 (1) | 4.61 | 18- 8 | -2201 / 74 | 0.67 (1) |
| | 12-13 | -114 / 9 | -174.6 | -174.6 | 0.61 (3) | 6.25 | 18-10 | 0 / 4315 | 0.53 (2) |
| | 24- 1 | -7265 / 73 | 0.0 | 0.0 | 0.34 (2) | 5.55 | 16-10 | -5885 / 94 | 0.56 (2) |
| | 14-13 | -598 / 0 | 0.0 | 0.0 | 0.08 (11) | 6.25 | 16-11 | 0 / 8089 | 1.00 (2) |
| | | | | | | | 15-11 | 0 / 464 | 0.06 (1) |
| | 24-23 | -496 / 389 | -52.5 | -52.5 | 0.10 (17) | 6.25 | 11-12 | -563 / 179 | 0.05 (3) |
| | 23-22 | -102 / 7397 | -52.5 | -52.5 | 0.54 (2) | 6.25 | 1-23 | 0 / 7801 | 0.97 (2) |
| | 22-21 | 0 / 13808 | -52.5 | -52.5 | 0.95 (2) | 10.00 | 4- 6 | -8614 / 376 | 0.99 (2) |
| | 21-20 | 0 / 13808 | -52.5 | -52.5 | 0.95 (2) | 10.00 | 22- 6 | -9075 / 0 | 0.85 (2) |
| | 20-19 | 0 / 13860 | -52.5 | -52.5 | 0.40 (2) | 10.00 | 11-13 | -84 / 348 | 0.02 (14) |
| | 19-18 | 0 / 15795 | -52.5 | -52.5 | 0.46 (2) | 10.00 | 11-14 | -10668 / 0 | 0.65 (1) |
| | 18-17 | 0 / 12388 | -52.5 | -52.5 | 0.89 (1) | 10.00 | | | |
| | 17-16 | 0 / 12388 | -52.5 | -52.5 | 0.89 (1) | 10.00 | | | |
| | 16-15 | 0 / 7262 | -52.5 | -52.5 | 0.55 (1) | 10.00 | | | |
| | 15-14 | 0 / 7241 | -52.5 | -52.5 | 0.55 (1) | 10.00 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**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 = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.31")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.42")

CSI: TC=0.61/1.00 (12-13:3) , BC=0.95/1.00 (20-22:2) , WB=1.00/1.00 (11-16:2) , SSI=0.42/1.00 (6-7:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (4) (INPUT = 0.90 )
JSI METAL= 0.93 (4) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A02C-GT | 2 | 2 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836393 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:04 2019 Page 2

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**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*+w | MT20 | 10.0 | 14.0 | 4.50 | 5.50 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 7.0 | | |
| 10 | TMWW+t | MT20 | 5.0 | 6.0 | 3.00 | 2.00 |
| 11 | TWMWWW*+w | MT20 | 10.0 | 16.0 | 6.50 | 5.75 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BVMW1+p | MT20 | 6.0 | 9.0 | 4.50 | 3.25 |
| 15 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 16 | BMWW+t | MT20 | 6.0 | 7.0 | 2.25 | 1.75 |
| 17 | BS-t | MT20 | 6.0 | 7.0 | | |
| 18 | BMWWW-t | MT20 | 5.0 | 8.0 | 2.00 | 2.25 |
| 19 | BMWW-t | MT20 | 5.0 | 5.0 | 2.25 | 2.00 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MT20 | 6.0 | 8.0 | | |
| 22 | BMWWW+t | MT20 | 7.0 | 8.0 | 3.50 | 1.75 |
| 23 | BMWW-t | MT20 | 5.0 | 9.0 | 2.75 | 2.50 |
| 24 | BVM1-l | MT20 | 5.0 | 6.0 | | |

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019



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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A03 | 2 | 2 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836394 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:07 2019 Page 1

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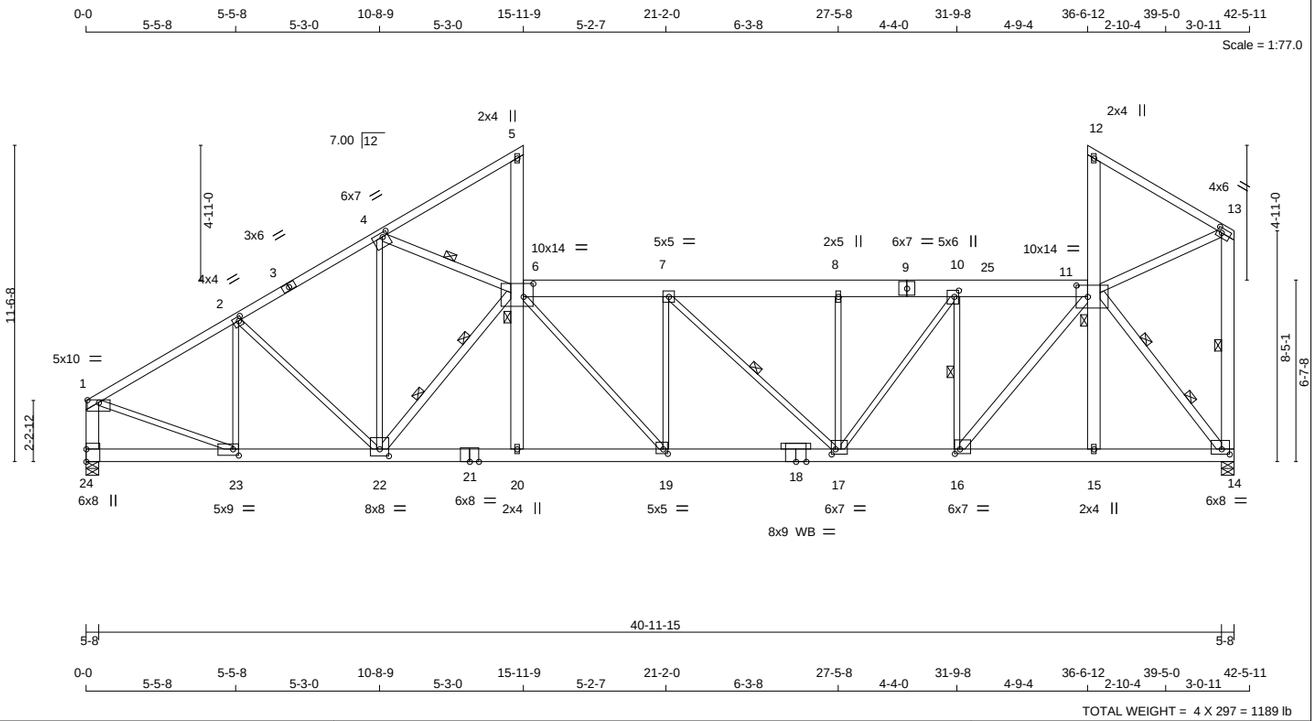


TOTAL WEIGHT = 4 X 297 = 1189 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 9 | 2x8 | DRY | 1950F 1.7E | SPF |
| 9 - 11 | 2x8 | DRY | 1950F 1.7E | SPF |
| 12 - 13 | 2x4 | DRY | No.2 | SPF |
| 24 - 1 | 2x6 | DRY | No.2 | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 24 - 21 | 2x6 | DRY | No.2 | SPF |
| 21 - 18 | 2x6 | DRY | 2100F 1.8E | SPF |
| 18 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 20 - 5 | 2x6 | DRY | No.2 | SPF |
| 16 - 11 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x6 | DRY | No.2 | SPF |
| 22 - 6 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 11 - 14 | 2x4 | DRY | No.2 | SPF |
| 11 - 13 | 2x4 | DRY | No.2 | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 5 | 1 | 12 | TOP |
| 12- 13 | 1 | 12 | TOP |
| 6- 9 | 2 | 12 | TOP |
| 9- 11 | 2 | 12 | TOP |
| 24- 1 | 2 | 12 | TOP |
| 14- 13 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 24- 21 | 2 | 12 | TOP |
| 21- 18 | 2 | 12 | TOP |
| 18- 14 | 2 | 12 | TOP |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 2x4 | 1 | 6 | |
| 2x6 | 2 | 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.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-p | MT20 | 5.0 | 10.0 | Edge | |
| 2 | TMWW-t | MT20 | 4.0 | 4.0 | 1.75 | 1.50 |
| 3 | TS-t | MT20 | 3.0 | 6.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 7.0 | 1.75 | 2.50 |

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 24 | 6925 | 0 | 7276 | 534 | -16 | 5-8 | 5-8 |
| 14 | 9137 | 0 | 9137 | 0 | 0 | 5-8 | 4-6 |

PROVIDE ANCHORAGE AT BEARING JOINT 24 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 534 LBS FACTORED HORIZONTAL REACTION AT JOINT 24

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 24 | 5122 | 3580 / 0 | 419 / 0 | 0 / 0 | 119 / -884 | 1358 / 0 | 0 / 0 |
| 14 | 6723 | 4193 / 0 | 419 / 0 | 0 / 0 | 38 / -856 | 2111 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 24 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 382 / -288 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 24, 14

BEARING SIZE FACTOR = 1.15 AT JNT(S) 24, 14 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.63 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

MAX. UNBRACED INTERIOR CHORD LENGTH = 6.25 FT

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-20, 7-17, 12-15, 13-14. DBS = 20-0-0 . CBF = 111 LBS.

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 10-16, 4-6. DBS = 4-0-0 . CBF = 215 LBS.

2 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-22. DBS = 4-0-0 . CBF = 232 LBS.

2 - 2x6 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 11-14. DBS = 4-0-0 . CBF = 280 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: (18)

| CHORDS MEMB. | FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | FORCE (LBS) | MAX. FACTORED CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -8419 / 0 | -174.6 | -174.6 | 0.47 (2) | 3.86 | 23- 2 | -2341 / 37 | 0.50 (2) |
| 2- 3 | -9333 / 0 | -174.6 | -174.6 | 0.54 (2) | 3.63 | 2-22 | 0 / 1389 | 0.17 (3) |
| 3- 4 | -9333 / 0 | -174.6 | -174.6 | 0.54 (2) | 3.63 | 22- 4 | 0 / 6629 | 0.82 (2) |
| 4- 5 | -157 / 0 | -174.6 | -174.6 | 0.30 (2) | 6.25 | 20- 6 | 0 / 215 | 0.15 (2) |
| 6- 7 | -16324 / 0 | -452.9 | -452.9 | 0.25 (2) | 4.06 | 6- 5 | -341 / 126 | 0.15 (2) |
| 7- 8 | -15686 / 0 | -452.9 | -452.9 | 0.25 (2) | 4.14 | 6-19 | 0 / 4226 | 0.52 (3) |
| 8- 9 | -15686 / 0 | -840.4 | -840.4 | 0.22 (2) | 4.17 | 19- 7 | -2913 / 0 | 0.89 (3) |
| 9-10 | -15686 / 0 | -840.4 | -840.4 | 0.22 (2) | 4.17 | 7-17 | -888 / 736 | 0.23 (2) |
| 10-25 | -13106 / 0 | -540.4 | -540.4 | 0.19 (1) | 4.52 | 17- 8 | -3154 / 0 | 0.96 (2) |
| 25-11 | -13106 / 0 | -452.9 | -452.9 | 0.19 (1) | 4.52 | 17-10 | 0 / 4599 | 0.57 (2) |
| 12-13 | -103 / 0 | -174.6 | -174.6 | 0.49 (3) | 6.25 | 16-10 | -7005 / 0 | 0.93 (2) |
| 24- 1 | -7187 / 42 | 0.0 | 0.0 | 0.29 (2) | 5.58 | 16-11 | 0 / 9407 | 0.83 (2) |
| 14-13 | -564 / 0 | 0.0 | 0.0 | 0.09 (11) | 6.25 | 15-11 | 0 / 255 | 0.08 (1) |
| | | | | | | 11-12 | -492 / 161 | 0.08 (3) |
| 24-23 | -502 / 388 | -27.5 | -27.5 | 0.07 (17) | 6.25 | 1-23 | 0 / 7712 | 0.95 (2) |
| 23-22 | -70 / 7312 | -27.5 | -27.5 | 0.52 (2) | 6.25 | 22- 6 | -9268 / 0 | 0.79 (2) |
| 22-21 | 0 / 13964 | -27.5 | -27.5 | 0.96 (2) | 10.00 | 4- 6 | -8588 / 256 | 0.74 (2) |
| 21-20 | 0 / 13964 | -27.5 | -27.5 | 0.96 (2) | 10.00 | 11-14 | -11217 / 0 | 0.93 (1) |
| 20-19 | 0 / 14027 | -27.5 | -27.5 | 0.40 (2) | 10.00 | 11-13 | -76 / 342 | 0.03 (14) |
| 19-18 | 0 / 16324 | -27.5 | -27.5 | 0.50 (2) | 10.00 | | | |
| 18-17 | 0 / 16324 | -27.5 | -27.5 | 0.50 (2) | 10.00 | | | |
| 17-16 | 0 / 13106 | -27.5 | -27.5 | 0.41 (1) | 10.00 | | | |
| 16-15 | 0 / 7268 | -27.5 | -27.5 | 0.22 (1) | 10.00 | | | |
| 15-14 | 0 / 7237 | -27.5 | -27.5 | 0.21 (1) | 10.00 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**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 | = | 49.9 | PSF |
| | DL | = | 10.0 | PSF |
| BOT CH. | LL | = | 10.0 | PSF |
| | DL | = | 7.0 | PSF |
| TOTAL LOAD | | = | 76.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.40")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.32")
ALLOWABLE DEFL.(TL)= L/180 (2.79")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.47")

CSI: TC=0.54/1.00 (2-4:2) , BC=0.96/1.00 (20-22:2) , WB=0.96/1.00 (8-17:2) , SSI=0.54/1.00 (8-10:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (22) (INPUT = 0.90 )
JSI METAL= 1.00 (18) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 5 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 6 | TWMWWW*-l | MT20 | 10.0 | 14.0 | 5.75 | 4.25 |
| 7 | TMWW-t | MT20 | 5.0 | 5.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 5.0 | | |
| 9 | TS-t | MT20 | 6.0 | 7.0 | | |
| 10 | TMWW+t | MT20 | 5.0 | 6.0 | 2.75 | 2.00 |
| 11 | TWMWWW*-l | MT20 | 10.0 | 14.0 | 5.00 | 5.00 |
| 12 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 13 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.00 |
| 14 | BMVW1-t | MT20 | 6.0 | 8.0 | 2.25 | 3.50 |
| 15 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 16 | BMWW-t | MT20 | 6.0 | 7.0 | 2.00 | 2.25 |
| 17 | BMWWW-t | MT20 | 6.0 | 7.0 | 2.25 | 1.75 |
| 18 | BS-t | MT20 | 8.0 | 9.0 | | |
| 19 | BMWW-t | MT20 | 5.0 | 5.0 | 2.00 | 2.00 |
| 20 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 21 | BS-t | MT20 | 6.0 | 8.0 | | |
| 22 | BMWWW-t | MT20 | 8.0 | 8.0 | 3.00 | 4.00 |
| 23 | BMWW-t | MT20 | 5.0 | 9.0 | 2.75 | 2.50 |
| 24 | BMV1+t | MT20 | 6.0 | 8.0 | 5.50 | |

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

WB - INDICATES BLOCKING REQUIRED

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A04 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836395 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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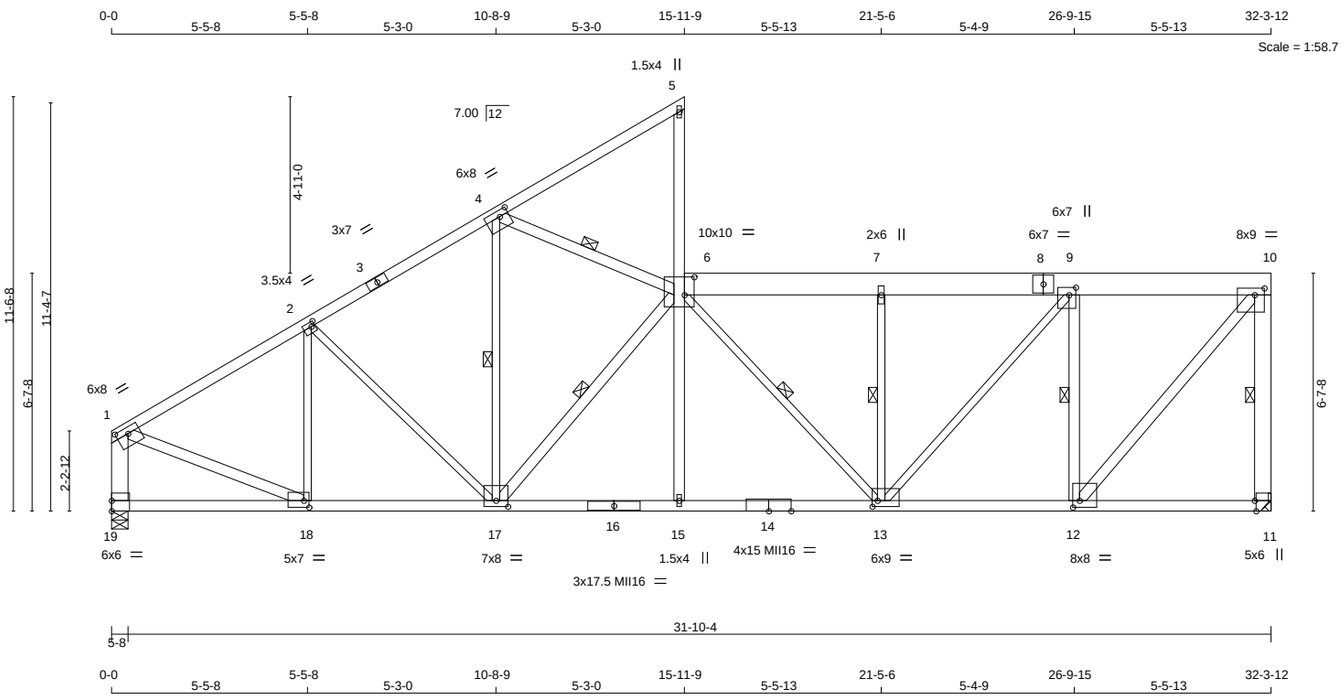


TOTAL WEIGHT = 2 X 192 = 384 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 15 - 5 | 2x4 | DRY | No.2 | SPF |
| 6 - 8 | 2x8 | DRY | No.2 | SPF |
| 8 - 10 | 2x8 | DRY | No.2 | SPF |
| 11 - 10 | 2x6 | DRY | No.2 | SPF |
| 19 - 1 | 2x6 | DRY | No.2 | SPF |
| 19 - 16 | 2x4 | DRY | 2100F 1.8E | SPF |
| 16 - 14 | 2x4 | DRY | 2100F 1.8E | SPF |
| 14 - 11 | 2x4 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 17 - 6 | 2x4 | DRY | 2100F 1.8E | SPF |
| 12 - 9 | 2x4 | DRY | 2100F 1.8E | SPF |
| 12 - 10 | 2x4 | DRY | 2100F 1.8E | SPF |
| 1 - 18 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 6.0 | 8.0 | 2.00 | 4.00 |
| 2 | TMWW-t | MT20 | 3.5 | 4.0 | 1.50 | 1.25 |
| 3 | TS-t | MT20 | 3.0 | 7.0 | | |
| 4 | TMWW-t | MT20 | 6.0 | 8.0 | 2.00 | 3.00 |
| 5 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 6 | TVMWWW-l | MT20 | 10.0 | 10.0 | 6.00 | 3.25 |
| 7 | TMW+w | MT20 | 2.0 | 6.0 | | |
| 8 | TS-t | MT20 | 6.0 | 7.0 | | |
| 9 | TMWW+t | MT20 | 6.0 | 7.0 | 2.50 | 2.25 |
| 10 | TMVW-t | MT20 | 8.0 | 9.0 | 2.25 | 3.25 |
| 11 | BMV1+t | MT20 | 5.0 | 6.0 | Edge | 0.50 |
| 12 | BMWW-t | MT20 | 8.0 | 8.0 | 2.25 | 2.25 |
| 13 | BMWWW-t | MT20 | 6.0 | 9.0 | 2.00 | 1.75 |
| 14 | BS-t | MII16 | 4.0 | 15.0 | | |
| 15 | BMV+p | MT20 | 1.5 | 4.0 | | |
| 16 | BS-t | MII16 | 3.0 | 17.5 | | |
| 17 | BMWWW-t | MT20 | 7.0 | 8.0 | 2.00 | 4.00 |
| 18 | BMWW-t | MT20 | 5.0 | 7.0 | 2.25 | 1.75 |
| 19 | BMV1-t | MT20 | 6.0 | 6.0 | 3.50 | |

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

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 11 | 6677 | 0 | 6677 | 0 | -201 | MECHANICAL | |
| 19 | 4430 | 0 | 4430 | 597 | -135 | 5-8 | 5-8 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 11. MINIMUM BEARING LENGTH AT JOINT 11 = 3-8.

PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 201 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 19 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 597 LBS FACTORED HORIZONTAL REACTION AT JOINT 19

**UNFACTORED REACTIONS**

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

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 11 | 4820 | 3580 / 0 | 323 / 0 | 0 / 0 | 114 / -733 | 917 / 0 | 0 / 0 |
| 19 | 3281 | 2283 / 0 | 323 / 0 | 0 / 0 | 229 / -530 | 675 / 0 | 0 / 0 |

HORIZONTAL REACTIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 427 / -277 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 19

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 2.44 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 10-11. DBS = 4-0-0 . CBF = 165 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-17, 6-13. DBS = 20-0-0 . CBF = 55 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6, 9-12. DBS = 6-0-0 . CBF = 204 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-17. DBS = 8-0-0 . CBF = 219 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-13. DBS = 14-0-0 . CBF = 229 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | -4882 / 136 | -174.6 | -174.6 | 0.86 (2) | 3.22 |
| 2- 3 | -5158 / 152 | -174.6 | -174.6 | 0.84 (2) | 3.11 |
| 3- 4 | -5158 / 152 | -174.6 | -174.6 | 0.84 (2) | 3.11 |
| 4- 5 | -208 / 25 | -174.6 | -174.6 | 0.55 (2) | 6.25 |
| 15- 6 | 0 / 260 | 0.0 | 0.0 | 0.12 (14) | 10.00 |
| 6- 5 | -416 / 173 | 0.0 | 0.0 | 0.21 (14) | 7.81 |
| 6- 7 | -7316 / 428 | -452.9 | -452.9 | 0.90 (1) | 2.44 |
| 7- 8 | -7316 / 428 | -452.9 | -452.9 | 0.87 (1) | 2.51 |
| 8- 9 | -7316 / 428 | -452.9 | -452.9 | 0.87 (1) | 2.51 |
| 9-10 | -4982 / 280 | -452.9 | -452.9 | 0.75 (1) | 3.33 |
| 11-10 | -6616 / 228 | 0.0 | 0.0 | 0.83 (1) | 3.27 |
| 19- 1 | -4366 / 162 | 0.0 | 0.0 | 0.37 (1) | 5.10 |
| 19-18 | -563 / 97 | -27.5 | -27.5 | 0.17 (17) | 6.25 |
| 18-17 | -565 / 4260 | -27.5 | -27.5 | 0.41 (1) | 6.25 |
| 17-16 | -355 / 7250 | -27.5 | -27.5 | 0.64 (1) | 6.25 |
| 16-15 | -355 / 7250 | -27.5 | -27.5 | 0.64 (1) | 6.25 |
| 15-14 | -364 / 7258 | -27.5 | -27.5 | 0.68 (1) | 6.25 |
| 14-13 | -364 / 7258 | -27.5 | -27.5 | 0.68 (1) | 6.25 |
| 13-12 | -148 / 4982 | -27.5 | -27.5 | 0.49 (1) | 6.25 |
| 12-11 | -43 / 109 | -27.5 | -27.5 | 0.18 (17) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 18- 2 | -1361 / 79 | 0.61 (1) |
| 2-17 | -40 / 587 | 0.15 (3) |
| 17- 4 | -117 / 3322 | 0.82 (1) |
| 4- 6 | -4767 / 518 | 0.86 (1) |
| 17- 6 | -4383 / 106 | 0.83 (1) |
| 6-13 | -437 / 863 | 0.21 (3) |
| 13- 7 | -2612 / 95 | 0.72 (3) |
| 13- 9 | -237 / 3554 | 0.88 (1) |
| 12- 9 | -5437 / 270 | 0.65 (1) |
| 12-10 | -258 / 7504 | 0.62 (1) |
| 1-18 | -1 / 4508 | 0.80 (1) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**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 = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.08")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.30")
ALLOWABLE DEFL.(TL)= L/180 (2.15")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.39")

CSI: TC=0.90/1.00 (6-7:1) , BC=0.68/1.00 (13-15:1) , WB=0.88/1.00 (9-13:1) , SSI=0.87/1.00 (9-10:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (13) (INPUT = 0.90 )
JSI METAL= 1.00 (12) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A05 | 1 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836396 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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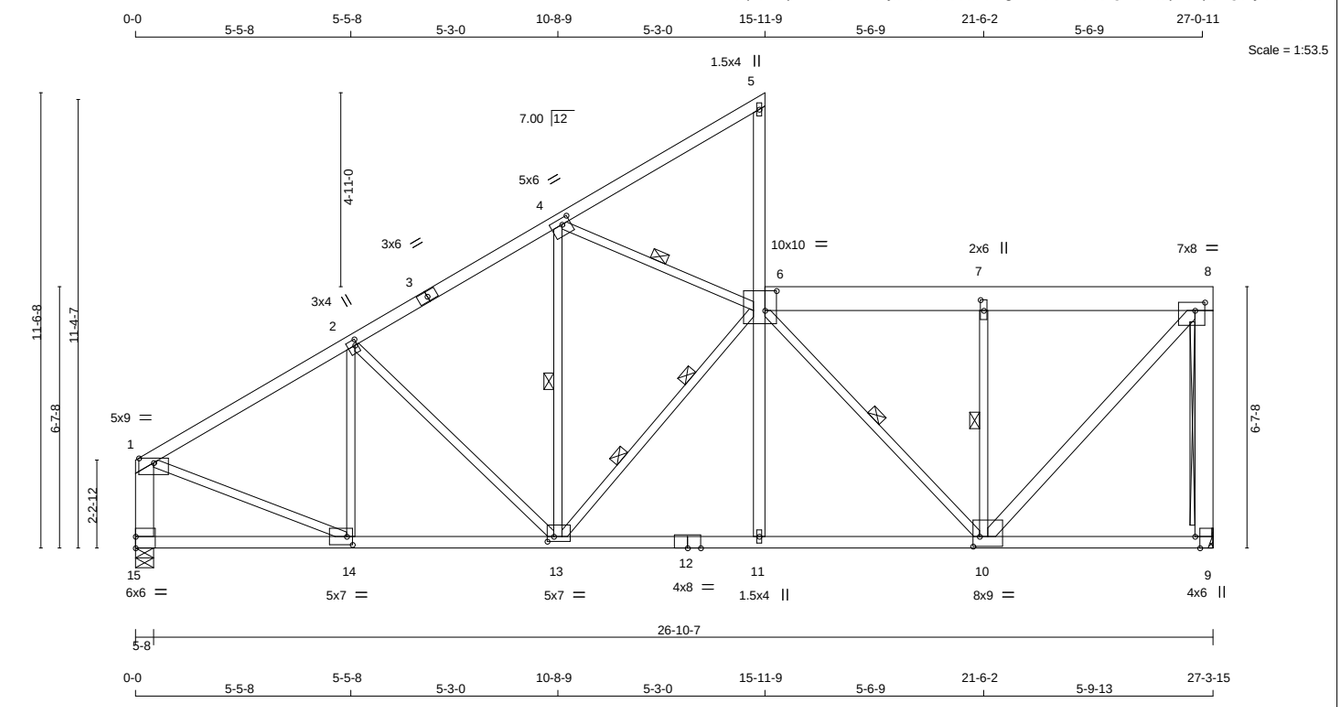


TOTAL WEIGHT = 156 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 3 - 5 | 2x4 | DRY | 2100F 1.8E | SPF |
| 11 - 5 | 2x4 | DRY | No.2 | SPF |
| 6 - 8 | 2x8 | DRY | No.2 | SPF |
| 9 - 8 | 2x6 | DRY | No.2 | SPF |
| 15 - 1 | 2x6 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| 12 - 9 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | 2100F 1.8E | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-p | MT20 | 5.0 | 9.0 | Edge | |
| 2 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 0.75 |
| 3 | TS-t | MT20 | 3.0 | 6.0 | | |
| 4 | TMWW-t | MT20 | 5.0 | 6.0 | 1.75 | 2.50 |
| 5 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 6 | TVMWWW-l | MT20 | 10.0 | 10.0 | 6.00 | 3.50 |
| 7 | TMW+w | MT20 | 2.0 | 6.0 | 3.25 | 1.00 |
| 8 | TMVW-t | MT20 | 7.0 | 8.0 | 2.50 | 3.00 |
| 9 | BMV1+t | MT20 | 4.0 | 6.0 | Edge | 1.50 |
| 10 | BMWWW-t | MT20 | 8.0 | 9.0 | 3.00 | 2.00 |
| 11 | BMV+p | MT20 | 1.5 | 4.0 | | |
| 12 | BS-t | MT20 | 4.0 | 8.0 | | |
| 13 | BMWWW-t | MT20 | 5.0 | 7.0 | 1.50 | 2.00 |
| 14 | BMWW-t | MT20 | 5.0 | 7.0 | 2.50 | 1.75 |
| 15 | BMV1-t | MT20 | 6.0 | 6.0 | 3.50 | |

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

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 9 | 5282 | 0 | 5282 | 0 | -217 | MECHANICAL | |
| 15 | 3430 | 0 | 3430 | 597 | -123 | 5-8 | 5-8 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 9. MINIMUM BEARING LENGTH AT JOINT 9 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 217 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 15 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 597 LBS FACTORED HORIZONTAL REACTION AT JOINT 15

**UNFACTORED REACTIONS**

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

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 9 | 3826 | 2817 / 0 | 273 / 0 | 0 / 0 | 144 / -629 | 736 / 0 | 0 / 0 |
| 15 | 2559 | 1749 / 0 | 273 / 0 | 0 / 0 | 207 / -433 | 537 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 15 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 427 / -277 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 15

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.34 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-13, 6-10. DBS = 20-0-0 . CBF = 171 LBS.
1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-6, 7-10. DBS = 10-0-0 . CBF = 210 LBS.
2 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 3 LENGTH OF 6-13. DBS = 14-0-0 . CBF = 212 LBS.
2x4 DRY SPF No.2 T-BRACE AT 8-9

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.

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: (18)

CHORDS

| MEMB. | MAX. FACTORED FORCE (LBS) | FR-TO | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|---|
| 1- 2 | -3645 / 122 | | -174.6 | -174.6 | 0.77 (2) | 3.65 |
| 2- 3 | -3642 / 134 | | -174.6 | -174.6 | 0.74 (2) | 3.74 |
| 3- 4 | -3642 / 134 | | -174.6 | -174.6 | 0.74 (2) | 3.74 |
| 4- 5 | -208 / 25 | | -174.6 | -174.6 | 0.54 (2) | 6.25 |
| 11- 6 | 0 / 243 | | 0.0 | 0.0 | 0.12 (14) | 10.00 |
| 6- 5 | -418 / 173 | | 0.0 | 0.0 | 0.21 (14) | 7.81 |
| 6- 7 | -3926 / 306 | | -452.9 | -452.9 | 0.85 (1) | 3.34 |
| 7- 8 | -3926 / 306 | | -452.9 | -452.9 | 0.85 (1) | 3.34 |
| 9- 8 | -5217 / 246 | | 0.0 | 0.0 | 0.88 (1) | 7.71 |
| 15- 1 | -3366 / 150 | | 0.0 | 0.0 | 0.29 (1) | 5.74 |
| 15-14 | -563 / 97 | | -27.5 | -27.5 | 0.25 (17) | 6.25 |
| 14-13 | -552 / 3210 | | -27.5 | -27.5 | 0.65 (1) | 6.25 |
| 13-12 | -326 / 4689 | | -27.5 | -27.5 | 0.92 (1) | 6.25 |
| 12-11 | -326 / 4689 | | -27.5 | -27.5 | 0.92 (1) | 6.25 |
| 11-10 | -334 / 4696 | | -27.5 | -27.5 | 0.96 (1) | 6.25 |
| 10- 9 | -43 / 109 | | -27.5 | -27.5 | 0.31 (17) | 6.25 |

WEBS

| MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 14- 2 | -995 / 74 | 0.44 (1) |
| 2-13 | -251 / 283 | 0.27 (2) |
| 13- 4 | -95 / 2053 | 0.51 (1) |
| 4- 6 | -3364 / 501 | 0.84 (1) |
| 13- 6 | -2422 / 39 | 0.96 (1) |
| 6-10 | -1364 / 413 | 0.65 (2) |
| 10- 7 | -3152 / 115 | 0.87 (1) |
| 10- 8 | -288 / 5727 | 0.47 (1) |
| 1-14 | 0 / 3376 | 0.84 (1) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**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 = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.91")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.18")
ALLOWABLE DEFL.(TL)= L/180 (1.82")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.23")

CSI: TC=0.88/1.00 (8-9:1) , BC=0.96/1.00 (10-11:1) , WB=0.96/1.00 (6-13:1) , SSI=0.93/1.00 (7-8:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (8) (INPUT = 0.90 )
JSI METAL= 0.92 (12) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A05 | 1 | 1 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836396 |



WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A06 | 2 | 1 | Communal Building Fire Reconstruction | P5836397 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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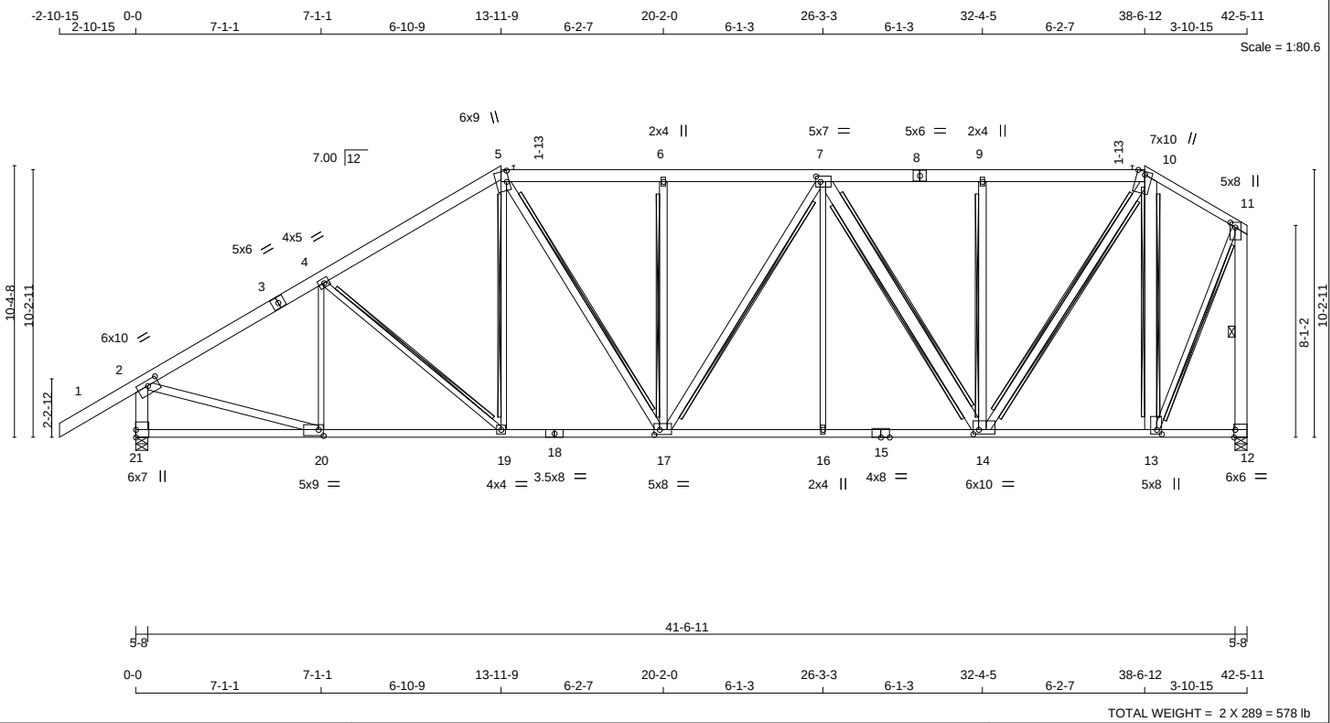


TOTAL WEIGHT = 2 X 289 = 578 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 5 | 2x6 | DRY | 2100F 1.8E | SPF |
| 5 - 8 | 2x6 | DRY | No.2 | SPF |
| 8 - 10 | 2x6 | DRY | No.2 | SPF |
| 10 - 11 | 2x4 | DRY | No.2 | SPF |
| 21 - 2 | 2x6 | DRY | No.2 | SPF |
| 12 - 11 | 2x6 | DRY | No.2 | SPF |
| 21 - 18 | 2x4 | DRY | No.2 | SPF |
| 18 - 15 | 2x4 | DRY | No.2 | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 5 - 17 | 2x4 | DRY | No.2 | SPF |
| 17 - 6 | 2x4 | DRY | No.2 | SPF |
| 17 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 14 | 2x6 | DRY | 2100F 1.8E | SPF |
| 14 - 9 | 2x4 | DRY | No.2 | SPF |
| 14 - 10 | 2x4 | DRY | 2100F 1.8E | SPF |
| 13 - 10 | 2x6 | DRY | 2100F 1.8E | SPF |
| 2 - 20 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 6.0 | 10.0 | 2.25 | 5.00 |
| 3 | TS-t | MT20 | 5.0 | 6.0 | | |
| 4 | TMWW-t | MT20 | 4.0 | 5.0 | | |
| 5 | TTWW+m | MT20 | 6.0 | 9.0 | 5.00 | 1.25 |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TMWWW-t | MT20 | 5.0 | 7.0 | 2.50 | 2.00 |
| 8 | TS-t | MT20 | 5.0 | 6.0 | | |
| 9 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 10 | TTWW+m | MT20 | 7.0 | 10.0 | Edge | |
| 11 | TMVW+p | MT20 | 5.0 | 8.0 | 2.25 | 2.25 |
| 12 | BMV1-t | MT20 | 6.0 | 6.0 | Edge | 0.50 |
| 13 | BMWW+t | MT20 | 5.0 | 8.0 | 2.00 | 2.25 |
| 14 | BMWWW-t | MT20 | 6.0 | 10.0 | 2.00 | 2.50 |
| 15 | BS-t | MT20 | 4.0 | 8.0 | | |
| 16 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 17 | BMWWW-t | MT20 | 5.0 | 8.0 | 2.25 | 2.50 |
| 18 | BS-t | MT20 | 3.5 | 8.0 | | |
| 19 | BMWW-t | MT20 | 4.0 | 4.0 | | |
| 20 | BMWW-t | MT20 | 5.0 | 9.0 | 2.75 | 2.25 |
| 21 | BMV1+t | MT20 | 6.0 | 7.0 | | |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 21 | 4517 | 0 | 5240 | 536 | -921 | 5-8 | 5-8 |
| 12 | 4026 | 0 | 4273 | 0 | -786 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 21 FOR 921 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 12 FOR 786 LBS FACTORED UPLIFT

PROVIDE FOR 536 LBS FACTORED HORIZONTAL REACTION AT JOINT 21

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 21 | 3384 | 2902 / 0 | 425 / 0 | 0 / 0 | 492 / -1005 | 540 / 0 | 0 / 0 |
| 12 | 3052 | 2282 / 0 | 425 / 0 | 0 / 0 | 435 / -889 | 510 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 21 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 383 / -277 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 21, 12

BEARING SIZE FACTOR = 1.15 AT JNT(S) 21 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 3.04 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 11-12. DBS = 8-0-0 . CBF = 212 LBS.
2x4 DRY SPF No.2 T-BRACE AT 4-19, 5-19, 5-17, 6-17, 7-17, 9-14, 11-13
2x4 DRY SPF No.2 I-BRACE AT 7-14, 10-14, 10-13

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.

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 20- 4 | -1051 / 280 | 0.62 (2) | |
| 2- 3 | -5499 / 1043 | -162.1 | -162.1 | 0.79 (2) | 3.04 | 4-19 | -557 / 427 | 0.37 (2) | |
| 3- 4 | -5499 / 1043 | -162.1 | -162.1 | 0.79 (2) | 3.04 | 19- 5 | -136 / 540 | 0.12 (2) | |
| 4- 5 | -5149 / 1108 | -162.1 | -162.1 | 0.51 (2) | 4.21 | 5-17 | -315 / 1749 | 0.31 (14) | |
| 5- 6 | -5054 / 1161 | -162.1 | -162.1 | 0.67 (2) | 3.23 | 17- 6 | -1434 / 370 | 0.90 (10) | |
| 6- 7 | -5053 / 1159 | -162.1 | -162.1 | 0.67 (2) | 3.23 | 17- 7 | -142 / 584 | 0.14 (13) | |
| 7- 8 | -3640 / 868 | -162.1 | -162.1 | 0.58 (2) | 3.85 | 16- 7 | 0 / 284 | 0.07 (17) | |
| 8- 9 | -3640 / 868 | -162.1 | -162.1 | 0.58 (2) | 3.85 | 7-14 | -2100 / 412 | 0.84 (2) | |
| 9-10 | -3643 / 872 | -162.1 | -162.1 | 0.58 (2) | 3.85 | 14- 9 | -1453 / 374 | 0.92 (10) | |
| 10-11 | -1696 / 481 | -162.1 | -162.1 | 0.57 (3) | 4.36 | 14-10 | -757 / 3951 | 0.40 (13) | |
| 21- 2 | -5159 / 955 | 0.0 | 0.0 | 0.38 (2) | 4.78 | 13-10 | -2978 / 582 | 0.84 (2) | |
| 12-11 | -4239 / 799 | 0.0 | 0.0 | 0.84 (3) | 4.19 | 2-20 | -708 / 4974 | 0.80 (2) | |
| | | | | | | 13-11 | -563 / 3464 | 0.78 (2) | |
| 21-20 | -503 / 373 | -27.5 | -27.5 | 0.35 (17) | 6.25 | | | | |
| 20-19 | -942 / 4818 | -27.5 | -27.5 | 0.94 (2) | 6.25 | | | | |
| 19-18 | -702 / 4400 | -27.5 | -27.5 | 0.83 (2) | 6.25 | | | | |
| 18-17 | -702 / 4400 | -27.5 | -27.5 | 0.83 (2) | 6.25 | | | | |
| 17-16 | -734 / 4746 | -27.5 | -27.5 | 0.86 (2) | 6.25 | | | | |
| 16-15 | -734 / 4746 | -27.5 | -27.5 | 0.88 (2) | 6.25 | | | | |
| 15-14 | -734 / 4746 | -27.5 | -27.5 | 0.88 (2) | 6.25 | | | | |
| 14-13 | -194 / 1551 | -27.5 | -27.5 | 0.36 (2) | 6.25 | | | | |
| 13-12 | -64 / 137 | -27.5 | -27.5 | 0.18 (17) | 6.25 | | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.26")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.32")

CSI: TC=0.84/1.00 (11-12:3) , BC=0.94/1.00 (19-20:2) , WB=0.92/1.00 (9-14:10) , SSI=0.44/1.00 (2-4:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (20) (INPUT = 0.90 )
JSI METAL= 0.96 (18) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire Reconstruction | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A07 | 2 | 1 | TRUSS DESC. | | P5836398 |

Locke Truss div of 976711 Ont. Inc., Brockville, ON K6V 5T4

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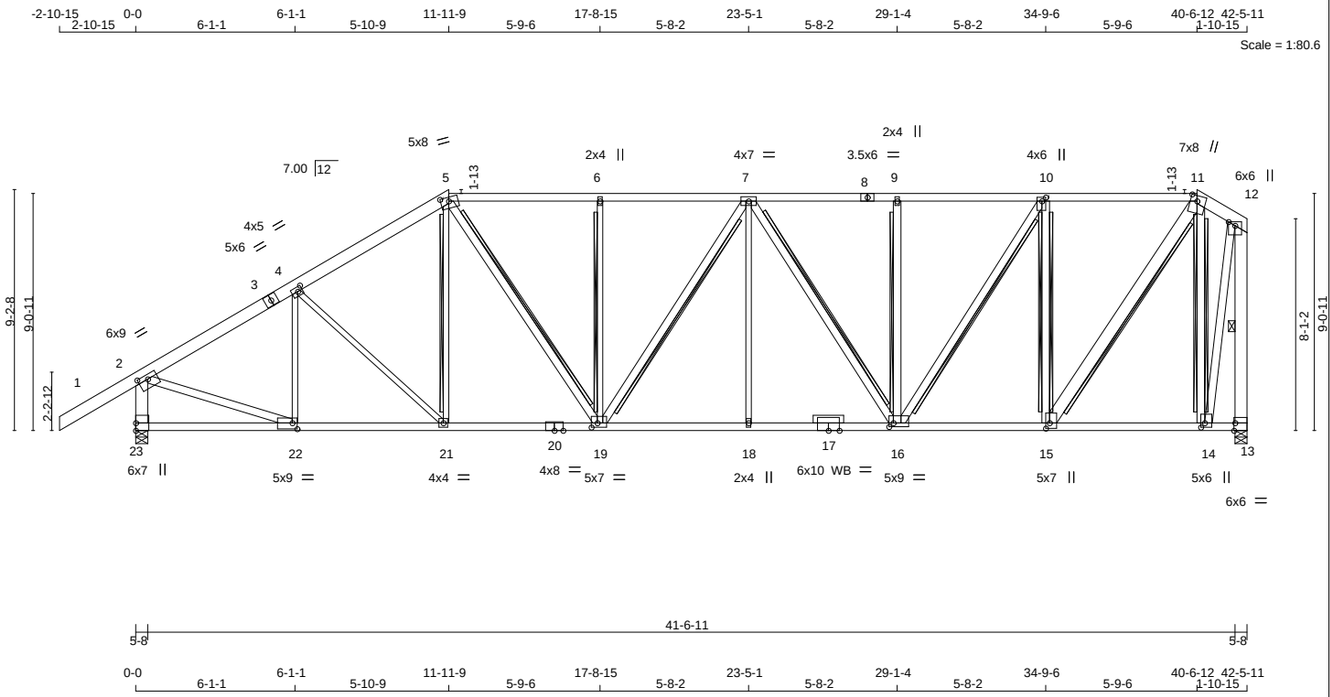





TOTAL WEIGHT = 2 X 274 = 548 lb

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

| CHORDS | SIZE | | LUMBER | | DESCR. |
|---|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | | SPF |
| 3 - 5 | 2x6 | DRY | No.2 | | SPF |
| 5 - 8 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 8 - 11 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 11 - 12 | 2x6 | DRY | No.2 | | SPF |
| 23 - 2 | 2x6 | DRY | No.2 | | SPF |
| 13 - 12 | 2x6 | DRY | No.2 | | SPF |
| 23 - 20 | 2x4 | DRY | No.2 | | SPF |
| 20 - 17 | 2x4 | DRY | No.2 | | SPF |
| 17 - 13 | 2x4 | DRY | No.2 | | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | | SPF |
| 5 - 19 | 2x4 | DRY | No.2 | | SPF |
| 19 - 7 | 2x4 | DRY | No.2 | | SPF |
| 7 - 16 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 16 - 9 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 16 - 10 | 2x4 | DRY | No.2 | | SPF |
| 15 - 10 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 15 - 11 | 2x6 | DRY | No.2 | | SPF |
| 14 - 11 | 2x4 | DRY | 2100F 1.8E | | SPF |
| 2 - 22 | 2x4 | DRY | No.2 | | SPF |
| 14 - 12 | 2x4 | DRY | No.2 | | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 6.0 | 9.0 | 2.00 | 4.50 |
| 3 | TS-t | MT20 | 5.0 | 6.0 | | |
| 4 | TMWW-t | MT20 | 4.0 | 5.0 | 2.00 | 2.25 |
| 5 | TTWW-m | MT20 | 5.0 | 8.0 | 1.75 | 3.75 |
| 6 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 7 | TMWWW-t | MT20 | 4.0 | 7.0 | | |
| 8 | TS-t | MT20 | 3.5 | 6.0 | | |
| 9 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 10 | TMWW+t | MT20 | 4.0 | 6.0 | 1.75 | 1.75 |
| 11 | TTWW+m | MT20 | 7.0 | 8.0 | 2.50 | 3.00 |
| 12 | TMVW+p | MT20 | 6.0 | 6.0 | Edge | |
| 13 | BMV1-t | MT20 | 6.0 | 6.0 | Edge | 0.50 |
| 14 | BMWW+t | MT20 | 5.0 | 6.0 | 2.00 | 1.75 |
| 15 | BMWW+t | MT20 | 5.0 | 7.0 | 2.50 | 1.75 |
| 16 | BMWWW-t | MT20 | 5.0 | 9.0 | 1.75 | 2.00 |
| 17 | BS-t | MT20 | 6.0 | 10.0 | | |
| 18 | BMW+w | MT20 | 2.0 | 4.0 | | |
| 19 | BMWWW-t | MT20 | 5.0 | 7.0 | 2.00 | 2.75 |
| 20 | BS-t | MT20 | 4.0 | 8.0 | | |
| 21 | BMWW-t | MT20 | 4.0 | 4.0 | | |
| 22 | BMWW-t | MT20 | 5.0 | 9.0 | 2.75 | 2.25 |
| 23 | BMV1+t | MT20 | 6.0 | 7.0 | | |

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

WB - INDICATES BLOCKING REQUIRED

PEO
Certificate No. 10889485


July 3,2019

**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 |
|---|---|---|---|---|---|---|---|
| | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 23 | 4517 | 0 | 5265 | 492 | -930 | 5-8 | 5-8 |
| 13 | 4026 | 0 | 4383 | 0 | -823 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 23 FOR 930 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 13 FOR 823 LBS FACTORED UPLIFT

PROVIDE FOR 492 LBS FACTORED HORIZONTAL REACTION AT JOINT 23

**UNFACTORED REACTIONS**

1ST LCASE — MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 23 | 3384 | 2918 / 0 | 425 / 0 | 0 / 0 | 502 / -1012 | 540 / 0 | 0 / 0 |
| 13 | 3052 | 2356 / 0 | 425 / 0 | 0 / 0 | 476 / -916 | 510 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 23 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 352 / -248 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 23, 13
BEARING SIZE FACTOR = 1.15 AT JNT(S) 23 ( BASED ON SUPPORT DEPTH = 1-8 )

**BRACING**
MAX. UNBRACED TOP CHORD LENGTH = 2.82 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x3 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 12-13. DBS = 4-0-0 . CBF = 109 LBS.
2x3 DRY SPF No.2 T-BRACE AT 5-21
2x4 DRY SPF No.2 T-BRACE AT 5-19, 6-19, 7-19, 7-16, 9-16, 10-16, 11-15
2x4 DRY SPF No.2 I-BRACE AT 10-15, 11-14

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.

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 |
| 2- 3 | -5377 / 1028 | -162.1 | -162.1 | 0.75 (2) | 3.03 |
| 3- 4 | -5377 / 1028 | -162.1 | -162.1 | 0.75 (2) | 3.03 |
| 4- 5 | -5369 / 1138 | -162.1 | -162.1 | 0.74 (2) | 3.03 |
| 5- 6 | -5590 / 1235 | -162.1 | -162.1 | 0.94 (2) | 2.82 |
| 6- 7 | -5589 / 1234 | -162.1 | -162.1 | 0.93 (2) | 2.83 |
| 7- 8 | -4932 / 1082 | -162.1 | -162.1 | 0.70 (2) | 3.34 |
| 8- 9 | -4932 / 1082 | -162.1 | -162.1 | 0.70 (2) | 3.34 |
| 9-10 | -4932 / 1082 | -162.1 | -162.1 | 0.89 (2) | 3.00 |
| 10-11 | -3426 / 797 | -162.1 | -162.1 | 0.77 (2) | 3.67 |
| 11-12 | -886 / 323 | -162.1 | -162.1 | 0.06 (3) | 6.25 |
| 23- 2 | -5193 / 960 | 0.0 | 0.0 | 0.39 (2) | 4.76 |
| 13-12 | -4366 / 802 | 0.0 | 0.0 | 0.83 (3) | 4.14 |
| 23-22 | -460 / 332 | -27.5 | -27.5 | 0.25 (17) | 6.25 |
| 22-21 | -915 / 4699 | -27.5 | -27.5 | 0.86 (2) | 6.25 |
| 21-20 | -753 / 4584 | -27.5 | -27.5 | 0.84 (2) | 6.25 |
| 20-19 | -753 / 4584 | -27.5 | -27.5 | 0.84 (2) | 6.25 |
| 19-18 | -918 / 5660 | -27.5 | -27.5 | 1.00 (2) | 6.25 |
| 18-17 | -918 / 5660 | -27.5 | -27.5 | 1.00 (2) | 6.25 |
| 17-16 | -918 / 5660 | -27.5 | -27.5 | 1.00 (2) | 6.25 |
| 16-15 | -485 / 3425 | -27.5 | -27.5 | 0.69 (2) | 6.25 |
| 15-14 | -143 / 936 | -27.5 | -27.5 | 0.30 (5) | 6.25 |
| 14-13 | -63 / 136 | -27.5 | -27.5 | 0.15 (17) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 22- 4 | -1235 / 292 | 0.58 (2) |
| 4-21 | -162 / 611 | 0.20 (7) |
| 21- 5 | -287 / 311 | 0.37 (10) |
| 5-19 | -389 / 2198 | 0.35 (3) |
| 19- 6 | -1317 / 339 | 0.77 (10) |
| 19- 7 | -503 / 73 | 0.38 (3) |
| 7-18 | 0 / 269 | 0.06 (17) |
| 7-16 | -1340 / 272 | 0.72 (2) |
| 16- 9 | -1110 / 286 | 0.37 (10) |
| 16-10 | -525 / 2771 | 0.45 (2) |
| 15-10 | -3591 / 783 | 0.94 (2) |
| 15-11 | -850 / 4527 | 0.53 (2) |
| 14-11 | -3798 / 697 | 0.97 (2) |
| 2-22 | -716 / 4904 | 0.79 (2) |
| 14-12 | -628 / 3959 | 0.64 (2) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.33")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.41")

CSI: TC=0.94/1.00 (5-6:2) , BC=1.00/1.00 (18-19:2) , WB=0.97/1.00 (11-14:2) , SSI=0.53/1.00 (10-11:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
COMPANION LIVE LOAD FACTOR = 0.50

AUTOSOLVE HEELS OFF

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (10) (INPUT = 0.90 )
JSI METAL= 0.99 (2) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | A07 | 2 | 1 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836398 |

Locke Truss div of 976711 Ont. Inc., Brockville, ON K6V 5T4

Version 8.300 S May 10 2019 MiTek Industries, Inc. Wed Jul 3 13:32:50 2019 Page 2

ID:oq2tZrEpFk4rOPkiFZzIjazNtN9-tfjdDkSuuZP9BDCvHq0?yk?8UtYTprfNMnSyuAz?lAR

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.

PEO
Certificate No. 10889485


July 3,2019



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire Reconstruction | DRWG NO. | P5836399 |
|---|---|---|---|---|---|---|---|
| 1904-0607 | A08 | 2 | 1 | TRUSS DESC. | | | |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:14 2019 Page 1

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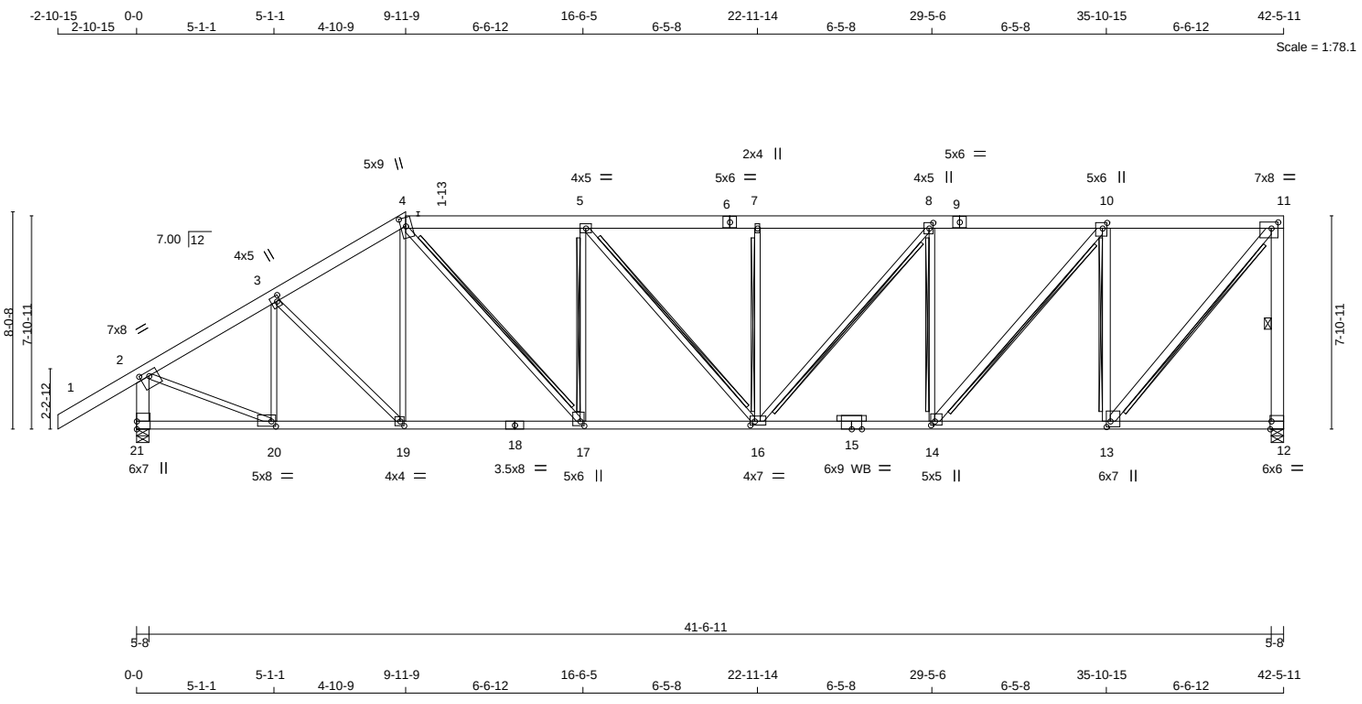


TOTAL WEIGHT = 2 X 239 = 479 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 4 - 6 | 2x6 | DRY | No.2 | SPF |
| 6 - 9 | 2x6 | DRY | No.2 | SPF |
| 9 - 11 | 2x6 | DRY | No.2 | SPF |
| 12 - 11 | 2x6 | DRY | No.2 | SPF |
| 21 - 2 | 2x6 | DRY | No.2 | SPF |
| 21 - 18 | 2x4 | DRY | No.2 | SPF |
| 18 - 15 | 2x4 | DRY | 2100F 1.8E | SPF |
| 15 - 12 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 14 - 10 | 2x4 | DRY | No.2 | SPF |
| 13 - 10 | 2x4 | DRY | 2100F 1.8E | SPF |
| 13 - 11 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 7.0 | 8.0 | 2.00 | 4.00 |
| 3 | TMWW+t | MT20 | 4.0 | 5.0 | 2.50 | 1.50 |
| 4 | TTWW+m | MT20 | 5.0 | 9.0 | 3.75 | 2.25 |
| 5 | TMWW-t | MT20 | 4.0 | 5.0 | | |
| 6 | TS-t | MT20 | 5.0 | 6.0 | | |
| 7 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 8 | TMWW+t | MT20 | 4.0 | 5.0 | 2.50 | 1.75 |
| 9 | TS-t | MT20 | 5.0 | 6.0 | | |
| 10 | TMWW+t | MT20 | 5.0 | 6.0 | 2.50 | 2.00 |
| 11 | TMVW-t | MT20 | 7.0 | 8.0 | 2.75 | 3.00 |
| 12 | BMV1-t | MT20 | 6.0 | 6.0 | Edge | 0.50 |
| 13 | BMWW+t | MT20 | 6.0 | 7.0 | 2.50 | 1.75 |
| 14 | BMWW+t | MT20 | 5.0 | 5.0 | 1.75 | 1.75 |
| 15 | BS-t | MT20 | 6.0 | 9.0 | | |
| 16 | BMWWW-t | MT20 | 4.0 | 7.0 | 1.75 | 2.00 |
| 17 | BMWW+t | MT20 | 5.0 | 6.0 | 2.00 | 1.75 |
| 18 | BS-t | MT20 | 3.5 | 8.0 | | |
| 19 | BMWW-t | MT20 | 4.0 | 4.0 | 2.00 | 1.75 |
| 20 | BMWW-t | MT20 | 5.0 | 8.0 | 2.25 | 2.00 |
| 21 | BMV1+t | MT20 | 6.0 | 7.0 | | |

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

WB - INDICATES BLOCKING REQUIRED

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 12 | 4026 | 0 | 4476 | 0 | -861 | 5-8 | 5-8 |
| 21 | 4517 | 0 | 4517 | 418 | -937 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 12 FOR 861 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 21 FOR 937 LBS FACTORED UPLIFT

PROVIDE FOR 418 LBS FACTORED HORIZONTAL REACTION AT JOINT 21

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | SNOW | MAX./MIN. COMPONENT REACTIONS LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 12 | 3052 | 2418 / 0 | 425 / 0 | 0 / 0 | 516 / -943 | 510 / 0 | 0 / 0 |
| 21 | 3384 | 2420 / 0 | 425 / 0 | 0 / 0 | 510 / -1017 | 540 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 21 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 298 / -204 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 12, 21

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 2.72 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 11-12. DBS = 8-0-0 . CBF = 220 LBS.

2x4 DRY SPF No.2 T-BRACE AT 4-17, 5-17, 5-16, 7-16, 8-16, 8-14, 10-14, 10-13, 11-13

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.

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 19- 4 | -499 / 497 | 0.56 (10) |
| 2- 3 | -4427 / 998 | -162.1 | -162.1 | 0.39 (2) | 3.80 | 4-17 | -505 / 2843 | 0.64 (3) |
| 3- 4 | -4726 / 1148 | -162.1 | -162.1 | 0.40 (1) | 3.68 | 17- 5 | -2023 / 468 | 0.82 (3) |
| 4- 5 | -5696 / 1356 | -162.1 | -162.1 | 0.82 (3) | 2.87 | 5-16 | -213 / 655 | 0.16 (9) |
| 5- 6 | -6114 / 1379 | -162.1 | -162.1 | 0.86 (3) | 2.72 | 16- 7 | -1266 / 326 | 0.50 (10) |
| 6- 7 | -6114 / 1379 | -162.1 | -162.1 | 0.86 (3) | 2.72 | 16- 8 | -282 / 1241 | 0.28 (1) |
| 7- 8 | -6114 / 1379 | -162.1 | -162.1 | 0.70 (3) | 2.98 | 14- 8 | -2160 / 543 | 0.87 (3) |
| 8- 9 | -5356 / 1195 | -162.1 | -162.1 | 0.81 (3) | 2.94 | 14-10 | -615 / 2999 | 0.48 (3) |
| 9-10 | -5356 / 1195 | -162.1 | -162.1 | 0.81 (3) | 2.94 | 13-10 | -3763 / 851 | 0.85 (3) |
| 10-11 | -3401 / 794 | -162.1 | -162.1 | 0.67 (3) | 3.82 | 13-11 | -1005 / 5170 | 0.83 (3) |
| 12-11 | -4423 / 894 | 0.0 | 0.0 | 0.75 (3) | 4.12 | 2-20 | -715 / 4097 | 0.92 (1) |
| 21- 2 | -4467 / 962 | 0.0 | 0.0 | 0.33 (1) | 5.12 | 20- 3 | -1286 / 311 | 0.46 (1) |
| | | | | | | 3-19 | -494 / 891 | 0.40 (9) |
| 21-20 | -386 / 270 | -27.5 | -27.5 | 0.15 (17) | 6.25 | | | |
| 20-19 | -872 / 3890 | -27.5 | -27.5 | 0.73 (1) | 6.25 | | | |
| 19-18 | -795 / 4073 | -27.5 | -27.5 | 0.77 (1) | 6.25 | | | |
| 18-17 | -795 / 4073 | -27.5 | -27.5 | 0.77 (1) | 6.25 | | | |
| 17-16 | -1089 / 5689 | -27.5 | -27.5 | 0.51 (3) | 6.25 | | | |
| 16-15 | -929 / 5356 | -27.5 | -27.5 | 0.97 (3) | 6.25 | | | |
| 15-14 | -929 / 5356 | -27.5 | -27.5 | 0.97 (3) | 6.25 | | | |
| 14-13 | -528 / 3401 | -27.5 | -27.5 | 0.70 (3) | 6.25 | | | |
| 13-12 | -52 / 133 | -27.5 | -27.5 | 0.30 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.35")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.43")

CSI: TC=0.86/1.00 (5-7:3) , BC=0.97/1.00 (14-16:3) , WB=0.92/1.00 (2-20:1) , SSI=0.46/1.00 (10-11:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (11) (INPUT = 0.90 )
JSI METAL= 0.94 (18) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire Reconstruction | DRWG NO. | P5836400 |
|---|---|---|---|---|---|---|---|
| 1904-0607 | A09 | 2 | 1 | TRUSS DESC. | | | |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:16 2019 Page 1

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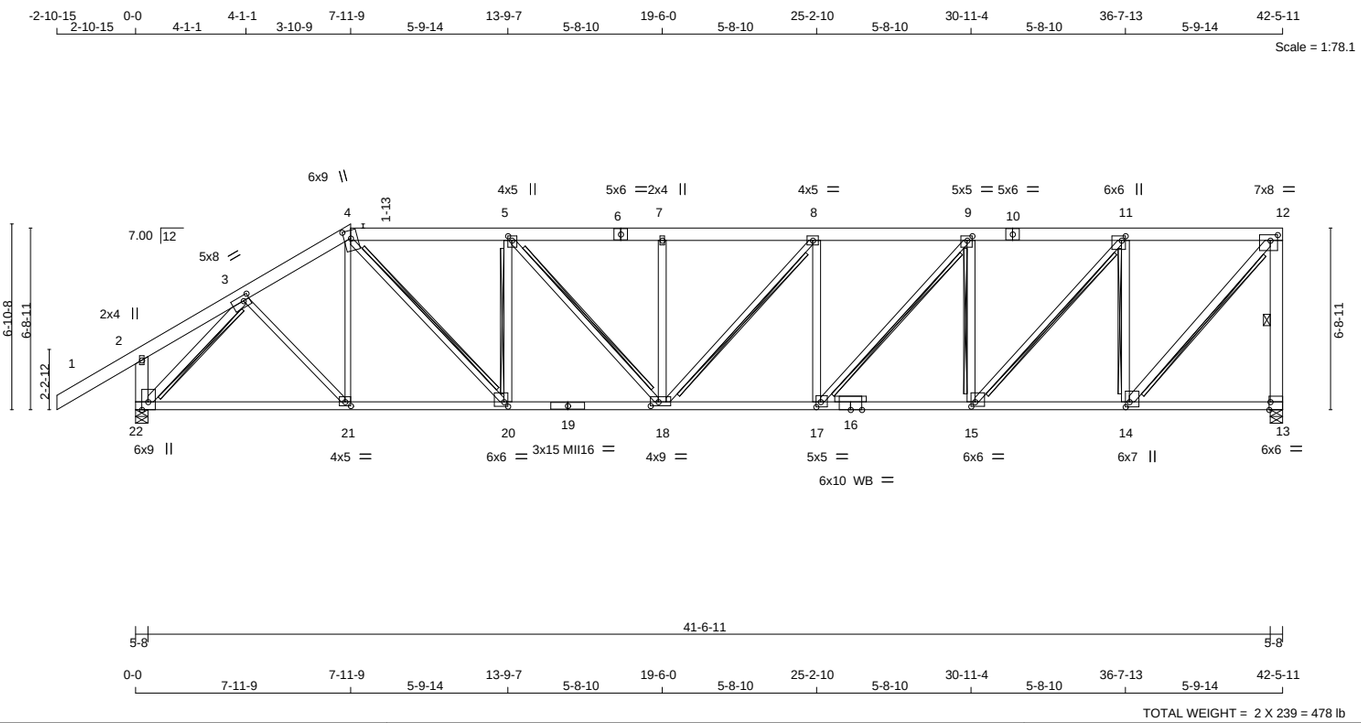


**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 4 - 6 | 2x6 | DRY | No.2 | SPF |
| 6 - 10 | 2x6 | DRY | No.2 | SPF |
| 10 - 12 | 2x6 | DRY | No.2 | SPF |
| 13 - 12 | 2x6 | DRY | No.2 | SPF |
| 22 - 2 | 2x6 | DRY | No.2 | SPF |
| 22 - 19 | 2x4 | DRY | 2100F 1.8E | SPF |
| 19 - 16 | 2x4 | DRY | 2100F 1.8E | SPF |
| 16 - 13 | 2x4 | DRY | 2100F 1.8E | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 20 - 5 | 2x4 | DRY | No.2 | SPF |
| 18 - 7 | 2x4 | DRY | No.2 | SPF |
| 17 - 8 | 2x4 | DRY | No.2 | SPF |
| 15 - 9 | 2x4 | DRY | No.2 | SPF |
| 14 - 11 | 2x4 | DRY | No.2 | SPF |
| 14 - 12 | 2x4 | DRY | No.2 | SPF |
| 22 - 3 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 5.0 | 8.0 | 2.25 | 2.75 |
| 4 | TTWW+m | MT20 | 6.0 | 9.0 | 3.50 | 3.00 |
| 5 | TMWW+t | MT20 | 4.0 | 5.0 | 2.00 | 1.75 |
| 6 | TS-t | MT20 | 5.0 | 6.0 | | |
| 7 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 8 | TMWW-t | MT20 | 4.0 | 5.0 | | |
| 9 | TMWW-t | MT20 | 5.0 | 5.0 | 2.00 | 2.25 |
| 10 | TS-t | MT20 | 5.0 | 6.0 | | |
| 11 | TMWW+t | MT20 | 6.0 | 6.0 | 2.00 | 1.75 |
| 12 | TMVW-t | MT20 | 7.0 | 8.0 | 2.50 | 3.25 |
| 13 | BMV1-t | MT20 | 6.0 | 6.0 | Edge | 0.50 |
| 14 | BMWW+t | MT20 | 6.0 | 7.0 | 2.25 | 1.75 |
| 15 | BMWW-t | MT20 | 6.0 | 6.0 | 2.00 | 1.75 |
| 16 | BS-t | MT20 | 6.0 | 10.0 | | |
| 17 | BMWW-t | MT20 | 5.0 | 5.0 | 2.25 | 2.00 |
| 18 | BMWWW-t | MT20 | 4.0 | 9.0 | 1.75 | 3.50 |
| 19 | BS-t | MII16 | 3.0 | 15.0 | | |
| 20 | BMWW-t | MT20 | 6.0 | 6.0 | 2.00 | 1.75 |
| 21 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 2.50 |
| 22 | BMVW1+p | MT20 | 6.0 | 9.0 | Edge | 2.75 |

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

WB - INDICATES BLOCKING REQUIRED

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 13 | 4009 | 0 | 4551 | 0 | -851 | 5-8 | 5-8 |
| 22 | 4534 | 0 | 4534 | 359 | -948 | 5-8 | 4-15 |

PROVIDE ANCHORAGE AT BEARING JOINT 13 FOR 851 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 22 FOR 948 LBS FACTORED UPLIFT

PROVIDE FOR 359 LBS FACTORED HORIZONTAL REACTION AT JOINT 22

**UNFACTORED REACTIONS**

| 1ST LCASE JT | COMBINED | SNOW | MAX./MIN. COMPONENT REACTIONS LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 13 | 3041 | 2469 / 0 | 425 / 0 | 0 / 0 | 510 / -935 | 509 / 0 | 0 / 0 |
| 22 | 3396 | 2431 / 0 | 425 / 0 | 0 / 0 | 515 / -1025 | 541 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 22 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 256 / -178 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 13, 22

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 2.59 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 12-13. DBS = 8-0-0 . CBF = 224 LBS.

2x4 DRY SPF No.2 T-BRACE AT 4-20, 5-20, 5-18, 8-18, 9-17, 9-15, 11-15, 11-14, 12-14, 3-22

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.

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: (18)

| CHORDS MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) | | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| FR-TO | | FROM | TO | | | FR-TO | | |
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 3-21 | -95 / 1329 | 0.30 (3) |
| 2- 3 | -127 / 239 | -162.1 | -162.1 | 0.59 (2) | 6.25 | 21- 4 | -769 / 172 | 0.54 (10) |
| 3- 4 | -4607 / 1077 | -162.1 | -162.1 | 0.31 (1) | 3.80 | 4-20 | -644 / 3472 | 0.78 (3) |
| 4- 5 | -6364 / 1411 | -162.1 | -162.1 | 0.71 (3) | 2.91 | 20- 5 | -2484 / 540 | 0.57 (3) |
| 5- 6 | -7367 / 1554 | -162.1 | -162.1 | 0.80 (3) | 2.59 | 5-18 | -253 / 1508 | 0.34 (3) |
| 6- 7 | -7367 / 1554 | -162.1 | -162.1 | 0.80 (3) | 2.59 | 18- 7 | -1111 / 286 | 0.54 (10) |
| 7- 8 | -7367 / 1554 | -162.1 | -162.1 | 0.72 (3) | 2.73 | 18- 8 | -66 / 252 | 0.06 (1) |
| 8- 9 | -7278 / 1510 | -162.1 | -162.1 | 0.71 (3) | 2.75 | 17- 8 | -1286 / 355 | 0.63 (10) |
| 9-10 | -6028 / 1255 | -162.1 | -162.1 | 0.71 (3) | 2.94 | 17- 9 | -381 / 1868 | 0.42 (3) |
| 10-11 | -6028 / 1255 | -162.1 | -162.1 | 0.71 (3) | 2.94 | 15- 9 | -2490 / 568 | 0.58 (3) |
| 11-12 | -3700 / 807 | -162.1 | -162.1 | 0.55 (3) | 3.88 | 15-11 | -669 / 3478 | 0.78 (3) |
| 13-12 | -4502 / 880 | 0.0 | 0.0 | 0.57 (3) | 4.08 | 14-11 | -3912 / 840 | 0.91 (3) |
| 22- 2 | -1163 / 374 | 0.0 | 0.0 | 0.09 (2) | 7.81 | 14-12 | -1029 / 5476 | 0.88 (3) |
| | | | | | | 22- 3 | -4779 / 849 | 0.89 (1) |
| 22-21 | -755 / 3339 | -27.5 | -27.5 | 0.39 (4) | 6.25 | | | |
| 21-20 | -775 / 4024 | -27.5 | -27.5 | 0.45 (3) | 6.25 | | | |
| 20-19 | -1185 / 6358 | -27.5 | -27.5 | 0.54 (3) | 6.25 | | | |
| 19-18 | -1185 / 6358 | -27.5 | -27.5 | 0.54 (3) | 6.25 | | | |
| 18-17 | -1286 / 7278 | -27.5 | -27.5 | 0.60 (3) | 6.25 | | | |
| 17-16 | -1031 / 6028 | -27.5 | -27.5 | 0.51 (3) | 6.25 | | | |
| 16-15 | -1031 / 6028 | -27.5 | -27.5 | 0.51 (3) | 6.25 | | | |
| 15-14 | -583 / 3700 | -27.5 | -27.5 | 0.36 (3) | 6.25 | | | |
| 14-13 | -44 / 112 | -27.5 | -27.5 | 0.16 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.44")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 948 (0.54")

CSI: TC=0.80/1.00 (5-7:3) , BC=0.60/1.00 (17-18:3) , WB=0.91/1.00 (11-14:3) , SSI=0.41/1.00 (11-12:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |
| MII16 | 473 | 276 | 2341 | 1245 | 4454 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (3) (INPUT = 0.90 )
JSI METAL= 0.99 (16) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | A10-GT | 2 | 2 | Communal Building Fire Reconstruction | | P5836401 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:23 2019 Page 1

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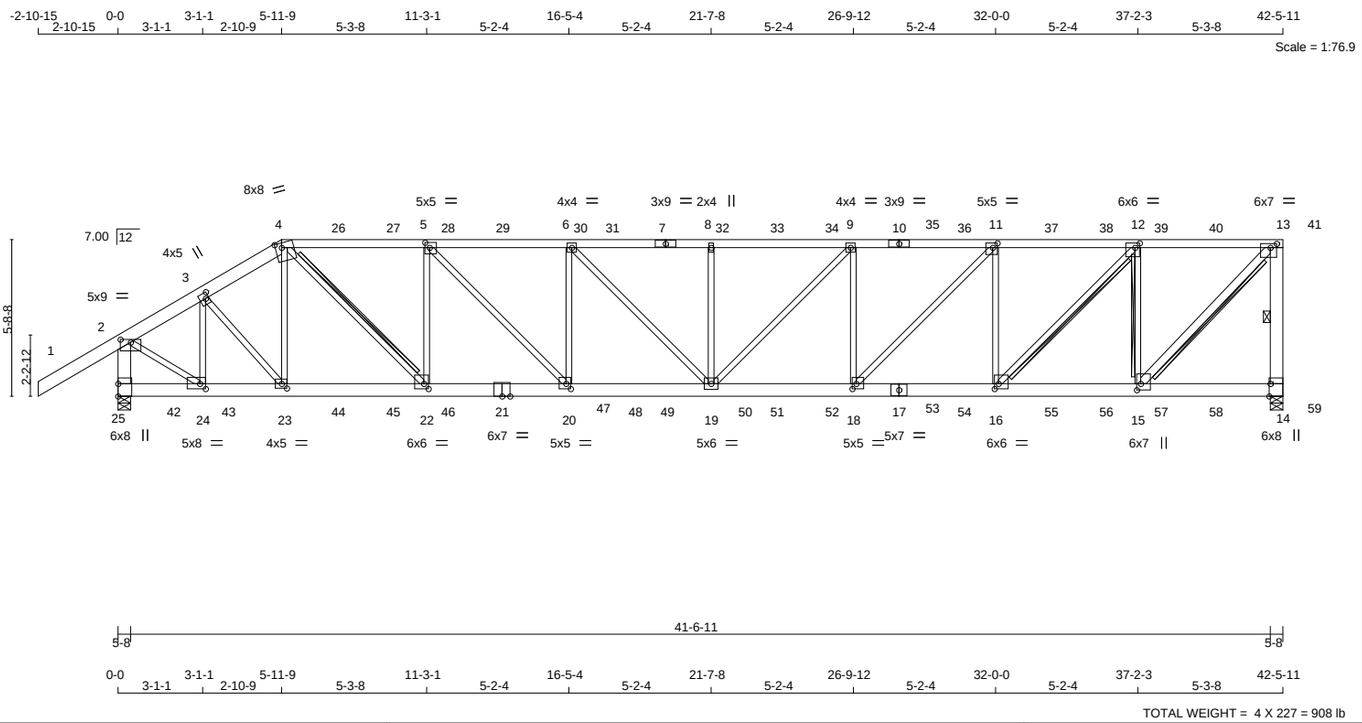


TOTAL WEIGHT = 4 X 227 = 908 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 4 - 7 | 2x4 | DRY | 2100F 1.8E | SPF |
| 7 - 10 | 2x4 | DRY | 2100F 1.8E | SPF |
| 10 - 13 | 2x4 | DRY | 2100F 1.8E | SPF |
| 14 - 13 | 2x6 | DRY | No.2 | SPF |
| 25 - 2 | 2x6 | DRY | No.2 | SPF |
| 25 - 21 | 2x6 | DRY | No.2 | SPF |
| 21 - 17 | 2x6 | DRY | 2100F 1.8E | SPF |
| 17 - 14 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 15 - 13 | 2x4 | DRY | No.2 | SPF |

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 | | | |
| 1- 4 | 2 | 12 | SIDE(140.3) |
| 13- 14 | 2 | 12 | SIDE(7.5) |
| 25- 2 | 2 | 12 | TOP |
| 4- 7 | 1 | 12 | SIDE(75.8) |
| 7- 10 | 1 | 12 | SIDE(0.0) |
| 10- 13 | 1 | 12 | SIDE(75.8) |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 25- 21 | 2 | 12 | SIDE(210.5) |
| 21- 17 | 2 | 12 | SIDE(0.0) |
| 17- 14 | 2 | 12 | SIDE(210.5) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 11- 16 | 1 | 6 | SIDE(6.7) |
| 2x4 | 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 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 TRANSFERING. 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 |
|---|---|---|---|---|---|---|
| 2 | TMVW-p | MT20 | 5.0 | 9.0 | 1.25 | 4.50 |
| 3 | TMWW+t | MT20 | 4.0 | 5.0 | 2.50 | 1.50 |
| 4 | TTWW-m | MT20 | 8.0 | 8.0 | 2.00 | 2.75 |

PEO
Certificate No. 10889485

LICENSED PROFESSIONAL ENGINEER
P. OJO-OLAJIRE
100227197
PROVINCE OF ONTARIO

July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 14 | 7568 | 0 | 8080 | 0 | -3049 | 5-8 | 5-8 |
| 25 | 8100 | 0 | 8323 | 308 | -2971 | 5-8 | 5-8 |

PROVIDE ANCHORAGE AT BEARING JOINT 14 FOR 3049 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 25 FOR 2971 LBS FACTORED UPLIFT

PROVIDE FOR 308 LBS FACTORED HORIZONTAL REACTION AT JOINT 25

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 14 | 5772 | 4163 / 0 | 853 / 0 | 0 / 0 | 1633 / -2786 | 946 / 0 | 0 / 0 |
| 25 | 6109 | 4323 / 0 | 823 / 0 | 0 / 0 | 1585 / -2742 | 964 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 25 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 220 / -155 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 14, 25

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 2.71 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 5.37 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 13-14. DBS = 4-0-0 . CBF = 188 LBS.

2x4 DRY SPF No.2 T-BRACE AT 4-22, 12-16, 12-15, 13-15

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.

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.34 (2) | 10.00 |
| 2- 3 | -7299 / 2795 | -162.1 | -162.1 | 0.38 (2) | 4.16 |
| 3- 4 | -8835 / 3472 | -162.1 | -162.1 | 0.23 (13) | 4.02 |
| 4-26 | -12316 / 4780 | -162.1 | -162.1 | 0.66 (3) | 3.11 |
| 26-27 | -12316 / 4780 | -162.1 | -162.1 | 0.66 (3) | 3.11 |
| 27- 5 | -12316 / 4780 | -162.1 | -162.1 | 0.66 (3) | 3.11 |
| 5-28 | -15012 / 5777 | -162.1 | -162.1 | 0.80 (3) | 2.72 |
| 28-29 | -15012 / 5777 | -162.1 | -162.1 | 0.80 (3) | 2.72 |
| 29-30 | -15012 / 5777 | -162.1 | -162.1 | 0.80 (3) | 2.72 |
| 30- 6 | -15012 / 5777 | -162.1 | -162.1 | 0.80 (3) | 2.72 |
| 6-31 | -15832 / 6070 | -162.1 | -162.1 | 0.74 (3) | 2.74 |
| 31- 7 | -15832 / 6070 | -162.1 | -162.1 | 0.74 (3) | 2.74 |
| 7- 8 | -15832 / 6070 | -162.1 | -162.1 | 0.74 (3) | 2.74 |
| 8-32 | -15832 / 6070 | -162.1 | -162.1 | 0.77 (3) | 2.71 |
| 32-33 | -15832 / 6070 | -162.1 | -162.1 | 0.77 (3) | 2.71 |
| 33-34 | -15832 / 6070 | -162.1 | -162.1 | 0.77 (3) | 2.71 |
| 34- 9 | -15832 / 6070 | -162.1 | -162.1 | 0.77 (3) | 2.71 |
| 9-35 | -14817 / 5677 | -162.1 | -162.1 | 0.71 (3) | 2.84 |
| 35-10 | -14817 / 5677 | -162.1 | -162.1 | 0.71 (3) | 2.84 |
| 10-36 | -14817 / 5677 | -162.1 | -162.1 | 0.71 (3) | 2.84 |
| 36-11 | -14817 / 5677 | -162.1 | -162.1 | 0.71 (3) | 2.84 |
| 11-37 | -11849 / 4553 | -162.1 | -162.1 | 0.66 (3) | 3.14 |
| 37-38 | -11849 / 4553 | -162.1 | -162.1 | 0.66 (3) | 3.14 |
| 38-12 | -11849 / 4553 | -162.1 | -162.1 | 0.66 (3) | 3.14 |
| 12-39 | -7104 / 2764 | -162.1 | -162.1 | 0.48 (3) | 4.11 |
| 39-40 | -7104 / 2764 | -162.1 | -162.1 | 0.48 (3) | 4.11 |
| 40-41 | -7104 / 2764 | -162.1 | -162.1 | 0.48 (3) | 4.11 |
| 41-13 | -7104 / 2764 | -162.1 | -162.1 | 0.48 (3) | 4.11 |
| 14-13 | -7768 / 2878 | 0.0 | 0.0 | 0.40 (3) | 4.37 |
| 25- 2 | -8125 / 2914 | 0.0 | 0.0 | 0.31 (1) | 5.35 |
| 25-42 | -277 / 202 | -27.5 | -27.5 | 0.13 (1) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 24- 3 | -2738 / 1052 | 0.31 (1) |
| 3-23 | -814 / 2270 | 0.28 (3) |
| 23- 4 | -1058 / 309 | 0.24 (3) |
| 4-22 | -2493 / 6699 | 0.81 (3) |
| 22- 5 | -4126 / 1432 | 0.95 (3) |
| 5-20 | -1447 / 3865 | 0.76 (14) |
| 20- 6 | -2126 / 702 | 0.49 (3) |
| 6-19 | -438 / 1176 | 0.23 (14) |
| 19- 8 | -1317 / 396 | 0.30 (10) |
| 19- 9 | -564 / 1456 | 0.30 (13) |
| 18- 9 | -2384 / 808 | 0.54 (3) |
| 18-11 | -1612 / 4258 | 0.85 (13) |
| 16-11 | -4311 / 1534 | 0.99 (3) |
| 16-12 | -2566 / 6806 | 0.82 (3) |
| 15-12 | -6407 / 2299 | 0.89 (3) |
| 15-13 | -3791 / 10085 | 0.87 (3) |
| 2-24 | -2535 / 7051 | 0.85 (1) |

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.42")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.49")
ALLOWABLE DEFL.(TL)= L/180 (2.83")
CALCULATED VERT. DEFL.(TL) = L/ 852 (0.60")

CSI: TC=0.80/1.00 (5-6:3) , BC=0.89/1.00 (20-22:3) , WB=0.99/1.00 (11-16:3) , SSI=0.34/1.00 (12-13:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (22) (INPUT = 0.90 )
JSI METAL= 0.98 (17) (INPUT = 1.00 )

CONTINUED ON PAGE 2



MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 5 | TMWW-t | MT20 | 5.0 | 5.0 | 2.25 | 2.00 |
| 6 | TMWW-t | MT20 | 4.0 | 4.0 | | |
| 7 | TS-t | MT20 | 3.0 | 9.0 | | |
| 8 | TMW+w | MT20 | 2.0 | 4.0 | | |
| 9 | TMWW-t | MT20 | 4.0 | 4.0 | | |
| 10 | TS-t | MT20 | 3.0 | 9.0 | | |
| 11 | TMWW-t | MT20 | 5.0 | 5.0 | 2.00 | 2.00 |
| 12 | TMWW-t | MT20 | 6.0 | 6.0 | 2.00 | 2.00 |
| 13 | TMVW-t | MT20 | 6.0 | 7.0 | 1.75 | 2.75 |
| 14 | BMV1+t | MT20 | 6.0 | 8.0 | Edge | 0.50 |
| 15 | BMWW+t | MT20 | 6.0 | 7.0 | 2.75 | 1.75 |
| 16 | BMWW-t | MT20 | 6.0 | 6.0 | 2.25 | 1.75 |
| 17 | BS-t | MT20 | 5.0 | 7.0 | | |
| 18 | BMWW-t | MT20 | 5.0 | 5.0 | 2.25 | 1.75 |
| 19 | BMWWW-t | MT20 | 5.0 | 6.0 | | |
| 20 | BMWW-t | MT20 | 5.0 | 5.0 | 2.25 | 2.00 |
| 21 | BS-t | MT20 | 6.0 | 7.0 | | |
| 22 | BMWW-t | MT20 | 6.0 | 6.0 | 2.25 | 2.00 |
| 23 | BMWW-t | MT20 | 4.0 | 5.0 | 2.00 | 2.25 |
| 24 | BMWW-t | MT20 | 5.0 | 8.0 | 2.25 | 2.50 |
| 25 | BMV1+t | MT20 | 6.0 | 8.0 | 5.50 | |

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | FACTORED (PLF) TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 42-24 | -277 / 202 | -27.5 | -27.5 | 0.13 (1) | 6.25 | | | |
| 24-43 | -2349 / 6195 | -27.5 | -27.5 | 0.49 (1) | 6.25 | | | |
| 43-23 | -2349 / 6195 | -27.5 | -27.5 | 0.49 (1) | 6.25 | | | |
| 23-44 | -2842 / 7570 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 44-45 | -2842 / 7570 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 45-22 | -2842 / 7570 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 22-46 | -4594 / 12314 | -27.5 | -27.5 | 0.89 (3) | 5.37 | | | |
| 46-21 | -4594 / 12314 | -27.5 | -27.5 | 0.89 (3) | 5.37 | | | |
| 21-47 | -4594 / 12314 | -27.5 | -27.5 | 0.89 (3) | 5.37 | | | |
| 47-20 | -4594 / 12314 | -27.5 | -27.5 | 0.89 (3) | 5.37 | | | |
| 20-48 | -5589 / 15009 | -27.5 | -27.5 | 0.46 (3) | 5.96 | | | |
| 48-49 | -5589 / 15009 | -27.5 | -27.5 | 0.46 (3) | 5.96 | | | |
| 49-19 | -5589 / 15009 | -27.5 | -27.5 | 0.46 (3) | 5.96 | | | |
| 19-50 | -5488 / 14814 | -27.5 | -27.5 | 0.46 (3) | 6.00 | | | |
| 50-51 | -5488 / 14814 | -27.5 | -27.5 | 0.46 (3) | 6.00 | | | |
| 51-52 | -5488 / 14814 | -27.5 | -27.5 | 0.46 (3) | 6.00 | | | |
| 52-18 | -5488 / 14814 | -27.5 | -27.5 | 0.46 (3) | 6.00 | | | |
| 18-53 | -4364 / 11845 | -27.5 | -27.5 | 0.86 (3) | 5.48 | | | |
| 53-17 | -4364 / 11845 | -27.5 | -27.5 | 0.86 (3) | 5.48 | | | |
| 17-54 | -4364 / 11845 | -27.5 | -27.5 | 0.86 (3) | 5.48 | | | |
| 54-16 | -4364 / 11845 | -27.5 | -27.5 | 0.86 (3) | 5.48 | | | |
| 16-55 | -2576 / 7100 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 55-56 | -2576 / 7100 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 56-15 | -2576 / 7100 | -27.5 | -27.5 | 0.58 (3) | 6.25 | | | |
| 15-57 | -37 / 94 | -27.5 | -27.5 | 0.14 (2) | 6.25 | | | |
| 57-58 | -37 / 94 | -27.5 | -27.5 | 0.14 (2) | 6.25 | | | |
| 58-59 | -37 / 94 | -27.5 | -27.5 | 0.14 (2) | 6.25 | | | |
| 59-14 | -37 / 94 | -27.5 | -27.5 | 0.14 (2) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 5-11-9 | -135 | -216 | 104 | BACK | VERT | TOTAL | --- | C1 |
| 7 | 20-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 11 | 32-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 16 | 32-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 21 | 14-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 23 | 6-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 26 | 8-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 27 | 10-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 28 | 12-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 29 | 14-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 30 | 16-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 31 | 18-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 32 | 22-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 33 | 24-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 34 | 26-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 35 | 28-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 36 | 30-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 37 | 34-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 38 | 36-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 39 | 38-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 40 | 40-0-5 | -129 | -295 | 108 | BACK | VERT | TOTAL | --- | C1 |
| 41 | 41-11-7 | -168 | -298 | 106 | BACK | VERT | TOTAL | --- | C1 |
| 42 | 2-0-5 | -564 | -595 | 235 | BACK | VERT | TOTAL | --- | C1 |
| 43 | 4-0-5 | -413 | -435 | 147 | BACK | VERT | TOTAL | --- | C1 |
| 44 | 8-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 45 | 10-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 46 | 12-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 47 | 16-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 48 | 18-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 49 | 20-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 50 | 22-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 51 | 24-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 52 | 26-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 53 | 28-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 54 | 30-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 55 | 34-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 56 | 36-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 57 | 38-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 58 | 40-0-5 | -192 | -207 | 153 | BACK | VERT | TOTAL | --- | C1 |
| 59 | 41-11-7 | -199 | -211 | 150 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING
AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

PEO
Certificate No. 10889485


July 3,2019

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B01 | 1 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836402 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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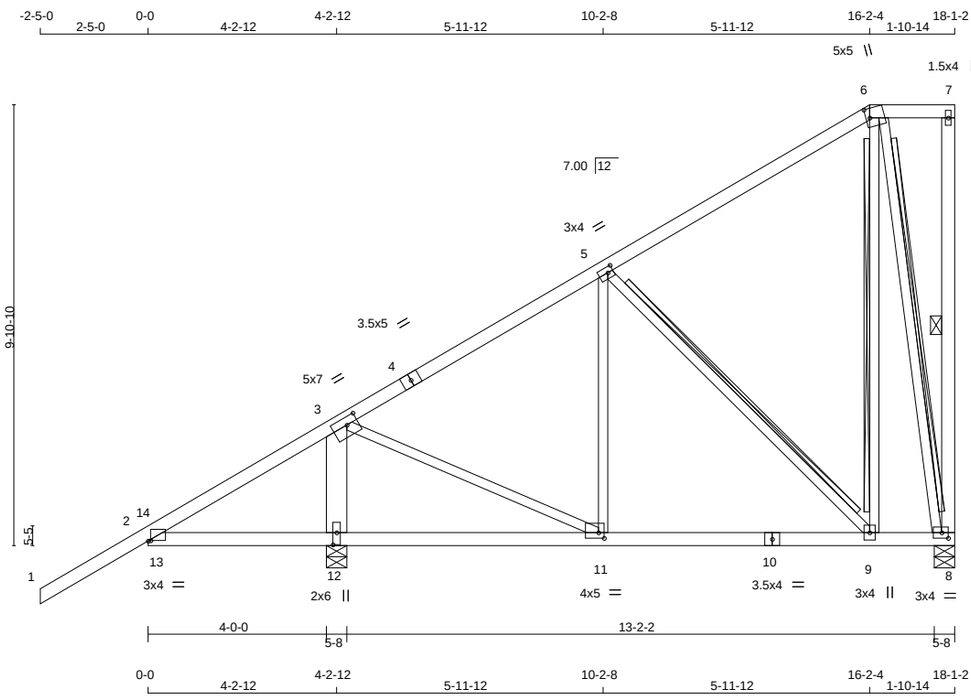


Scale = 1:47.3

TOTAL WEIGHT = 94 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 7 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 12 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-I | MT20 | 3.0 | 4.0 | 0.25 | 0.75 |
| 3 | TMWW-t | MT20 | 5.0 | 7.0 | 2.00 | 3.00 |
| 4 | TS-t | MT20 | 3.5 | 5.0 | | |
| 5 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.50 |
| 6 | TTWW+m | MT20 | 5.0 | 5.0 | 2.50 | 1.00 |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.0 | 4.0 | 1.50 | 1.75 |
| 9 | BMWW+t | MT20 | 3.0 | 4.0 | | |
| 10 | BS-t | MT20 | 3.5 | 4.0 | | |
| 11 | BMWW-t | MT20 | 4.0 | 5.0 | 1.50 | 1.50 |
| 12 | BMW1+w | MT20 | 2.0 | 6.0 | 3.25 | 1.00 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 8 | 1069 | 0 | 1100 | 0 | -276 | 5-8 | 1-8 |
| 12 | 2765 | 0 | 3210 | 517 | -735 | 5-8 | 4-11 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 276 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 12 FOR 735 LBS FACTORED UPLIFT

PROVIDE FOR 517 LBS FACTORED HORIZONTAL REACTION AT JOINT 12

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 8 | 820 | 551 / -169 | 126 / -13 | 0 / 0 | 236 / -289 | 143 / 0 | 0 / 0 |
| 12 | 2054 | 1798 / 0 | 236 / 0 | 0 / 0 | 69 / -728 | 316 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 12 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 369 / -221 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 12

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 5.87 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 4.94 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 24 LBS.
2x3 DRY SPF No.2 T-BRACE AT 5-9
2x4 DRY SPF No.2 T-BRACE AT 6-9, 6-8

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.

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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 |
| 2-14 | -542 / 2174 | -162.1 | -162.1 | 0.38 (19) | 6.25 |
| 14- 3 | -446 / 1647 | -162.1 | -162.1 | 0.90 (2) | 6.25 |
| 3- 4 | -682 / 319 | -162.1 | -162.1 | 0.70 (2) | 5.87 |
| 4- 5 | -682 / 319 | -162.1 | -162.1 | 0.70 (2) | 5.87 |
| 5- 6 | -318 / 149 | -162.1 | -162.1 | 0.66 (2) | 6.25 |
| 6- 7 | -66 / 169 | -162.1 | -162.1 | 0.12 (3) | 6.25 |
| 8- 7 | -193 / 49 | 0.0 | 0.0 | 0.49 (13) | 6.25 |
| 2-13 | -1402 / 512 | -27.5 | -27.5 | 0.40 (19) | 4.94 |
| 13-12 | -1402 / 512 | -27.5 | -27.5 | 0.42 (19) | 4.94 |
| 12-11 | -1402 / 306 | -27.5 | -27.5 | 0.28 (2) | 5.22 |
| 11-10 | -293 / 587 | -27.5 | -27.5 | 0.26 (17) | 6.25 |
| 10- 9 | -293 / 587 | -27.5 | -27.5 | 0.26 (17) | 6.25 |
| 9- 8 | -104 / 204 | -27.5 | -27.5 | 0.15 (17) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 12- 3 | -2963 / 666 | 0.24 (2) |
| 3-11 | -281 / 2055 | 0.46 (2) |
| 11- 5 | -707 / 209 | 0.46 (9) |
| 5- 9 | -583 / 379 | 0.74 (2) |
| 9- 6 | -186 / 543 | 0.14 (19) |
| 6- 8 | -950 / 226 | 0.72 (1) |
| 13-14 | -1205 / 176 | 0.00 (1) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.46")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.05")
ALLOWABLE DEFL.(TL)= L/180 (0.92")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 588 ( 0.09")
ALLOWABLE DEFL.(TL)= L/120 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 530 ( 0.10")

CSI: TC=0.90/1.00 (3-14:2) , BC=0.42/1.00 (12-13:19) , WB=0.74/1.00 (5-9:2) , SSI=0.90/1.00 (2-13:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (4) (INPUT = 0.90 )
JSI METAL= 0.58 (3) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B02 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836403 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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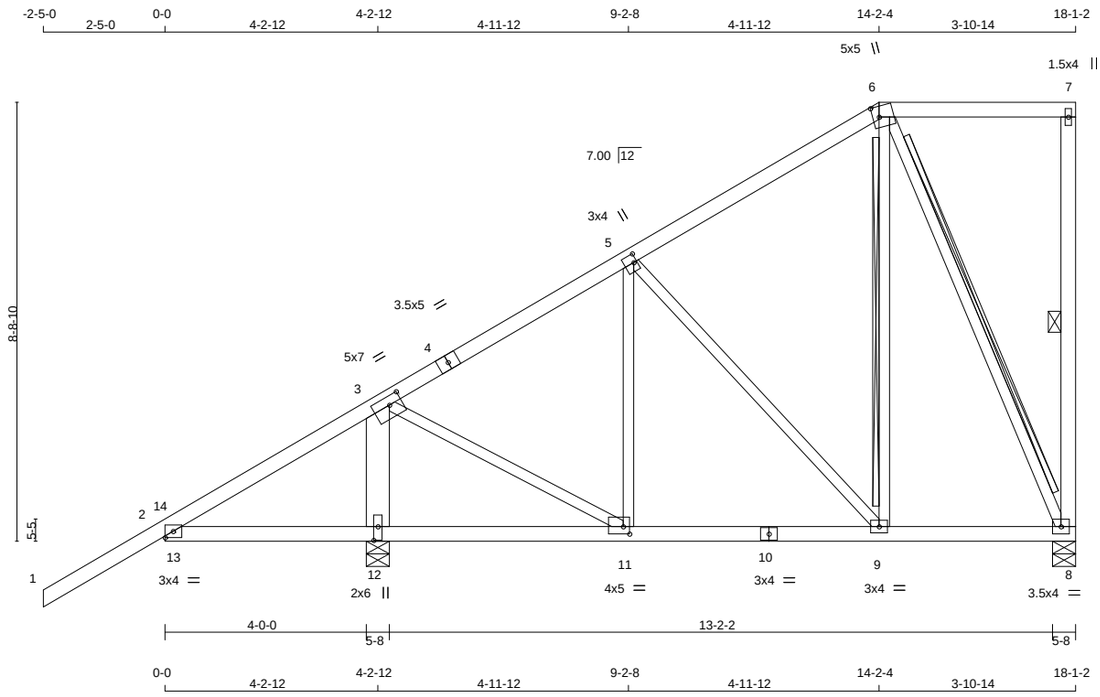


TOTAL WEIGHT = 2 X 89 = 178 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 7 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 12 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-I | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TMWW-t | MT20 | 5.0 | 7.0 | 2.00 | 3.00 |
| 4 | TS-t | MT20 | 3.5 | 5.0 | | |
| 5 | TMWW+t | MT20 | 3.0 | 4.0 | 2.00 | 0.75 |
| 6 | TTWW+m | MT20 | 5.0 | 5.0 | 2.50 | 1.50 |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.5 | 4.0 | | |
| 9 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 10 | BS-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 1.50 |
| 12 | BMW1+w | MT20 | 2.0 | 6.0 | 3.25 | 1.00 |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 8 | 1069 | 0 | 1094 | 0 | -256 | 5-8 | 1-8 |
| 12 | 2765 | 0 | 3134 | 458 | -755 | 5-8 | 4-7 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 256 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 12 FOR 755 LBS FACTORED UPLIFT

PROVIDE FOR 458 LBS FACTORED HORIZONTAL REACTION AT JOINT 12

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 8 | 820 | 551 / -169 | 126 / -13 | 0 / 0 | 219 / -275 | 143 / 0 | 0 / 0 |
| 12 | 2054 | 1748 / 0 | 236 / 0 | 0 / 0 | 85 / -742 | 316 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 12 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 327 / -195 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 12

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 4.95 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 47 LBS.
2x3 DRY SPF No.2 T-BRACE AT 6-9
2x4 DRY SPF No.2 T-BRACE AT 6-8

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.

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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 |
| 2-14 | -575 / 2168 | -162.1 | -162.1 | 0.38 (19) | 6.25 |
| 14- 3 | -446 / 1645 | -162.1 | -162.1 | 0.81 (2) | 6.25 |
| 3- 4 | -523 / 422 | -162.1 | -162.1 | 0.68 (2) | 6.25 |
| 4- 5 | -523 / 422 | -162.1 | -162.1 | 0.68 (2) | 6.25 |
| 5- 6 | -448 / 179 | -162.1 | -162.1 | 0.68 (2) | 6.25 |
| 6- 7 | -58 / 148 | -162.1 | -162.1 | 0.50 (3) | 6.25 |
| 8- 7 | -396 / 102 | 0.0 | 0.0 | 0.39 (13) | 6.25 |
| 2-13 | -1399 / 515 | -27.5 | -27.5 | 0.40 (19) | 4.95 |
| 13-12 | -1399 / 515 | -27.5 | -27.5 | 0.42 (19) | 4.95 |
| 12-11 | -1399 / 266 | -27.5 | -27.5 | 0.27 (2) | 5.22 |
| 11-10 | -386 / 484 | -27.5 | -27.5 | 0.17 (5) | 6.25 |
| 10- 9 | -386 / 484 | -27.5 | -27.5 | 0.17 (5) | 6.25 |
| 9- 8 | -132 / 338 | -27.5 | -27.5 | 0.16 (4) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 12- 3 | -2885 / 669 | 0.23 (2) |
| 3-11 | -306 / 1970 | 0.44 (2) |
| 11- 5 | -823 / 230 | 0.42 (2) |
| 5- 9 | -238 / 456 | 0.27 (2) |
| 9- 6 | -262 / 347 | 0.32 (19) |
| 6- 8 | -809 / 191 | 0.52 (1) |
| 13-14 | -1200 / 224 | 0.00 (1) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.46")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/180 (0.92")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 614 ( 0.08")
ALLOWABLE DEFL.(TL)= L/120 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 544 ( 0.09")

CSI: TC=0.83/1.00 (1-2:2) , BC=0.42/1.00 (12-13:19) , WB=0.52/1.00 (6-8:1) , SSI=0.90/1.00 (2-13:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (2) (INPUT = 0.90 )
JSI METAL= 0.54 (3) (INPUT = 1.00 )




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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B03 | 2 | 1 | Communal Building Fire Reconstruction | | P5836404 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:25 2019 Page 1

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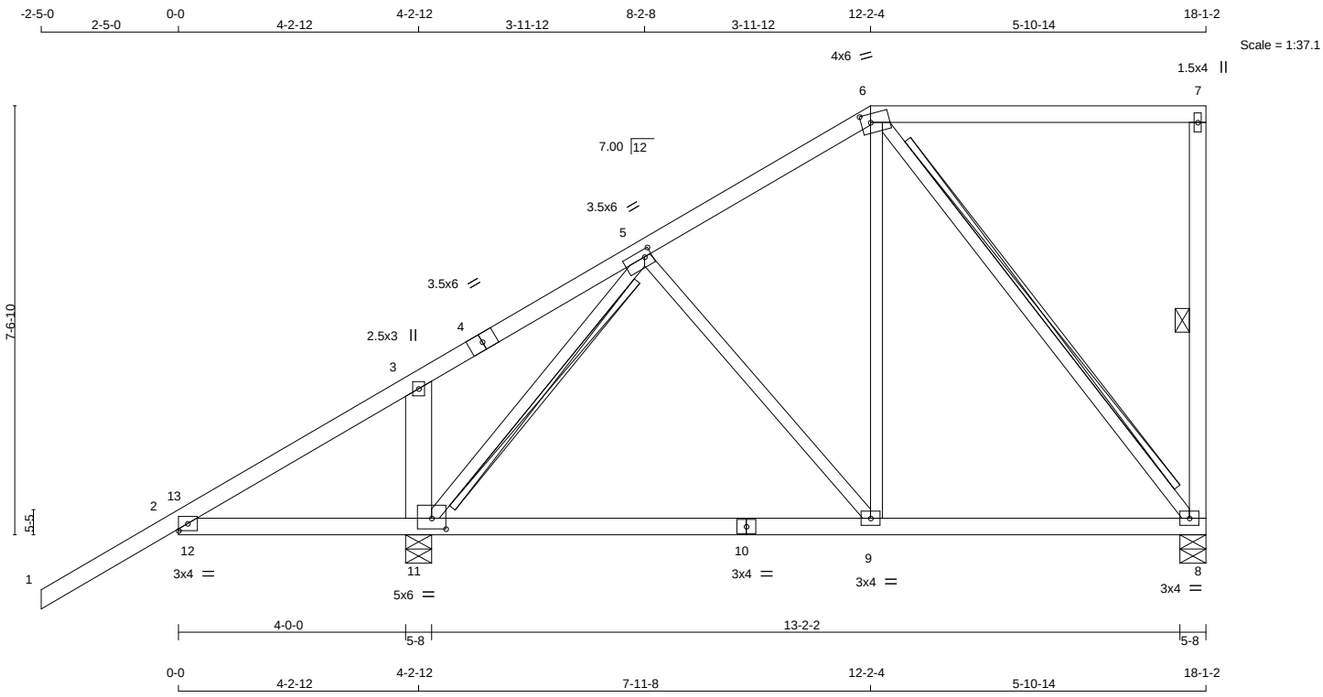


TOTAL WEIGHT = 2 X 82 = 164 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 7 | 2x4 | DRY | 2100F 1.8E | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 11 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-l | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TMW+w | MT20 | 2.5 | 3.0 | | |
| 4 | TS-t | MT20 | 3.5 | 6.0 | | |
| 5 | TMWW-t | MT20 | 3.5 | 6.0 | 1.50 | 1.50 |
| 6 | TTWW-m | MT20 | 4.0 | 6.0 | 1.75 | 2.00 |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 10 | BS-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWW1-t | MT20 | 5.0 | 6.0 | 2.25 | 3.00 |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 8 | 1069 | 0 | 1101 | 0 | -239 | 5-8 | 1-8 |
| 11 | 2765 | 0 | 3007 | 399 | -772 | 5-8 | 3-4 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 239 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 772 LBS FACTORED UPLIFT

PROVIDE FOR 399 LBS FACTORED HORIZONTAL REACTION AT JOINT 11

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 8 | 820 | 560 / -169 | 126 / -13 | 0 / 0 | 205 / -263 | 143 / 0 | 0 / 0 |
| 11 | 2054 | 1662 / 0 | 236 / 0 | 0 / 0 | 100 / -755 | 316 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 11 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 285 / -170 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 11

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 5.03 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 71 LBS.

2x4 DRY SPF No.2 T-BRACE AT 5-11, 6-8

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.

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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH |
|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 |
| 2-13 | -560 / 2092 | -162.1 | -162.1 | 0.35 (19) | 6.25 |
| 13- 3 | -469 / 1625 | -162.1 | -162.1 | 0.75 (2) | 6.25 |
| 3- 4 | -286 / 1575 | -162.1 | -162.1 | 0.75 (2) | 6.25 |
| 4- 5 | -286 / 1575 | -162.1 | -162.1 | 0.75 (2) | 6.25 |
| 5- 6 | -533 / 186 | -162.1 | -162.1 | 0.39 (2) | 6.25 |
| 6- 7 | -50 / 128 | -162.1 | -162.1 | 0.76 (3) | 6.25 |
| 8- 7 | -598 / 154 | 0.0 | 0.0 | 0.30 (13) | 6.25 |
| 2-12 | -1377 / 533 | -27.5 | -27.5 | 0.37 (19) | 5.03 |
| 12-11 | -1377 / 533 | -27.5 | -27.5 | 0.39 (19) | 5.03 |
| 11-10 | -506 / 347 | -27.5 | -27.5 | 0.36 (17) | 6.25 |
| 10- 9 | -506 / 347 | -27.5 | -27.5 | 0.36 (17) | 6.25 |
| 9- 8 | -160 / 439 | -27.5 | -27.5 | 0.38 (17) | 6.25 |

| WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|
| 11- 3 | -871 / 343 | 0.07 (2) |
| 11- 5 | -2377 / 496 | 0.71 (2) |
| 5- 9 | -21 / 549 | 0.12 (19) |
| 9- 6 | -343 / 319 | 0.36 (19) |
| 6- 8 | -698 / 253 | 0.45 (1) |
| 12-13 | -1113 / 174 | 0.00 (1) |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.46")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.08")
ALLOWABLE DEFL.(TL)= L/180 (0.92")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.13")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 592 ( 0.09")
ALLOWABLE DEFL.(TL)= L/120 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 541 ( 0.09")

CSI: TC=0.83/1.00 (1-2:2) , BC=0.39/1.00 (11-12:19) , WB=0.71/1.00 (5-11:2) , SSI=0.84/1.00 (2-12:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (9) (INPUT = 0.90 )
JSI METAL= 0.58 (4) (INPUT = 1.00 )




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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B04 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836405 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:26 2019 Page 1

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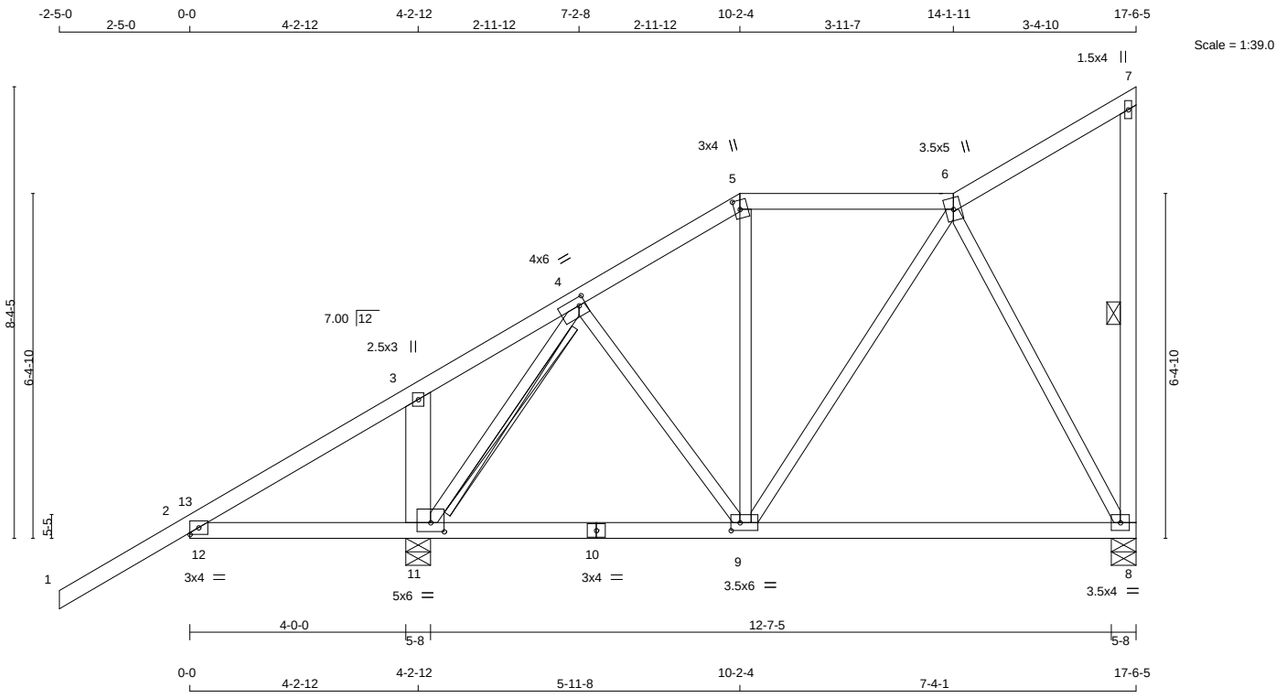


TOTAL WEIGHT = 2 X 83 = 166 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 6 | 2x4 | DRY | No.2 | SPF |
| 6 - 7 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 11 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-l | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TMW+w | MT20 | 2.5 | 3.0 | | |
| 4 | TMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 5 | TTW+m | MT20 | 3.0 | 4.0 | 2.00 | 1.25 |
| 6 | TTWW+m | MT20 | 3.5 | 5.0 | | |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.5 | 4.0 | | |
| 9 | BMWWW-t | MT20 | 3.5 | 6.0 | 1.75 | 2.00 |
| 10 | BS-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWW1-t | MT20 | 5.0 | 6.0 | 2.00 | 3.00 |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 8 | 1005 | 0 | 1166 | 0 | -238 | 5-8 | 1-8 |
| 11 | 2722 | 0 | 3184 | 467 | -751 | 5-8 | 3-7 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 238 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 751 LBS FACTORED UPLIFT

PROVIDE FOR 467 LBS FACTORED HORIZONTAL REACTION AT JOINT 11

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 8 | 772 | 625 / -176 | 120 / -13 | 0 / 0 | 214 / -257 | 136 / 0 | 0 / 0 |
| 11 | 2020 | 1787 / 0 | 231 / 0 | 0 / 0 | 77 / -735 | 310 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 11 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -201 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 11

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 5.07 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 41 LBS.
2x3 DRY SPF No.2 T-BRACE AT 4-11

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.

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: (19)

| CHORDS | | | | | | WEBS | | | |
|---|---|---|---|---|---|---|---|---|---|
| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) | |
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 | 11- 3 | -826 / 318 | 0.07 (2) | |
| 2-13 | -586 / 2056 | -162.1 | -162.1 | 0.33 (19) | 6.25 | 11- 4 | -2567 / 430 | 0.95 (2) | |
| 13- 3 | -454 / 1626 | -162.1 | -162.1 | 0.73 (2) | 6.25 | 4- 9 | -13 / 652 | 0.15 (19) | |
| 3- 4 | -286 / 1554 | -162.1 | -162.1 | 0.72 (2) | 6.25 | 9- 5 | -364 / 118 | 0.24 (2) | |
| 4- 5 | -559 / 325 | -162.1 | -162.1 | 0.22 (2) | 6.25 | 9- 6 | -291 / 211 | 0.29 (19) | |
| 5- 6 | -458 / 274 | -162.1 | -162.1 | 0.52 (2) | 6.25 | 6- 8 | -864 / 265 | 0.76 (2) | |
| 6- 7 | -119 / 162 | -162.1 | -162.1 | 0.38 (2) | 6.25 | 12-13 | -1059 / 231 | 0.00 (1) | |
| 8- 7 | -327 / 108 | 0.0 | 0.0 | 0.34 (13) | 6.25 | | | | |
| 2-12 | -1374 / 523 | -27.5 | -27.5 | 0.36 (19) | 5.07 | | | | |
| 12-11 | -1374 / 523 | -27.5 | -27.5 | 0.37 (19) | 5.07 | | | | |
| 11-10 | -649 / 284 | -27.5 | -27.5 | 0.36 (6) | 6.25 | | | | |
| 10- 9 | -649 / 284 | -27.5 | -27.5 | 0.36 (6) | 6.25 | | | | |
| 9- 8 | -137 / 420 | -27.5 | -27.5 | 0.36 (6) | 6.25 | | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.44")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/180 (0.89")
CALCULATED VERT. DEFL.(TL) = L/ 952 (0.17")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 653 ( 0.08")
ALLOWABLE DEFL.(TL)= L/120 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 567 ( 0.09")

CSI: TC=0.83/1.00 (1-2:2) , BC=0.37/1.00 (11-12:19) , WB=0.95/1.00 (4-11:2) , SSI=0.80/1.00 (2-12:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (2) (INPUT = 0.90 )
JSI METAL= 0.59 (4) (INPUT = 1.00 )




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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | B05 | 2 | 1 | Communal Building Fire Reconstruction | P5836406 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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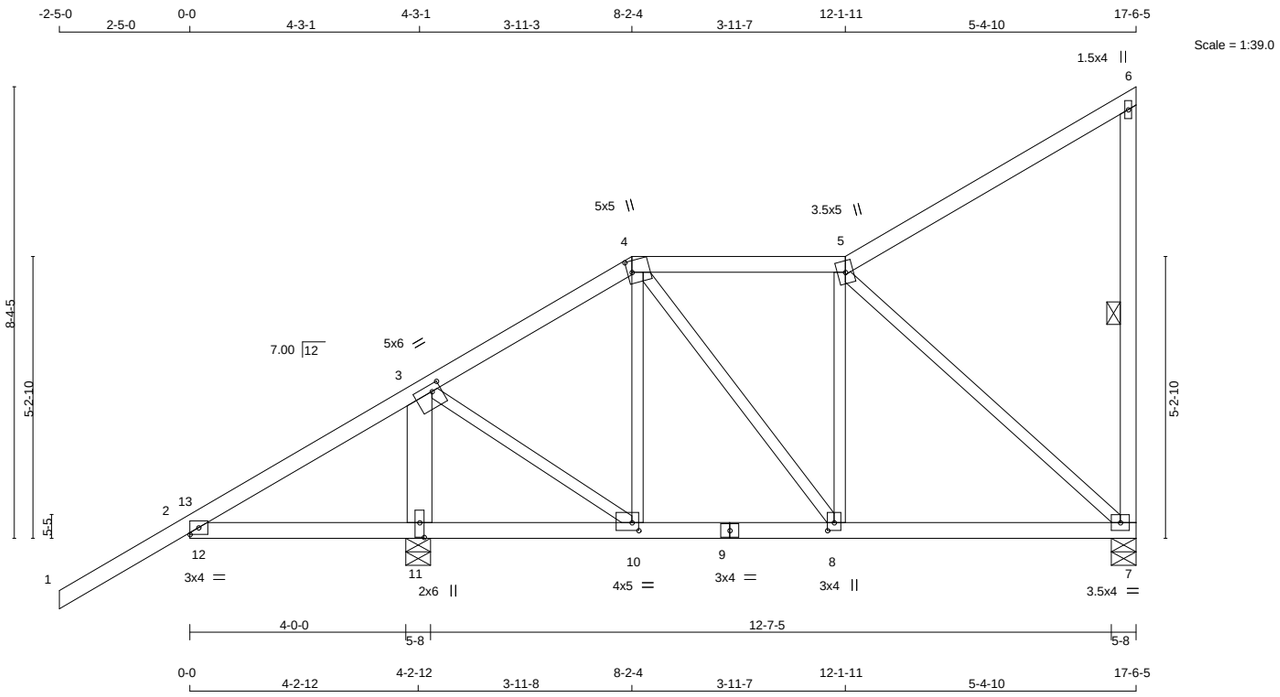


TOTAL WEIGHT = 2 X 81 = 161 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 6 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x4 | DRY | No.2 | SPF |
| 2 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 11 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-l | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TMWW-t | MT20 | 5.0 | 6.0 | 1.50 | 2.00 |
| 4 | TTWW+m | MT20 | 5.0 | 5.0 | 2.50 | 1.00 |
| 5 | TTWW+m | MT20 | 3.5 | 5.0 | | |
| 6 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 7 | BMVW1-t | MT20 | 3.5 | 4.0 | | |
| 8 | BMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 1.50 |
| 9 | BS-t | MT20 | 3.0 | 4.0 | | |
| 10 | BMWW-t | MT20 | 4.0 | 5.0 | 1.75 | 1.50 |
| 11 | BMW1+w | MT20 | 2.0 | 6.0 | 3.25 | 1.00 |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 7 | 999 | 0 | 1160 | 0 | -237 | 5-8 | 1-8 |
| 11 | 2727 | 0 | 3190 | 467 | -753 | 5-8 | 4-10 |

PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 237 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 753 LBS FACTORED UPLIFT

PROVIDE FOR 467 LBS FACTORED HORIZONTAL REACTION AT JOINT 11

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 7 | 768 | 621 / -178 | 119 / -14 | 0 / 0 | 214 / -256 | 135 / 0 | 0 / 0 |
| 11 | 2024 | 1790 / 0 | 231 / 0 | 0 / 0 | 77 / -738 | 311 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 11 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -201 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7, 11

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 4.96 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-7. DBS = 20-0-0 . CBF = 65 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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 | 11- 3 | -2939 / 655 | 0.24 (2) |
| 2-13 | -574 / 2168 | -162.1 | -162.1 | 0.38 (19) | 6.25 | 3-10 | -267 / 1892 | 0.43 (2) |
| 13- 3 | -442 / 1643 | -162.1 | -162.1 | 0.83 (2) | 6.25 | 10- 4 | -983 / 216 | 0.40 (2) |
| 3- 4 | -386 / 538 | -162.1 | -162.1 | 0.59 (2) | 6.25 | 4- 8 | -84 / 624 | 0.14 (2) |
| 4- 5 | -650 / 239 | -162.1 | -162.1 | 0.53 (2) | 6.25 | 8- 5 | -390 / 164 | 0.15 (9) |
| 5- 6 | -145 / 160 | -162.1 | -162.1 | 0.95 (2) | 6.25 | 5- 7 | -855 / 316 | 0.85 (2) |
| 7- 6 | -520 / 150 | 0.0 | 0.0 | 0.35 (13) | 6.25 | 12-13 | -1204 / 228 | 0.00 (1) |
| 2-12 | -1396 / 512 | -27.5 | -27.5 | 0.40 (19) | 4.96 | | | |
| 12-11 | -1396 / 512 | -27.5 | -27.5 | 0.42 (19) | 4.96 | | | |
| 11-10 | -1396 / 272 | -27.5 | -27.5 | 0.26 (2) | 5.21 | | | |
| 10- 9 | -503 / 288 | -27.5 | -27.5 | 0.21 (6) | 6.25 | | | |
| 9- 8 | -503 / 288 | -27.5 | -27.5 | 0.21 (6) | 6.25 | | | |
| 8- 7 | -233 / 631 | -27.5 | -27.5 | 0.23 (5) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.44")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/180 (0.88")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.43")
CALCULATED VERT. DEFL.(LL) = L/ 645 ( 0.08")
ALLOWABLE DEFL.(TL)= L/120 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 564 ( 0.09")

CSI: TC=0.95/1.00 (5-6:2) , BC=0.42/1.00 (11-12:19) , WB=0.85/1.00 (5-7:2) , SSI=0.90/1.00 (2-12:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (2) (INPUT = 0.90 )
JSI METAL= 0.58 (3) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B06 | 2 | 1 | Communal Building Fire Reconstruction | | P5836407 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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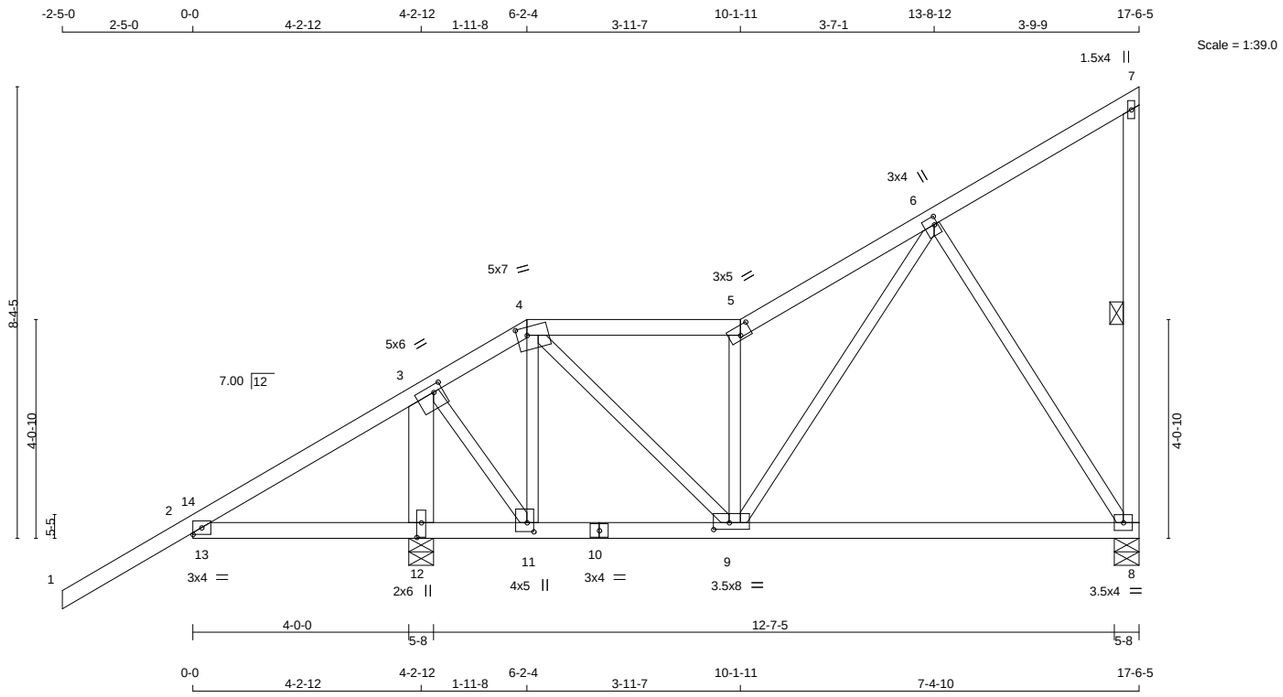


TOTAL WEIGHT = 2 X 82 = 164 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 7 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 12 - 3 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-l | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TMWW-t | MT20 | 5.0 | 6.0 | 1.50 | 2.00 |
| 4 | TTWW-m | MT20 | 5.0 | 7.0 | 1.75 | 2.25 |
| 5 | TTW-h | MT20 | 3.0 | 5.0 | 2.00 | 2.50 |
| 6 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 0.75 |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.5 | 4.0 | | |
| 9 | BMWWW-t | MT20 | 3.5 | 8.0 | 1.50 | 3.50 |
| 10 | BS-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWW+t | MT20 | 4.0 | 5.0 | 2.00 | 1.50 |
| 12 | BMW1+w | MT20 | 2.0 | 6.0 | 3.25 | 1.00 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 8 | 1005 | 0 | 1166 | 0 | -238 | 5-8 | 1-8 |
| 12 | 2722 | 0 | 3184 | 467 | -751 | 5-8 | 4-10 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 238 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 12 FOR 751 LBS FACTORED UPLIFT

PROVIDE FOR 467 LBS FACTORED HORIZONTAL REACTION AT JOINT 12

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 8 | 772 | 625 / -176 | 120 / -13 | 0 / 0 | 214 / -257 | 136 / 0 | 0 / 0 |
| 12 | 2020 | 1787 / 0 | 231 / 0 | 0 / 0 | 77 / -735 | 310 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 12 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -201 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 12

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.00 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 5.05 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 35 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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 | 12- 3 | -2875 / 604 | 0.23 (2) |
| 2-14 | -616 / 2085 | -162.1 | -162.1 | 0.36 (19) | 6.25 | 3-11 | -249 / 1784 | 0.40 (2) |
| 14- 3 | -436 / 1608 | -162.1 | -162.1 | 0.72 (2) | 6.25 | 11- 4 | -1473 / 264 | 0.37 (2) |
| 3- 4 | -97 / 892 | -162.1 | -162.1 | 0.55 (19) | 6.25 | 4- 9 | -168 / 1352 | 0.30 (2) |
| 4- 5 | -717 / 458 | -162.1 | -162.1 | 0.53 (2) | 6.14 | 9- 5 | -1068 / 239 | 0.27 (2) |
| 5- 6 | -817 / 538 | -162.1 | -162.1 | 0.47 (2) | 6.00 | 9- 6 | -613 / 434 | 0.55 (19) |
| 6- 7 | -116 / 160 | -162.1 | -162.1 | 0.45 (2) | 6.25 | 6- 8 | -955 / 302 | 0.84 (2) |
| 8- 7 | -280 / 99 | 0.0 | 0.0 | 0.34 (11) | 6.25 | 13-14 | -1129 / 296 | 0.00 (1) |
| 2-13 | -1358 / 511 | -27.5 | -27.5 | 0.37 (19) | 5.05 | | | |
| 13-12 | -1358 / 511 | -27.5 | -27.5 | 0.39 (19) | 5.05 | | | |
| 12-11 | -1387 / 264 | -27.5 | -27.5 | 0.29 (2) | 5.22 | | | |
| 11-10 | -857 / 292 | -27.5 | -27.5 | 0.36 (6) | 6.25 | | | |
| 10- 9 | -857 / 292 | -27.5 | -27.5 | 0.36 (6) | 6.25 | | | |
| 9- 8 | -157 / 521 | -27.5 | -27.5 | 0.37 (6) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.44")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.12")
ALLOWABLE DEFL.(TL)= L/180 (0.89")
CALCULATED VERT. DEFL.(TL) = L/ 796 (0.20")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.42")
CALCULATED VERT. DEFL.(LL) = L/ 685 ( 0.07")
ALLOWABLE DEFL.(TL)= L/120 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 607 ( 0.08")

CSI: TC=0.83/1.00 (1-2:2) , BC=0.39/1.00 (12-13:19) , WB=0.84/1.00 (6-8:2) , SSI=0.84/1.00 (2-13:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (9) (INPUT = 0.90 )
JSI METAL= 0.53 (12) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | B07 | 2 | 1 | Communal Building Fire Reconstruction | P5836408 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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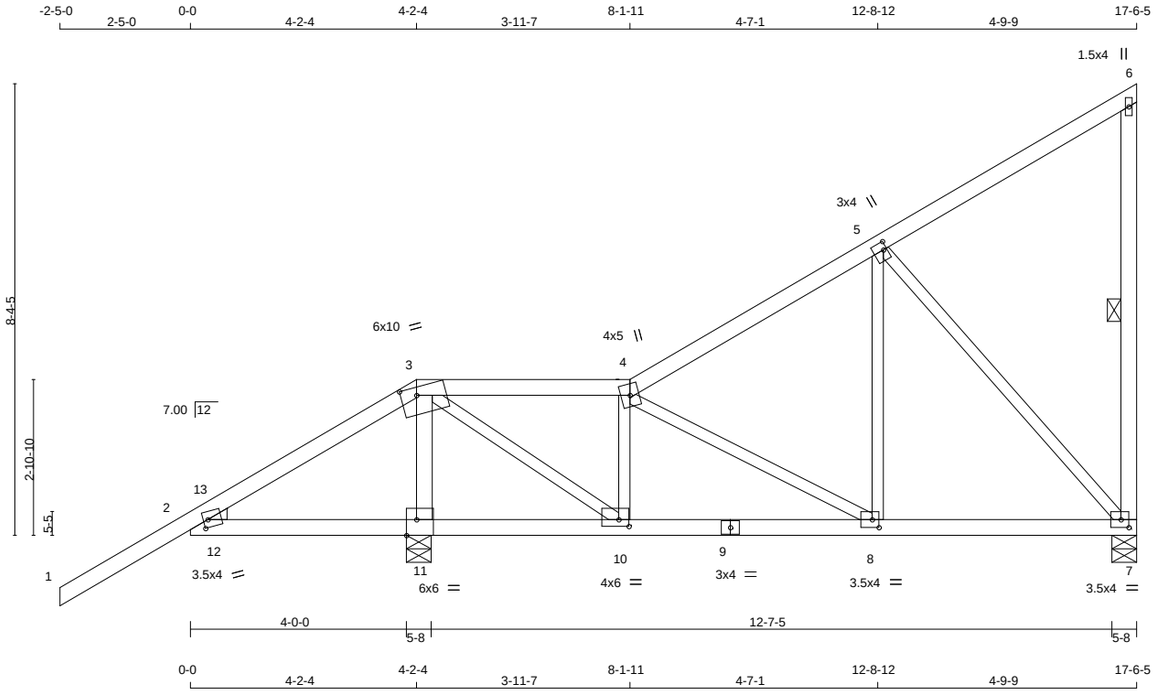


TOTAL WEIGHT = 2 X 77 = 153 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x4 | DRY | No.2 | SPF |
| 2 - 9 | 2x4 | DRY | No.2 | SPF |
| 9 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 11 - 3 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMBH-m | MT20 | 3.5 | 4.0 | 1.75 | 1.00 |
| 3 | TTWW-m | MT20 | 6.0 | 10.0 | 1.75 | 3.50 |
| 4 | TTWW+m | MT20 | 4.0 | 5.0 | | |
| 5 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 0.75 |
| 6 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 7 | BMVW1-t | MT20 | 3.5 | 4.0 | 1.75 | 1.75 |
| 8 | BMWW-t | MT20 | 3.5 | 4.0 | 1.75 | 1.50 |
| 9 | BS-t | MT20 | 3.0 | 4.0 | | |
| 10 | BMWW-t | MT20 | 4.0 | 6.0 | 1.50 | 2.25 |
| 11 | BMW1-t | MT20 | 6.0 | 6.0 | Edge | 2.25 |

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

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX | HEEL WEDGE |
|---|---|---|---|---|---|---|---|---|
| 7 | 983 | 0 | 1141 | 0 | -232 | 5-8 | 1-8 | |
| 11 | 2743 | 0 | 3209 | 467 | -762 | 5-8 | 5-8 | 2x3 L |

PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 232 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 762 LBS FACTORED UPLIFT

PROVIDE FOR 467 LBS FACTORED HORIZONTAL REACTION AT JOINT 11

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 756 | 610 / -184 | 118 / -14 | 0 / 0 | 213 / -251 | 133 / 0 | 0 / 0 |
| 11 | 2036 | 1801 / 0 | 233 / 0 | 0 / 0 | 74 / -745 | 312 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 11 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -201 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7, 11

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 5.42 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 4.65 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-7. DBS = 20-0-0 . CBF = 44 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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.83 (2) | 10.00 | 11- 3 | -2886 / 627 | 0.35 (2) |
| 2-13 | -609 / 1915 | -162.1 | -162.1 | 0.33 (2) | 6.25 | 3-10 | -328 / 2328 | 0.52 (2) |
| 13- 3 | -475 / 1699 | -162.1 | -162.1 | 0.71 (19) | 6.25 | 10- 4 | -1281 / 275 | 0.22 (2) |
| 3- 4 | -361 / 1018 | -162.1 | -162.1 | 0.52 (2) | 6.25 | 4- 8 | -102 / 929 | 0.21 (19) |
| 4- 5 | -755 / 225 | -162.1 | -162.1 | 0.75 (2) | 5.42 | 8- 5 | -375 / 301 | 0.18 (19) |
| 5- 6 | -126 / 159 | -162.1 | -162.1 | 0.72 (2) | 6.25 | 5- 7 | -997 / 286 | 0.92 (2) |
| 7- 6 | -354 / 114 | 0.0 | 0.0 | 0.35 (13) | 6.25 | 12-13 | -819 / 232 | 0.00 (1) |
| 2-12 | -1466 / 562 | -27.5 | -27.5 | 0.51 (2) | 4.65 | | | |
| 12-11 | -1466 / 562 | -27.5 | -27.5 | 0.54 (2) | 4.65 | | | |
| 11-10 | -1656 / 327 | -27.5 | -27.5 | 0.36 (2) | 4.77 | | | |
| 10- 9 | -1003 / 379 | -27.5 | -27.5 | 0.21 (5) | 6.18 | | | |
| 9- 8 | -1003 / 379 | -27.5 | -27.5 | 0.21 (5) | 6.18 | | | |
| 8- 7 | -193 / 673 | -27.5 | -27.5 | 0.22 (5) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.44")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/180 (0.88")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.43")
CALCULATED VERT. DEFL.(LL) = L/ 533 ( 0.10")
ALLOWABLE DEFL.(TL)= L/120 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 471 ( 0.11")

CSI: TC=0.83/1.00 (1-2:2) , BC=0.54/1.00 (11-12:2) , WB=0.92/1.00 (5-7:2) , SSI=0.56/1.00 (2-12:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (10) (INPUT = 0.90 )
JSI METAL= 0.54 (2) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B08 | 2 | 2 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836409 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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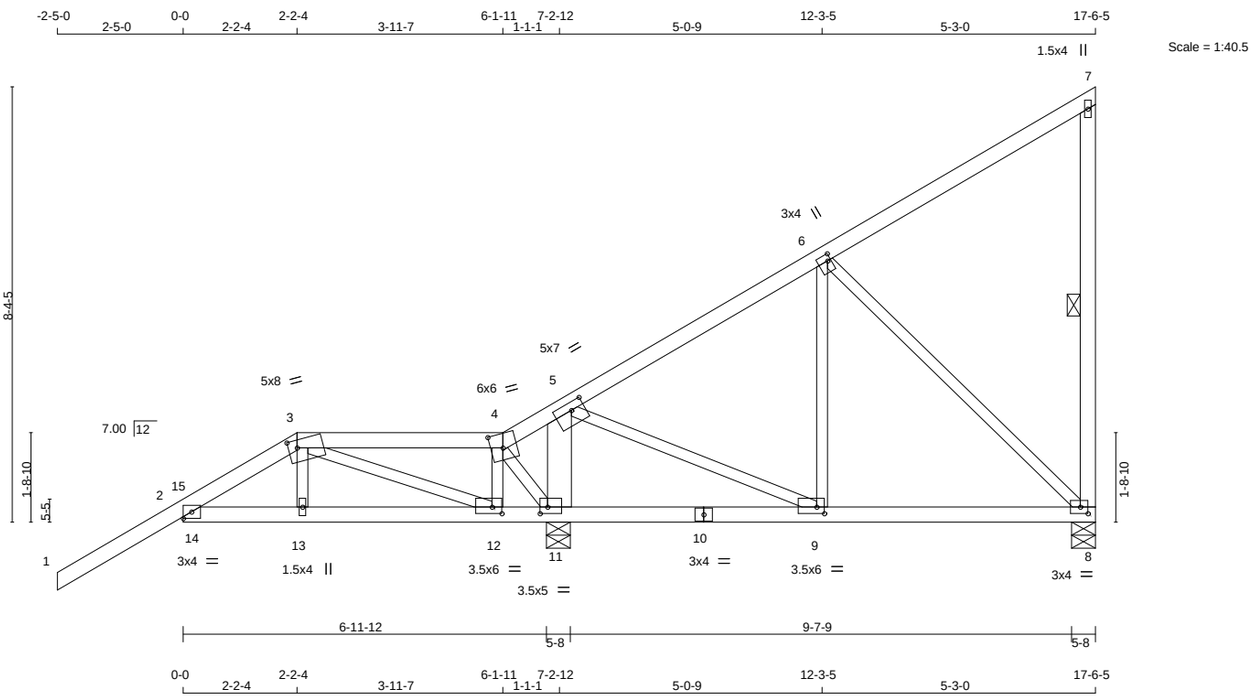


TOTAL WEIGHT = 4 X 78 = 311 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 7 | 2x4 | DRY | No.2 | SPF |
| 8 - 7 | 2x4 | DRY | No.2 | SPF |
| 2 - 10 | 2x4 | DRY | No.2 | SPF |
| 10 - 8 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 11 - 5 | 2x6 | DRY | No.2 | SPF |

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 | | | |
| 1- 3 | 1 | 12 | TOP |
| 3- 4 | 1 | 12 | TOP |
| 4- 7 | 1 | 12 | TOP |
| 7- 8 | 1 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 2- 10 | 1 | 12 | TOP |
| 10- 8 | 1 | 12 | TOP |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x3 | 1 | 6 | |
| 2x6 | 2 | 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.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-I | MT20 | 3.0 | 4.0 | | Edge |
| 3 | TTWW-m | MT20 | 5.0 | 8.0 | 1.75 | 2.00 |
| 4 | TTWW-m | MT20 | 6.0 | 6.0 | 3.25 | 2.75 |
| 5 | TMWW-t | MT20 | 5.0 | 7.0 | 1.75 | 3.00 |
| 6 | TMWW+t | MT20 | 3.0 | 4.0 | 1.50 | 0.75 |
| 7 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 8 | BMVW1-t | MT20 | 3.0 | 4.0 | 1.50 | 1.75 |
| 9 | BMWW-t | MT20 | 3.5 | 6.0 | 1.50 | 1.75 |
| 10 | BS-t | MT20 | 3.0 | 4.0 | | |
| 11 | BMWW1-t | MT20 | 3.5 | 5.0 | 1.50 | 1.75 |
| 12 | BMWW-t | MT20 | 3.5 | 6.0 | 1.50 | 2.25 |
| 13 | BMW+w | MT20 | 1.5 | 4.0 | | |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 8 | 163 | 0 | 230 | 0 | -845 | 5-8 | 1-8 |
| 11 | 3564 | 0 | 4169 | 467 | -1147 | 5-8 | 2-4 |

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 845 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 11 FOR 1147 LBS FACTORED UPLIFT

PROVIDE FOR 467 LBS FACTORED HORIZONTAL REACTION AT JOINT 11

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 8 | 150 | 68 / -553 | 52 / -51 | 0 / 0 | 203 / -113 | 42 / 0 | 0 / 0 |
| 11 | 2642 | 2344 / 0 | 298 / 0 | 0 / 0 | 0 / -1078 | 403 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 11 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -201 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 8, 11

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 3.98 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 7-8. DBS = 20-0-0 . CBF = 51 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: (19)

| CHORDS MEMB. | FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. | FORCE (LBS) | MAX. FACTORED CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| FR-TO | | (PLF) | | | | FR-TO | | |
| 1- 2 | 0 / 113 | -162.1 | -162.1 | 0.46 (2) | 10.00 | 13- 3 | -162 / 138 | 0.02 (6) |
| 2-15 | -276 / 969 | -162.1 | -162.1 | 0.53 (19) | 6.25 | 3-12 | -3829 / 1250 | 0.55 (2) |
| 15- 3 | -454 / 1816 | -162.1 | -162.1 | 0.27 (2) | 6.25 | 12- 4 | -607 / 1539 | 0.19 (19) |
| 3- 4 | -1533 / 5198 | -162.1 | -162.1 | 0.74 (2) | 6.25 | 4-11 | -241 / 1213 | 0.15 (2) |
| 4- 5 | -1686 / 5481 | -162.1 | -162.1 | 0.76 (2) | 6.25 | 11- 5 | -5060 / 1401 | 0.20 (2) |
| 5- 6 | -254 / 1087 | -162.1 | -162.1 | 0.44 (2) | 6.25 | 5- 9 | -1188 / 4601 | 0.57 (2) |
| 6- 7 | -132 / 159 | -162.1 | -162.1 | 0.40 (2) | 6.25 | 9- 6 | -1597 / 531 | 0.35 (2) |
| 8- 7 | -405 / 125 | 0.0 | 0.0 | 0.19 (13) | 6.25 | 6- 8 | -159 / 1306 | 0.16 (19) |
| | | | | | | 14-15 | -186 / 786 | 0.00 (1) |
| 2-14 | -1596 / 513 | -27.5 | -27.5 | 0.12 (19) | 6.25 | | | |
| 14-13 | -1596 / 513 | -27.5 | -27.5 | 0.12 (19) | 6.25 | | | |
| 13-12 | -1605 / 509 | -27.5 | -27.5 | 0.17 (19) | 6.25 | | | |
| 12-11 | -5311 / 1727 | -27.5 | -27.5 | 0.25 (19) | 3.98 | | | |
| 11-10 | -4714 / 1309 | -27.5 | -27.5 | 0.23 (2) | 4.29 | | | |
| 10- 9 | -4714 / 1309 | -27.5 | -27.5 | 0.23 (2) | 4.29 | | | |
| 9- 8 | -948 / 257 | -27.5 | -27.5 | 0.10 (6) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.34")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/180 (0.69")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.72")
CALCULATED VERT. DEFL.(LL) = L/ 414 ( 0.21")
ALLOWABLE DEFL.(TL)= L/120 (0.72")
CALCULATED VERT. DEFL.(TL) = L/ 360 ( 0.24")

CSI: TC=0.76/1.00 (4-5:2) , BC=0.25/1.00 (11-12:19) , WB=0.57/1.00 (5-9:2) , SSI=0.55/1.00 (2-15:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (8) (INPUT = 0.90 )
JSI METAL= 0.62 (3) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B09 | 4 | 1 | Communal Building Fire Reconstruction | | P5836410 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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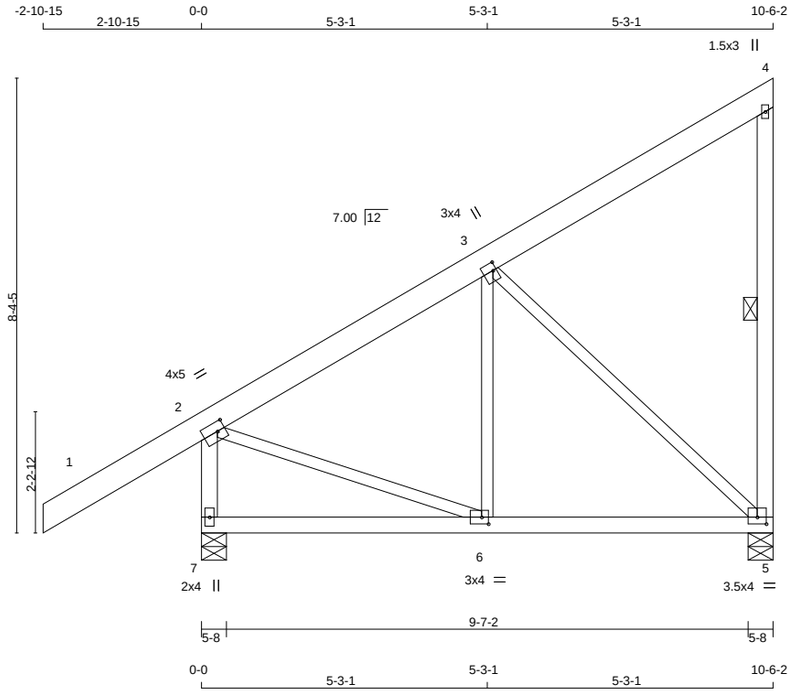


Scale = 1:38.8

TOTAL WEIGHT = 4 X 64 = 256 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 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 |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 4.0 | 5.0 | 2.00 | 1.75 |
| 3 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 0.75 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.5 | 4.0 | 1.50 | 2.00 |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.50 |
| 7 | 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 VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 996 | 0 | 1160 | 0 | -296 | 5-8 | 1-8 |
| 7 | 1487 | 0 | 1745 | 468 | -235 | 5-8 | 3-0 |

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 296 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 235 LBS FACTORED UPLIFT

PROVIDE FOR 468 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 755 | 633 / 0 | 105 / 0 | 0 / 0 | 199 / -293 | 126 / 0 | 0 / 0 |
| 7 | 1087 | 998 / 0 | 105 / 0 | 0 / 0 | 74 / -269 | 156 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -227 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5, 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-5. DBS = 20-0-0 . CBF = 48 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 6- 3 | -164 / 244 | 0.06 (9) |
| 2- 3 | -843 / 134 | -162.1 | -162.1 | 0.43 (2) | 6.25 | 3- 5 | -1052 / 378 | 0.96 (2) |
| 3- 4 | -130 / 157 | -162.1 | -162.1 | 0.42 (2) | 6.25 | 2- 6 | -71 / 839 | 0.18 (2) |
| 5- 4 | -387 / 120 | 0.0 | 0.0 | 0.34 (13) | 6.25 | | | |
| 7- 2 | -1688 / 260 | 0.0 | 0.0 | 0.19 (2) | 6.39 | | | |
| 7- 6 | -436 / 302 | -27.5 | -27.5 | 0.23 (6) | 6.25 | | | |
| 6- 5 | -236 / 770 | -27.5 | -27.5 | 0.28 (5) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/180 (0.70")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.28/1.00 (5-6:5) , WB=0.96/1.00 (3-5:2) , SSI=0.33/1.00 (3-4:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (7) (INPUT = 0.90 )
JSI METAL= 0.42 (2) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.

For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B10 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836411 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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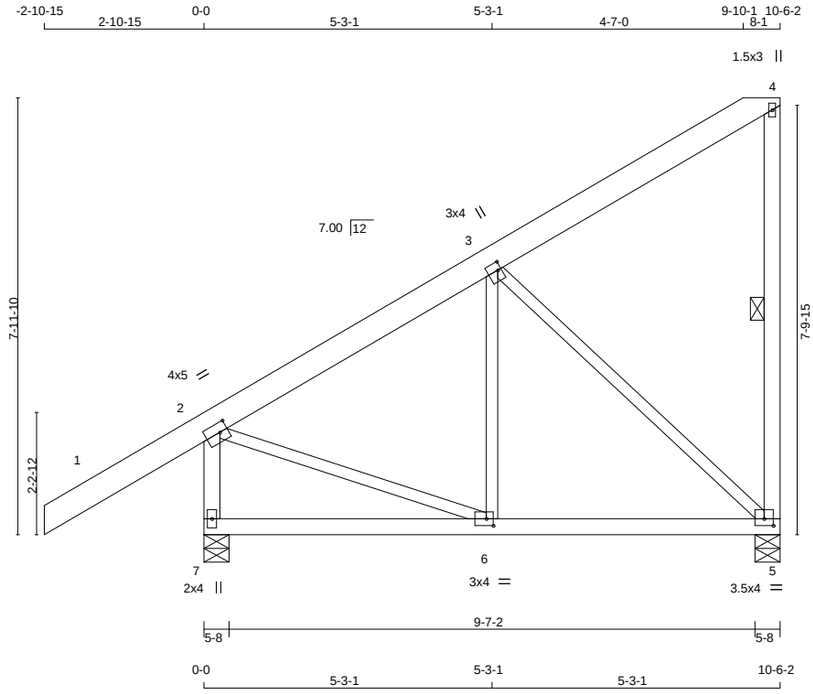


TOTAL WEIGHT = 2 X 64 = 127 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 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 |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 4.0 | 5.0 | 2.00 | 1.75 |
| 3 | TMWW+t | MT20 | 3.0 | 4.0 | 1.75 | 0.75 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.5 | 4.0 | 1.50 | 2.00 |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.50 |
| 7 | 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 VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 996 | 0 | 1160 | 0 | -296 | 5-8 | 1-8 |
| 7 | 1487 | 0 | 1745 | 468 | -235 | 5-8 | 3-0 |

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 296 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 235 LBS FACTORED UPLIFT

PROVIDE FOR 468 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 755 | 633 / 0 | 105 / 0 | 0 / 0 | 199 / -293 | 126 / 0 | 0 / 0 |
| 7 | 1087 | 998 / 0 | 105 / 0 | 0 / 0 | 74 / -269 | 156 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 334 / -227 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5, 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 4-5. DBS = 20-0-0 . CBF = 48 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 (PLF) | -162.1 | 0.61 (2) | 10.00 | 6- 3 | -164 / 244 | 0.06 (9) |
| 2- 3 | -843 / 134 | -162.1 | -162.1 | 0.43 (2) | 6.25 | 3- 5 | -1052 / 378 | 0.96 (2) |
| 3- 4 | -130 / 157 | -162.1 | -162.1 | 0.42 (2) | 6.25 | 2- 6 | -71 / 839 | 0.18 (2) |
| 5- 4 | -387 / 120 | 0.0 | 0.0 | 0.34 (13) | 6.25 | | | |
| 7- 2 | -1688 / 260 | 0.0 | 0.0 | 0.19 (2) | 6.39 | | | |
| 7- 6 | -436 / 302 | -27.5 | -27.5 | 0.23 (6) | 6.25 | | | |
| 6- 5 | -236 / 770 | -27.5 | -27.5 | 0.28 (5) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/180 (0.70")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.28/1.00 (5-6:5) , WB=0.96/1.00 (3-5:2) , SSI=0.33/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (7) (INPUT = 0.90 )
JSI METAL= 0.42 (2) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.
For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B11 | 2 | 1 | Communal Building Fire Reconstruction | | P5836412 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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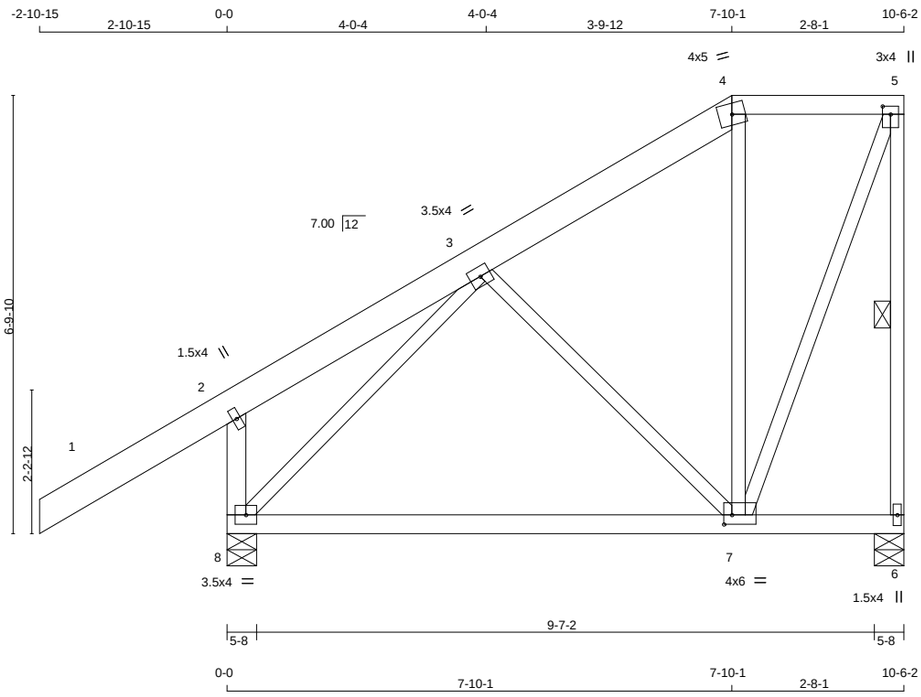


TOTAL WEIGHT = 2 X 64 = 127 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 6 - 5 | 2x3 | DRY | No.2 | SPF |
| 8 - 2 | 2x4 | DRY | No.2 | SPF |
| 8 - 6 | 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 |
|---|---|---|---|---|---|---|
| 2 | TMV+t | MT20 | 1.5 | 4.0 | | |
| 3 | TMWW-t | MT20 | 3.5 | 4.0 | | |
| 4 | TTW-m | MT20 | 4.0 | 5.0 | | |
| 5 | TMVW+p | MT20 | 3.0 | 4.0 | 1.50 | 1.50 |
| 6 | BMV1+p | MT20 | 1.5 | 4.0 | | |
| 7 | BMWWW-t | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 8 | BMVW1-t | MT20 | 3.5 | 4.0 | | |

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 6 | 926 | 0 | 940 | 0 | -247 | 5-8 | 2-3 |
| 8 | 1558 | 0 | 1768 | 367 | -285 | 5-8 | 2-0 |

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 247 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 285 LBS FACTORED UPLIFT

PROVIDE FOR 367 LBS FACTORED HORIZONTAL REACTION AT JOINT 8

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 707 | 481 / 0 | 105 / 0 | 0 / 0 | 168 / -255 | 122 / 0 | 0 / 0 |
| 8 | 1135 | 1009 / 0 | 105 / 0 | 0 / 0 | 105 / -307 | 161 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 8 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 262 / -182 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6, 8

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 5-6. DBS = 20-0-0 . CBF = 119 LBS.

DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE (PER BRACE). FASTEN LATERAL BRACE(S) USING (0.122"X3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 3- 7 | -324 / 253 | 0.18 (2) |
| 2- 3 | -118 / 235 | -162.1 | -162.1 | 0.59 (2) | 6.25 | 7- 4 | -375 / 104 | 0.28 (7) |
| 3- 4 | -372 / 133 | -162.1 | -162.1 | 0.22 (2) | 6.25 | 7- 5 | -179 / 796 | 0.18 (1) |
| 4- 5 | -300 / 179 | -162.1 | -162.1 | 0.24 (3) | 6.25 | 8- 3 | -756 / 86 | 0.37 (9) |
| 6- 5 | -953 / 232 | 0.0 | 0.0 | 0.48 (13) | 5.62 | | | |
| 8- 2 | -1154 / 368 | 0.0 | 0.0 | 0.13 (2) | 7.41 | | | |
| 8- 7 | -230 / 510 | -27.5 | -27.5 | 0.43 (17) | 6.25 | | | |
| 7- 6 | -45 / 115 | -27.5 | -27.5 | 0.41 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")
CALCULATED VERT. DEFL.(LL) = L/ 898 (0.14")
ALLOWABLE DEFL.(TL)= L/180 (0.70")
CALCULATED VERT. DEFL.(TL) = L/ 534 (0.24")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.43/1.00 (7-8:17) , WB=0.37/1.00 (3-8:9) , SSI=0.30/1.00 (1-2:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (7) (INPUT = 0.90 )
JSI METAL= 0.53 (2) (INPUT = 1.00 )

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July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.
For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | B12 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836413 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:32 2019 Page 1

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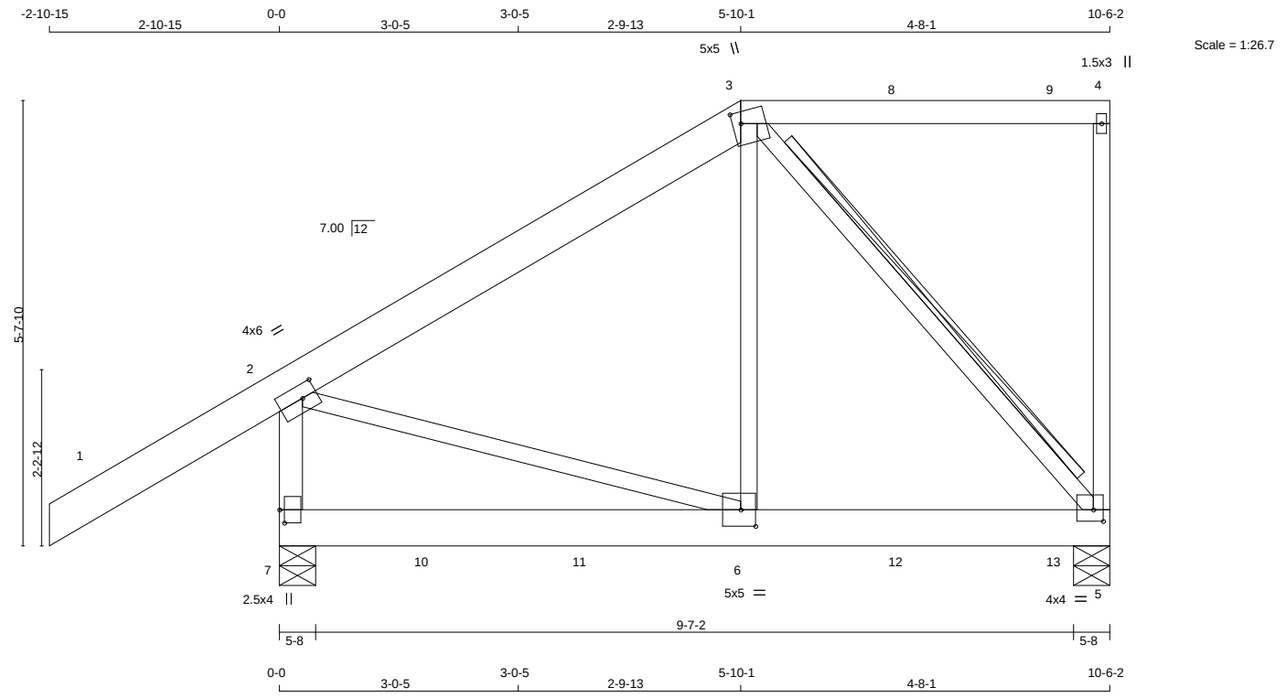


TOTAL WEIGHT = 2 X 62 = 125 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 2 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 4.0 | 6.0 | 2.00 | 2.25 |
| 3 | TTWW+m | MT20 | 5.0 | 5.0 | 1.75 | 1.25 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 4.0 | 4.0 | 1.75 | 1.50 |
| 6 | BMWW-t | MT20 | 5.0 | 5.0 | 2.50 | 2.25 |
| 7 | BMV1+p | MT20 | 2.5 | 4.0 | 2.00 | 0.75 |

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July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 1965 | 0 | 2037 | 0 | -802 | 5-8 | 2-13 |
| 7 | 2411 | 0 | 2561 | 304 | -718 | 5-8 | 4-13 |

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 802 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 718 LBS FACTORED UPLIFT

PROVIDE FOR 304 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 1494 | 1036 / 0 | 216 / 0 | 0 / 0 | 450 / -729 | 243 / 0 | 0 / 0 |
| 7 | 1776 | 1434 / 0 | 191 / 0 | 0 / 0 | 360 / -671 | 246 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 217 / -153 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5, 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 5.73 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

2x4 DRY SPF No.2 T-BRACE AT 3-5

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.67 (2) | 10.00 | 2- 6 | -378 / 1180 | 0.28 (1) |
| 2- 3 | -1302 / 485 | -162.1 | -162.1 | 0.63 (2) | 5.73 | 6- 3 | -393 / 857 | 0.21 (3) |
| 3- 8 | -36 / 91 | -162.1 | -162.1 | 1.00 (3) | 6.25 | 3- 5 | -1714 / 661 | 0.60 (1) |
| 8- 9 | -36 / 91 | -162.1 | -162.1 | 1.00 (3) | 6.25 | | | |
| 9- 4 | -36 / 91 | -162.1 | -162.1 | 1.00 (3) | 6.25 | | | |
| 5- 4 | -639 / 192 | 0.0 | 0.0 | 0.46 (3) | 7.81 | | | |
| 7- 2 | -2080 / 573 | 0.0 | 0.0 | 0.25 (2) | 5.83 | | | |
| 7-10 | -273 / 200 | -27.5 | -27.5 | 0.64 (1) | 6.25 | | | |
| 10-11 | -273 / 200 | -27.5 | -27.5 | 0.64 (1) | 6.25 | | | |
| 11- 6 | -273 / 200 | -27.5 | -27.5 | 0.64 (1) | 6.25 | | | |
| 6-12 | -458 / 1144 | -27.5 | -27.5 | 0.60 (1) | 6.25 | | | |
| 12-13 | -458 / 1144 | -27.5 | -27.5 | 0.60 (1) | 6.25 | | | |
| 13- 5 | -458 / 1144 | -27.5 | -27.5 | 0.60 (1) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 5-10-1 | -131 | -212 | 102 | FRONT | VERT | TOTAL | --- | C1 |
| 6 | 5-10-13 | -179 | -194 | 150 | FRONT | VERT | TOTAL | --- | C1 |
| 8 | 7-10-13 | -125 | -291 | 106 | FRONT | VERT | TOTAL | --- | C1 |
| 9 | 9-10-13 | -157 | -293 | 105 | FRONT | VERT | TOTAL | --- | C1 |
| 10 | 1-10-13 | -540 | -571 | 248 | FRONT | VERT | TOTAL | --- | C1 |
| 11 | 3-10-13 | -399 | -420 | 143 | FRONT | VERT | TOTAL | --- | C1 |
| 12 | 7-10-13 | -179 | -194 | 150 | FRONT | VERT | TOTAL | --- | C1 |
| 13 | 9-10-13 | -184 | -197 | 148 | FRONT | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.35")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.10")
ALLOWABLE DEFL.(TL)= L/180 (0.70")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.12")

CSI: TC=1.00/1.00 (3-4:3) , BC=0.64/1.00 (6-7:1) , WB=0.60/1.00 (3-5:1) , SSI=0.52/1.00 (3-4:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (6) (INPUT = 0.90 )
JSI METAL= 0.46 (2) (INPUT = 1.00 )

CONTINUED ON PAGE 2



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**CONNECTION REQUIREMENTS**

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

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Certificate No. 10889485


July 3,2019




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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C01 | 1 | 1 | Communal Building Fire Reconstruction | | P5836414 |

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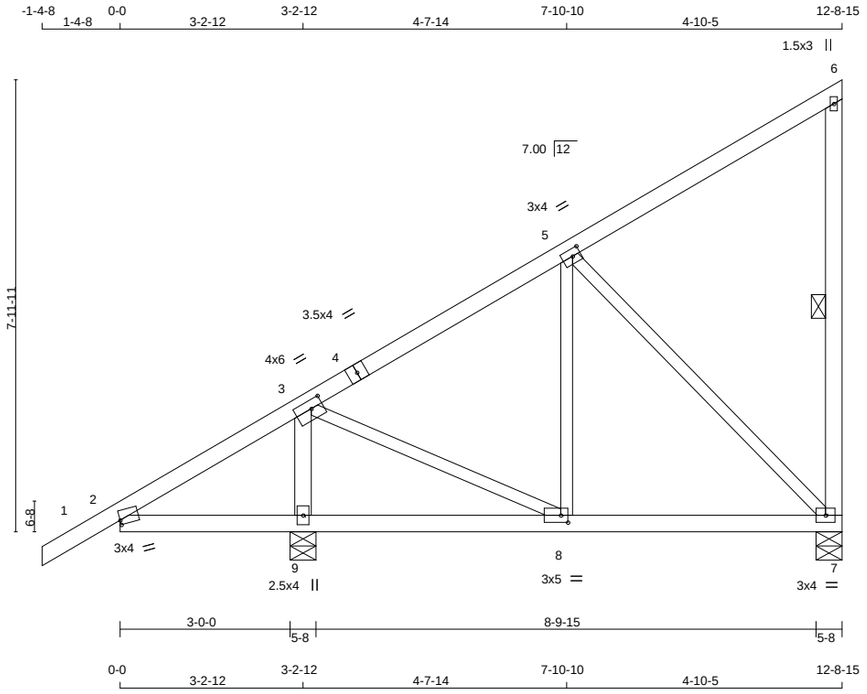


Scale = 1:37.2

TOTAL WEIGHT = 57 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 6 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x4 | DRY | No.2 | SPF |
| 2 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 9 - 3 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-m | MT20 | 3.0 | 4.0 | 1.00 | |
| 3 | TMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 2.50 |
| 4 | TS-t | MT20 | 3.5 | 4.0 | | |
| 5 | TMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.75 |
| 6 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 7 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 5.0 | 1.50 | 1.50 |
| 9 | BMW1+w | MT20 | 2.5 | 4.0 | | |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 7 | 718 | 0 | 834 | 0 | -215 | 5-8 | 1-8 |
| 9 | 1933 | 0 | 2259 | 430 | -510 | 5-8 | 3-14 |

PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 215 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 510 LBS FACTORED UPLIFT

PROVIDE FOR 430 LBS FACTORED HORIZONTAL REACTION AT JOINT 9

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 551 | 448 / -125 | 84 / -11 | 0 / 0 | 186 / -215 | 96 / 0 | 0 / 0 |
| 9 | 1440 | 1262 / 0 | 171 / 0 | 0 / 0 | 18 / -509 | 224 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 9 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 307 / -186 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7, 9

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-7. DBS = 20-0-0 . CBF = 47 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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD (PLF) FROM | TO | LC1 MAX CSI (LC) | WEBS MEMB. FR-TO | MAX. UNBRAC LENGTH | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 55 | -162.1 | -162.1 | 0.28 (2) | 10.00 | 9- 3 | -2120 / 466 | 0.24 (2) |
| 2- 3 | -303 / 1076 | -162.1 | -162.1 | 0.56 (2) | 6.25 | 3- 8 | -145 / 1321 | 0.30 (2) |
| 3- 4 | -485 / 174 | -162.1 | -162.1 | 0.65 (2) | 6.25 | 8- 5 | -456 / 150 | 0.17 (9) |
| 4- 5 | -485 / 174 | -162.1 | -162.1 | 0.65 (2) | 6.25 | 5- 7 | -573 / 232 | 0.48 (2) |
| 5- 6 | -124 / 151 | -162.1 | -162.1 | 0.64 (2) | 6.25 | | | |
| 7- 6 | -374 / 117 | 0.0 | 0.0 | 0.32 (13) | 6.25 | | | |
| 2- 9 | -880 / 332 | -27.5 | -27.5 | 0.12 (5) | 6.25 | | | |
| 9- 8 | -880 / 275 | -27.5 | -27.5 | 0.16 (6) | 6.25 | | | |
| 8- 7 | -186 / 407 | -27.5 | -27.5 | 0.18 (5) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/180 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.03")
ALLOWABLE DEFL.(TL)= L/120 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 999 ( 0.03")

CSI: TC=0.65/1.00 (3-5:2) , BC=0.18/1.00 (7-8:5) , WB=0.48/1.00 (5-7:2) , SSI=0.38/1.00 (5-6:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (8) (INPUT = 0.90 )
JSI METAL= 0.46 (3) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire Reconstruction | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C02 | 2 | 1 | TRUSS DESC. | | P5836415 |

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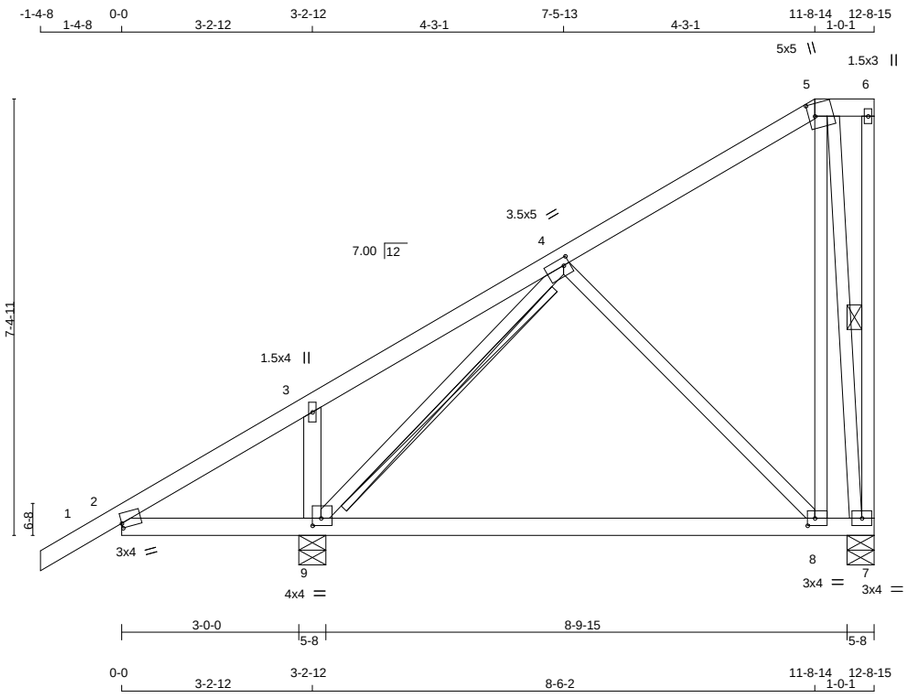


TOTAL WEIGHT = 2 X 62 = 123 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 6 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x3 | DRY | No.2 | SPF |
| 2 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 9 - 3 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-m | MT20 | 3.0 | 4.0 | 1.00 | |
| 3 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 4 | TMWW-t | MT20 | 3.5 | 5.0 | 1.50 | 1.25 |
| 5 | TTWW+m | MT20 | 5.0 | 5.0 | 2.50 | 1.25 |
| 6 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 7 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 4.0 | 1.50 | 1.50 |
| 9 | BMWW1-t | MT20 | 4.0 | 4.0 | 1.50 | 1.75 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 7 | 718 | 0 | 745 | 0 | -191 | 5-8 | 1-8 |
| 9 | 1933 | 0 | 2249 | 374 | -522 | 5-8 | 2-9 |

PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 191 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 522 LBS FACTORED UPLIFT

PROVIDE FOR 374 LBS FACTORED HORIZONTAL REACTION AT JOINT 9

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 551 | 371 / -125 | 84 / -11 | 0 / 0 | 171 / -198 | 96 / 0 | 0 / 0 |
| 9 | 1440 | 1256 / 0 | 171 / 0 | 0 / 0 | 32 / -517 | 224 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 9 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 267 / -160 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7, 9

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 6-7. DBS = 20-0-0 . CBF = 13 LBS.
2x4 DRY SPF No.2 T-BRACE AT 4-9

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.

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: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 55 | -162.1 | -162.1 | 0.28 (2) | 10.00 | 9- 3 | -839 / 317 | 0.09 (2) |
| 2- 3 | -329 / 1036 | -162.1 | -162.1 | 0.55 (2) | 6.25 | 9- 4 | -1620 / 283 | 0.48 (2) |
| 3- 4 | -154 / 978 | -162.1 | -162.1 | 0.63 (2) | 6.25 | 4- 8 | -344 / 292 | 0.24 (2) |
| 4- 5 | -198 / 95 | -162.1 | -162.1 | 0.49 (2) | 6.25 | 8- 5 | -83 / 582 | 0.13 (5) |
| 5- 6 | -49 / 125 | -162.1 | -162.1 | 0.04 (3) | 6.25 | 5- 7 | -777 / 79 | 0.76 (2) |
| 7- 6 | -102 / 25 | 0.0 | 0.0 | 0.52 (13) | 6.25 | | | |
| 2- 9 | -845 / 352 | -27.5 | -27.5 | 0.35 (5) | 6.25 | | | |
| 9- 8 | -207 / 335 | -27.5 | -27.5 | 0.39 (17) | 6.25 | | | |
| 8- 7 | -57 / 153 | -27.5 | -27.5 | 0.39 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.11")
ALLOWABLE DEFL.(TL)= L/180 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 604 (0.19")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.04")
ALLOWABLE DEFL.(TL)= L/120 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 999 ( 0.04")

CSI: TC=0.63/1.00 (3-4:2) , BC=0.39/1.00 (7-8:17) , WB=0.76/1.00 (5-7:2) , SSI=0.33/1.00 (4-5:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (9) (INPUT = 0.90 )
JSI METAL= 0.44 (4) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C03 | 2 | 1 | Communal Building Fire Reconstruction | | P5836416 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:34 2019 Page 1

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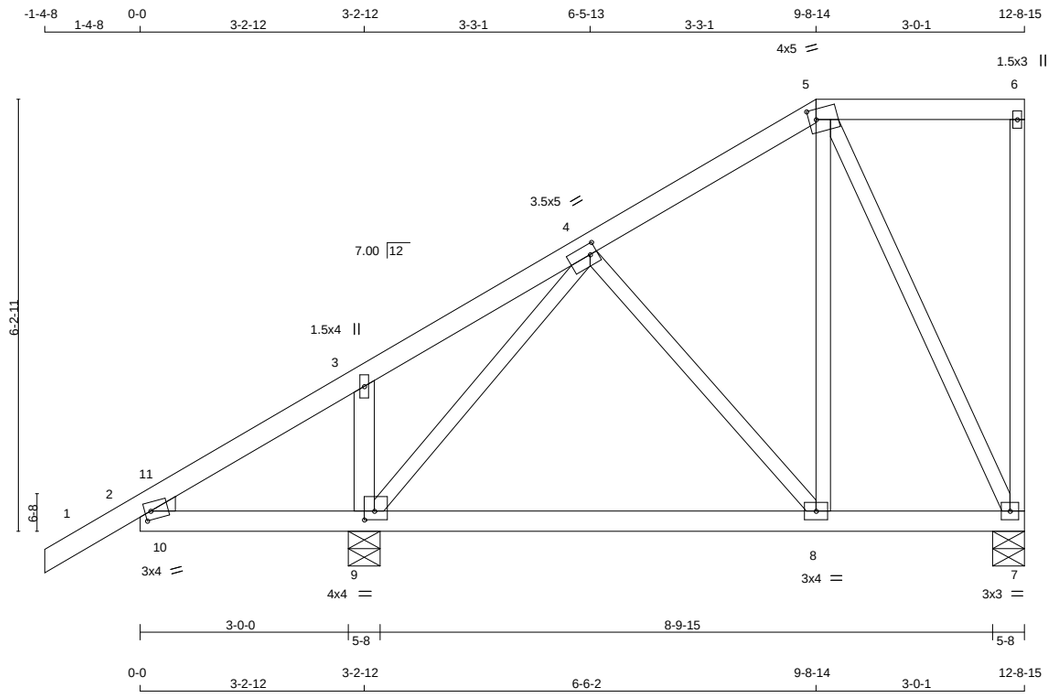


TOTAL WEIGHT = 2 X 57 = 115 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 5 | 2x4 | DRY | No.2 | SPF |
| 5 - 6 | 2x4 | DRY | No.2 | SPF |
| 7 - 6 | 2x3 | DRY | No.2 | SPF |
| 2 - 7 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 9 - 3 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMBH-m | MT20 | 3.0 | 4.0 | 1.50 | 1.00 |
| 3 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 4 | TMWW-t | MT20 | 3.5 | 5.0 | 1.75 | 1.25 |
| 5 | TTWW-m | MT20 | 4.0 | 5.0 | 1.75 | 1.25 |
| 6 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 7 | BMVW1-t | MT20 | 3.0 | 3.0 | | |
| 8 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 9 | BMWW1-t | MT20 | 4.0 | 4.0 | 1.50 | 1.75 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX | HEEL WEDGE |
|---|---|---|---|---|---|---|---|---|
| 7 | 718 | 0 | 738 | 0 | -170 | 5-8 | 1-8 | |
| 9 | 1933 | 0 | 2173 | 315 | -542 | 5-8 | 2-8 | 2x3 L |

PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 170 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 542 LBS FACTORED UPLIFT

PROVIDE FOR 315 LBS FACTORED HORIZONTAL REACTION AT JOINT 9

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 7 | 551 | 371 / -125 | 84 / -11 | 0 / 0 | 154 / -183 | 96 / 0 | 0 / 0 |
| 9 | 1440 | 1205 / 0 | 171 / 0 | 0 / 0 | 50 / -531 | 224 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 9 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 225 / -135 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7, 9

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 55 | -162.1 | -162.1 | 0.28 (2) | 10.00 | 9- 3 | -701 / 279 | 0.08 (2) |
| 2-11 | -354 / 1168 | -162.1 | -162.1 | 0.27 (19) | 6.25 | 9- 4 | -1562 / 295 | 0.68 (2) |
| 11- 3 | -299 / 1002 | -162.1 | -162.1 | 0.48 (2) | 6.25 | 4- 8 | -43 / 347 | 0.08 (19) |
| 3- 4 | -153 / 951 | -162.1 | -162.1 | 0.48 (2) | 6.25 | 8- 5 | -217 / 260 | 0.13 (19) |
| 4- 5 | -303 / 118 | -162.1 | -162.1 | 0.25 (2) | 6.25 | 5- 7 | -519 / 158 | 0.39 (1) |
| 5- 6 | -41 / 104 | -162.1 | -162.1 | 0.30 (3) | 6.25 | 10-11 | -568 / 103 | 0.00 (1) |
| 7- 6 | -304 / 78 | 0.0 | 0.0 | 0.38 (13) | 7.81 | | | |
| 2-10 | -831 / 341 | -27.5 | -27.5 | 0.27 (19) | 6.25 | | | |
| 10- 9 | -831 / 341 | -27.5 | -27.5 | 0.27 (19) | 6.25 | | | |
| 9- 8 | -291 / 258 | -27.5 | -27.5 | 0.26 (5) | 6.25 | | | |
| 8- 7 | -89 / 233 | -27.5 | -27.5 | 0.21 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/180 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.07")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 925 ( 0.04")
ALLOWABLE DEFL.(TL)= L/120 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 856 ( 0.05")

CSI: TC=0.48/1.00 (3-11:2) , BC=0.27/1.00 (9-10:19) , WB=0.68/1.00 (4-9:2) , SSI=0.40/1.00 (2-10:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (2) (INPUT = 0.90 )
JSI METAL= 0.44 (4) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C04 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836417 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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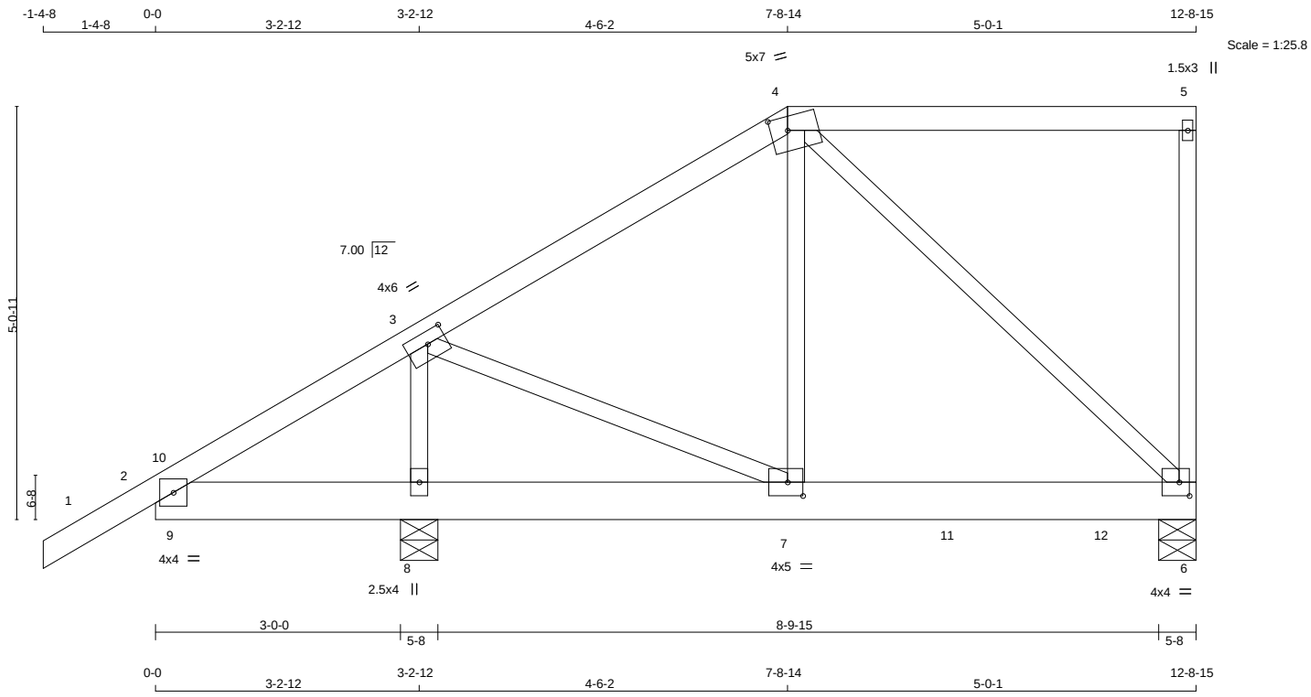


TOTAL WEIGHT = 2 X 58 = 116 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 4 - 5 | 2x4 | DRY | No.2 | SPF |
| 6 - 5 | 2x3 | DRY | No.2 | SPF |
| 2 - 6 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-I | MT20 | 4.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 4.0 | 6.0 | 1.75 | 2.75 |
| 4 | TTWW-m | MT20 | 5.0 | 7.0 | 2.00 | 2.50 |
| 5 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 6 | BMVW1-t | MT20 | 4.0 | 4.0 | 2.00 | 1.50 |
| 7 | BMWW-t | MT20 | 4.0 | 5.0 | 2.00 | 2.25 |
| 8 | BMW1+w | MT20 | 2.5 | 4.0 | | |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 1070 | 0 | 1303 | 0 | -484 | 5-8 | 1-10 |
| 8 | 2145 | 0 | 2233 | 254 | -741 | 5-8 | 5-5 |

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 484 LBS FACTORED UPLIFT

PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 741 LBS FACTORED UPLIFT

PROVIDE FOR 254 LBS FACTORED HORIZONTAL REACTION AT JOINT 8

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 815 | 635 / -125 | 118 / -11 | 0 / 0 | 453 / -433 | 135 / 0 | 0 / 0 |
| 8 | 1599 | 1219 / 0 | 191 / 0 | 0 / 0 | 235 / -689 | 248 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 8 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 181 / -108 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6, 8

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 61 | -162.1 | -162.1 | 0.31 (2) | 10.00 | 8- 3 | -2013 / 688 | 0.33 (2) |
| 2-10 | -358 / 1425 | -162.1 | -162.1 | 0.38 (19) | 6.25 | 3- 7 | -348 / 1224 | 0.30 (1) |
| 10- 3 | -269 / 1005 | -162.1 | -162.1 | 0.76 (2) | 6.25 | 7- 4 | -258 / 373 | 0.09 (19) |
| 3- 4 | -692 / 311 | -162.1 | -162.1 | 0.61 (2) | 6.25 | 4- 6 | -836 / 359 | 0.66 (10) |
| 4- 5 | -32 / 82 | -162.1 | -162.1 | 0.91 (3) | 6.25 | 9-10 | -949 / 144 | 0.00 (1) |
| 6- 5 | -507 / 131 | 0.0 | 0.0 | 0.27 (13) | 7.81 | | | |
| 2- 9 | -866 / 313 | -27.5 | -27.5 | 0.20 (19) | 6.25 | | | |
| 9- 8 | -866 / 313 | -27.5 | -27.5 | 0.20 (19) | 6.25 | | | |
| 8- 7 | -866 / 174 | -27.5 | -27.5 | 0.15 (19) | 6.25 | | | |
| 7-11 | -293 / 610 | -27.5 | -27.5 | 0.24 (7) | 6.25 | | | |
| 11-12 | -293 / 610 | -27.5 | -27.5 | 0.24 (7) | 6.25 | | | |
| 12- 6 | -293 / 610 | -27.5 | -27.5 | 0.24 (7) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 7 | 7-8-14 | -180 | -208 | 105 | FRONT | VERT | TOTAL | --- | C1 |
| 7 | 7-9-10 | -128 | -174 | 136 | FRONT | VERT | TOTAL | --- | C1 |
| 11 | 9-9-10 | -128 | -174 | 136 | FRONT | VERT | TOTAL | --- | C1 |
| 12 | 11-8-4 | -128 | -174 | 136 | FRONT | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/180 (0.63")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 999 ( 0.03")
ALLOWABLE DEFL.(TL)= L/120 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 999 ( 0.03")

CSI: TC=0.91/1.00 (4-5:3) , BC=0.24/1.00 (6-7:7) , WB=0.66/1.00 (4-6:10) , SSI=0.55/1.00 (2-9:19)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (3) (INPUT = 0.90 )
JSI METAL= 0.43 (3) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C05 | 6 | 1 | Communal Building Fire Reconstruction | | P5836418 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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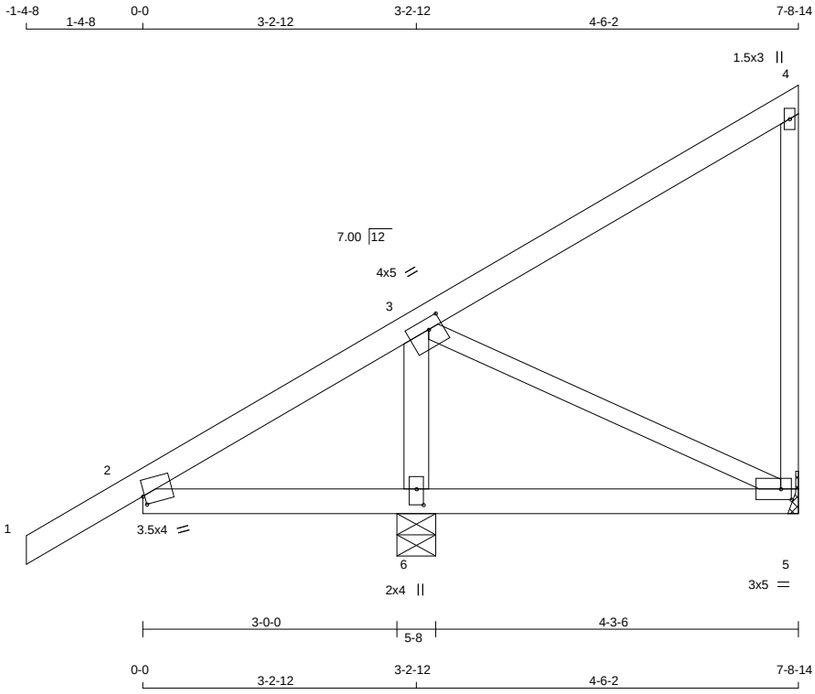


TOTAL WEIGHT = 6 X 31 = 183 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 2 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x4 | DRY | No.2 | SPF |
| EXCEPT | | | | |
| 3 - 5 | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-m | MT20 | 3.5 | 4.0 | 1.25 | 0.25 |
| 3 | TMWW-t | MT20 | 4.0 | 5.0 | 1.50 | 2.00 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 5.0 | 1.50 | 1.50 |
| 6 | BMW1+w | MT20 | 2.0 | 4.0 | 2.25 | 1.00 |

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 5 | 154 | 0 | 190 | 0 | -503 | MECHANICAL | |
| 6 | 2347 | 0 | 2631 | 271 | -579 | 5-8 | 4-14 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 503 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 579 LBS FACTORED UPLIFT

PROVIDE FOR 271 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 5 | 129 | 69 / -329 | 32 / -34 | 0 / 0 | 130 / -106 | 28 / 0 | 0 / 0 |
| 6 | 1738 | 1473 / 0 | 195 / 0 | 0 / 0 | 65 / -580 | 259 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 194 / -117 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 5.73 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS | | | | | WEBS | | | |
|---|---|---|---|---|---|---|---|---|
| MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) | | MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| FR-TO | | FROM | TO | | | FR-TO | | |
| 1- 2 | 0 / 55 | -162.1 | -162.1 | 0.31 (2) | 10.00 | 6- 3 | -1968 / 489 | 0.24 (2) |
| 2- 3 | -313 / 1330 | -162.1 | -162.1 | 0.82 (2) | 6.25 | 3- 5 | -131 / 1207 | 0.30 (19) |
| 3- 4 | -93 / 92 | -162.1 | -162.1 | 0.62 (2) | 6.25 | | | |
| 5- 4 | -345 / 97 | 0.0 | 0.0 | 0.27 (13) | 7.81 | | | |
| 2- 6 | -1093 / 334 | -130.7 | -130.7 | 0.46 (2) | 5.73 | | | |
| 6- 5 | -1093 / 203 | -130.7 | -130.7 | 0.47 (2) | 5.73 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 4-0-0
END DISTANCE = 7-8-14
END SPAN CARRIED = 4-0-0
END WALL WIDTH = 1-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 99 % OF GSL.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/180 (0.30")
CALCULATED VERT. DEFL.(TL) = L/ 972 (0.06")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.32")
CALCULATED VERT. DEFL.(LL) = L/ 971 ( 0.04")
ALLOWABLE DEFL.(TL)= L/120 (0.32")
CALCULATED VERT. DEFL.(TL) = L/ 867 ( 0.04")

CSI: TC=0.82/1.00 (2-3:2) , BC=0.47/1.00 (5-6:2) , WB=0.30/1.00 (3-5:19) , SSI=0.39/1.00 (3-4:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) | | SHEAR (PLI) | | SECTION (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= 0.89 (2) (INPUT = 0.90 )
JSI METAL= 0.47 (3) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | C06 | 2 | 1 | Communal Building Fire Reconstruction | | P5836419 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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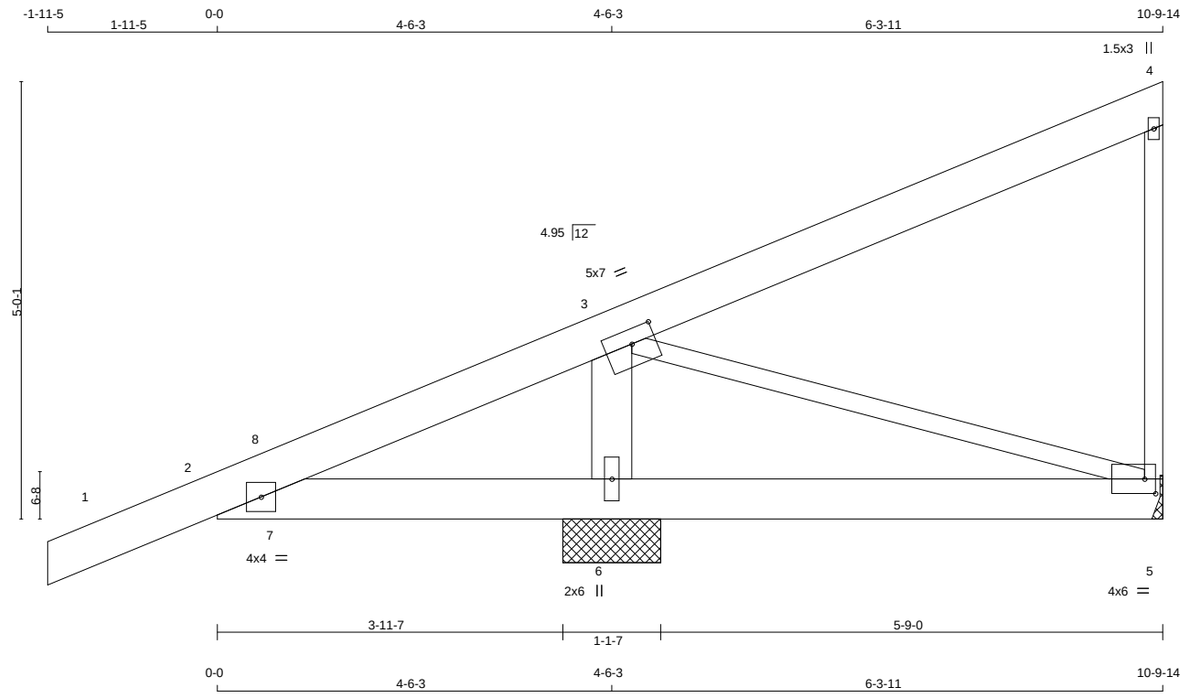


TOTAL WEIGHT = 2 X 55 = 111 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 2 - 5 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS | 2x6 | DRY | No.2 | SPF |
| EXCEPT | | | | |
| 3 - 5 | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMB-I | MT20 | 4.0 | 4.0 | | |
| 3 | TMWW-t | MT20 | 5.0 | 7.0 | 2.00 | 3.25 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 4.0 | 6.0 | 2.00 | 1.50 |
| 6 | BMW1+w | MT20 | 2.0 | 6.0 | | |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 216 | 0 | 230 | 0 | -708 | MECHANICAL | |
| 6 | 3300 | 0 | 3700 | 308 | -858 | 1-1-7 | 9-13 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 708 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 858 LBS FACTORED UPLIFT

PROVIDE FOR 308 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 181 | 98 / -464 | 45 / -47 | 0 / 0 | 93 / -88 | 40 / 0 | 0 / 0 |
| 6 | 2442 | 2074 / 0 | 273 / 0 | 0 / 0 | 0 / -846 | 362 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 220 / 0 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 5.02 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 70 | -162.9 | -162.9 | 0.30 (2) | 10.00 | 6- 3 | -2699 / 729 | 0.20 (2) |
| 2- 8 | -568 / 2391 | -162.9 | -162.9 | 0.42 (19) | 6.25 | 3- 5 | -386 / 2318 | 0.57 (19) |
| 8- 3 | -575 / 2452 | -162.9 | -162.9 | 0.94 (2) | 6.25 | 7- 8 | -294 / 16 | 0.00 (1) |
| 3- 4 | -99 / 47 | -162.9 | -162.9 | 0.67 (2) | 6.25 | | | |
| 5- 4 | -468 / 120 | 0.0 | 0.0 | 0.28 (11) | 7.81 | | | |
| 2- 7 | -2217 / 603 | -131.4 | -131.4 | 0.24 (19) | 5.19 | | | |
| 7- 6 | -2217 / 603 | -131.4 | -131.4 | 0.54 (2) | 5.02 | | | |
| 6- 5 | -2217 / 449 | -131.4 | -131.4 | 0.56 (2) | 5.02 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 50.1 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 72.1 | PSF |

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

GIRDER TYPE: CStdGirder
START DISTANCE = 0-0
START SPAN CARRIED = 4-0-0
END DISTANCE = 10-9-14
END SPAN CARRIED = 4-0-0
END WALL WIDTH = 1-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
- ADDT'L LOADS BASED ON 100 % OF GSL.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 50.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.21")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.03")
ALLOWABLE DEFL.(TL)= L/180 (0.42")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.05")

CANTILEVER DEFLECTION:
ALLOWABLE DEFL.(LL)= L/120 (0.45")
CALCULATED VERT. DEFL.(LL) = L/ 513 ( 0.11")
ALLOWABLE DEFL.(TL)= L/120 (0.45")
CALCULATED VERT. DEFL.(TL) = L/ 458 ( 0.12")

CSI: TC=0.94/1.00 (3-8:2) , BC=0.56/1.00 (5-6:2) , WB=0.57/1.00 (3-5:19) , SSI=0.46/1.00 (3-4:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (2) (INPUT = 0.90 )
JSI METAL= 0.94 (2) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | D01 | 1 | 1 | Communal Building Fire Reconstruction | P5836420 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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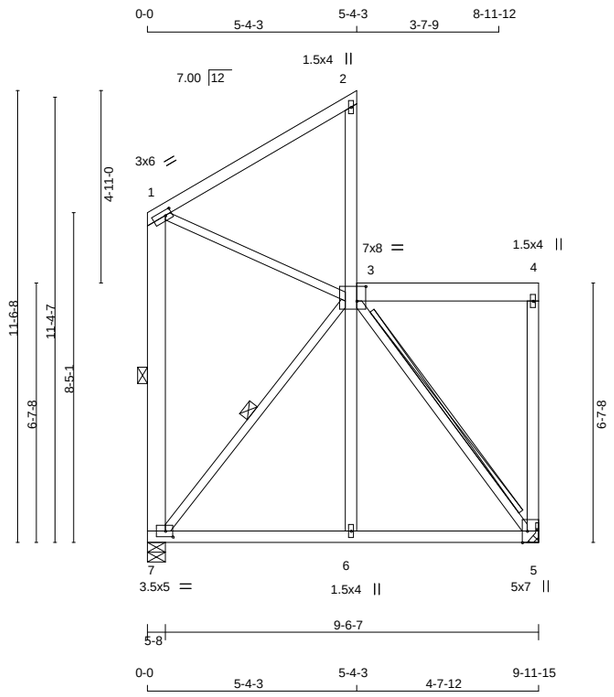


TOTAL WEIGHT = 77 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x4 | DRY | No.2 | SPF |
| 6 - 2 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x6 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 7 - 1 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 2 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 3 | TVMWWW-l | MT20 | 7.0 | 8.0 | 4.50 | 2.75 |
| 4 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 5 | BMVW1+t | MT20 | 5.0 | 7.0 | Edge | 1.50 |
| 6 | BMV+p | MT20 | 1.5 | 4.0 | | |
| 7 | BMWW1-t | MT20 | 3.5 | 5.0 | 1.75 | 2.25 |

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

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 1987 | 0 | 1987 | 0 | -319 | MECHANICAL | |
| 7 | 1308 | 0 | 1308 | 184 | 0 | 5-8 | 1-8 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 3-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 319 LBS FACTORED UPLIFT

PROVIDE FOR 184 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 1435 | 1064 / 0 | 98 / 0 | 0 / 0 | 86 / -404 | 274 / 0 | 0 / 0 |
| 7 | 970 | 672 / 0 | 98 / 0 | 0 / 0 | 65 / -115 | 201 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 131 / -57 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 1-7, 3-7. DBS = 20-0-0 . CBF = 131 LBS.
2x3 DRY SPF No.2 T-BRACE AT 3-5

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.

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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM TO (PLF) | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|
| 1- 2 | -212 / 34 | -174.6 -174.6 | 0.92 (2) | 6.25 | 3- 5 | -1077 / 381 | 1.00 (1) |
| 6- 3 | 0 / 287 | 0.0 0.0 | 0.12 (14) | 10.00 | 7- 1 | -512 / 10 | 0.11 (2) |
| 3- 2 | -515 / 201 | 0.0 0.0 | 0.21 (14) | 7.81 | 7- 3 | -1044 / 0 | 0.44 (1) |
| 3- 4 | -43 / 110 | -452.9 -452.9 | 0.96 (1) | 6.25 | 1- 3 | -31 / 273 | 0.06 (13) |
| 5- 4 | -1085 / 39 | 0.0 0.0 | 0.93 (1) | 7.50 | | | |
| 7- 6 | -108 / 652 | -27.5 -27.5 | 0.29 (17) | 6.25 | | | |
| 6- 5 | -121 / 653 | -27.5 -27.5 | 0.29 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**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 = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.33")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")
ALLOWABLE DEFL.(TL)= L/180 (0.65")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

CSI: TC=0.96/1.00 (3-4:1) , BC=0.29/1.00 (5-6:17) , WB=1.00/1.00 (3-5:1) , SSI=0.72/1.00 (3-4:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (7) (INPUT = 0.90 )
JSI METAL= 0.27 (4) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | D02 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836421 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:37 2019 Page 1

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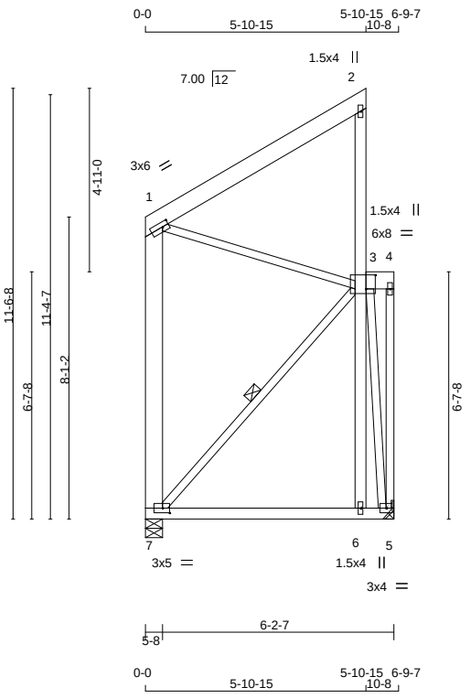


TOTAL WEIGHT = 2 X 68 = 136 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x6 | DRY | No.2 | SPF |
| 6 - 2 | 2x4 | DRY | No.2 | SPF |
| 3 - 4 | 2x6 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS EXCEPT | 2x3 | DRY | No.2 | SPF |
| 7 - 1 | 2x6 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMWW-t | MT20 | 3.0 | 6.0 | 1.50 | 2.00 |
| 2 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 3 | TVMWWW-l | MT20 | 6.0 | 8.0 | 4.50 | 3.00 |
| 4 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 6 | BMV+p | MT20 | 1.5 | 4.0 | | |
| 7 | BMWW1-t | MT20 | 3.0 | 5.0 | 1.50 | 2.25 |

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Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 865 | 0 | 895 | 0 | -466 | MECHANICAL | |
| 7 | 664 | 0 | 753 | 188 | 0 | 5-8 | 1-8 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 466 LBS FACTORED UPLIFT

PROVIDE FOR 188 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 641 | 445 / 0 | 64 / 0 | 0 / 0 | 156 / -418 | 132 / 0 | 0 / 0 |
| 7 | 504 | 388 / 0 | 64 / 0 | 0 / 0 | 238 / -129 | 111 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 134 / -64 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

1 - 2x4 DRY SPF No.2 LATERAL BRACE(S) AT 1/ 2 LENGTH OF 3-7. DBS = 20-0-0 . CBF = 41 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: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD FROM | TO | LC1 MAX (PLF) CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | -214 / 33 | -174.6 | -174.6 | 0.56 (2) | 6.25 | 3- 5 | -738 / 420 | 0.51 (2) |
| 6- 3 | 0 / 329 | 0.0 | 0.0 | 0.11 (14) | 10.00 | 7- 1 | -569 / 16 | 0.33 (2) |
| 3- 2 | -565 / 215 | 0.0 | 0.0 | 0.20 (14) | 7.81 | 7- 3 | -379 / 0 | 0.17 (14) |
| 3- 4 | -43 / 110 | -452.9 | -452.9 | 0.03 (1) | 6.25 | 1- 3 | -28 / 278 | 0.06 (13) |
| 5- 4 | -203 / 7 | 0.0 | 0.0 | 0.44 (14) | 7.81 | | | |
| 7- 6 | -55 / 108 | -27.5 | -27.5 | 0.25 (17) | 6.25 | | | |
| 6- 5 | -52 / 105 | -27.5 | -27.5 | 0.25 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**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 = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.21")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.04")
ALLOWABLE DEFL.(TL)= L/180 (0.43")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.06")

CSI: TC=0.56/1.00 (1-2:2) , BC=0.25/1.00 (5-6:17) , WB=0.51/1.00 (3-5:2) , SSI=0.32/1.00 (1-2:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (3) (INPUT = 0.90 )
JSI METAL= 0.19 (2) (INPUT = 1.00 )




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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | D03-GT | 1 | 2 | Communal Building Fire Reconstruction<br>TRUSS DESC. | P5836422 |

Locke Truss div of 976711 Ont. Inc., Brockville, ON K6V 5T4

Version 8.300 S May 10 2019 MiTek Industries, Inc. Wed Jul 3 08:36:04 2019 Page 1

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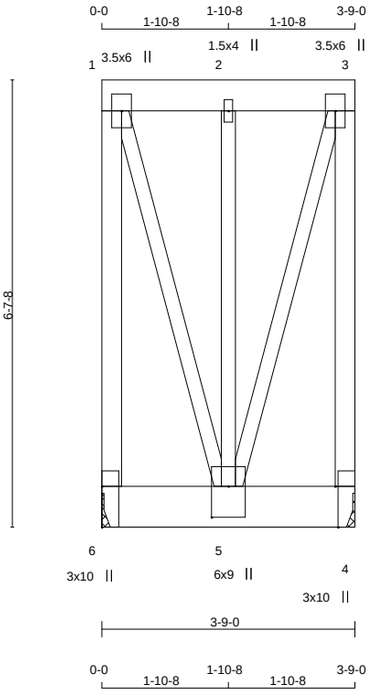


Scale = 1:31.2

DO NOT INVERT TRUSS

TOTAL WEIGHT = 2 X 42 = 84 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 6 - 1 | 2x4 | DRY | 2100F 1.8E | SPF |
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 4 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 6 - 4 | 2x8 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

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 | | | |
| 6- 1 | 1 | 12 | TOP |
| 3- 4 | 1 | 12 | TOP |
| 1- 3 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 6- 4 | 2 | 12 | SIDE(210.5) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2- 5 | 1 | 3 | SIDE(1187.8) |
| 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 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 TRANSFERING. 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 |
|---|---|---|---|---|---|---|
| 1 | TMVW+p | MT20 | 3.5 | 6.0 | | |
| 2 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 3 | TMVW+p | MT20 | 3.5 | 6.0 | | |
| 4 | BMV1+t | MT20 | 3.0 | 10.0 | Edge | 0.50 |
| 5 | BMWWW+t | MT20 | 6.0 | 9.0 | 5.50 | 3.00 |
| 6 | BMV1+t | MT20 | 3.0 | 10.0 | 7.25 | |

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

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Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 3856 | 0 | 3867 | -280 | -113 | MECHANICAL | |
| 4 | 3856 | 0 | 3856 | 0 | -69 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 6, 4. MINIMUM BEARING LENGTH AT JOINT 6 = 1-8, JOINT 4 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 280 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | SNOW | MAX./MIN. COMPONENT REACTIONS LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 2804 | 1896 / 0 | 164 / 0 | 0 / 0 | 231 / -559 | 744 / 0 | 0 / 0 |
| 4 | 2804 | 1896 / 0 | 164 / 0 | 0 / 0 | 200 / -527 | 744 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 200 / -200 | 0 / 0 | 0 /0 |

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. | FR-TO | FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| | 6- 1 | -2894 / 133 | 0.0 | 0.0 | 0.67 (1) | 7.81 | 1- 5 | -243 / 2213 | 0.27 (1) |
| | 1- 2 | -653 / 109 | -627.9 | -627.9 | 0.18 (1) | 6.25 | 5- 2 | -793 / 0 | 0.24 (1) |
| | 2- 3 | -653 / 109 | -627.9 | -627.9 | 0.18 (1) | 6.25 | 5- 3 | -229 / 2209 | 0.27 (1) |
| | 4- 3 | -2884 / 97 | 0.0 | 0.0 | 0.67 (1) | 7.81 | | | |
| | 6- 5 | -179 / 240 | -27.5 | -27.5 | 0.45 (1) | 6.25 | | | |
| | 5- 4 | -42 / 108 | -27.5 | -27.5 | 0.45 (1) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 1-11-4 | -5255 | -5255 | 230 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.

[M]

**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 = | 50.1 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 77.1 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 50.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/180 (0.25")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.67/1.00 (1-6:1) , BC=0.45/1.00 (5-6:1) , WB=0.27/1.00 (1-5:1) , SSI=0.29/1.00 (5-6:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.77 (3) (INPUT = 0.90 )
JSI METAL= 0.44 (5) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | D03A-GT | 1 | 2 | Communal Building Fire Reconstruction | P5836423 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:38 2019 Page 1

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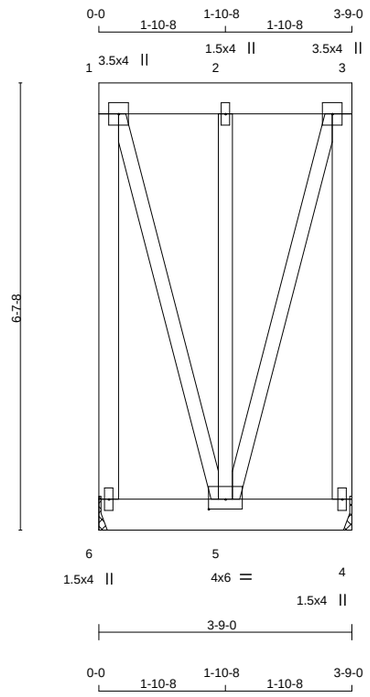


Scale = 1:31.2

DO NOT INVERT TRUSS

TOTAL WEIGHT = 2 X 41 = 81 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 6 - 1 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 4 - 3 | 2x4 | DRY | No.2 | SPF |
| 6 - 4 | 2x6 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

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 | | | |
| 6- 1 | 1 | 12 | TOP |
| 3- 4 | 1 | 12 | TOP |
| 1- 3 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 6- 4 | 2 | 12 | TOP |
| 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.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW+p | MT20 | 3.5 | 4.0 | | |
| 2 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 3 | TMVW+p | MT20 | 3.5 | 4.0 | | |
| 4 | BMV1+p | MT20 | 1.5 | 4.0 | | |
| 5 | BMWWW-t | MT20 | 4.0 | 6.0 | 1.75 | 3.00 |
| 6 | BMV1+p | MT20 | 1.5 | 4.0 | | |

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 1229 | 0 | 1275 | -283 | -3 | MECHANICAL | |
| 4 | 1229 | 0 | 1263 | 0 | 0 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 6, 4. MINIMUM BEARING LENGTH AT JOINT 6 = 1-8, JOINT 4 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 150 LBS FACTORED UPLIFT

PROVIDE FOR 283 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 908 | 488 / 0 | 37 / 0 | 0 / 0 | 163 / -248 | 382 / 0 | 0 / 0 |
| 4 | 908 | 488 / 0 | 37 / 0 | 0 / 0 | 132 / -217 | 382 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 202 / -202 | 0 / 0 | 0 /0 |

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. | FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) | | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. | FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| FR-TO | | FROM | TO | | FR-TO | | | |
| 6- 1 | -1126 / 38 | 0.0 | 0.0 | 0.43 (1) | 7.81 | 1- 5 | -153 / 532 | 0.06 (1) |
| 1- 2 | -157 / 83 | -627.9 | -627.9 | 0.11 (1) | 6.25 | 5- 2 | -1118 / 0 | 0.36 (1) |
| 2- 3 | -157 / 83 | -627.9 | -627.9 | 0.11 (1) | 6.25 | 5- 3 | -137 / 527 | 0.06 (1) |
| 4- 3 | -1115 / 0 | 0.0 | 0.0 | 0.43 (1) | 7.81 | | | |
| 6- 5 | -182 / 243 | -27.5 | -27.5 | 0.09 (1) | 6.25 | | | |
| 5- 4 | -43 / 109 | -27.5 | -27.5 | 0.09 (1) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**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 = | 50.1 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 77.1 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 50.1 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/180 (0.25")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.43/1.00 (1-6:1) , BC=0.09/1.00 (5-6:1) , WB=0.36/1.00 (2-5:1) , SSI=0.21/1.00 (1-2:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.39 (2) (INPUT = 0.90 )
JSI METAL= 0.14 (4) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | Communal Building Fire | DRWG NO. | P5836424 |
|---|---|---|---|---|---|---|---|
| 1904-0607 | D04-GT | 1 | 3 | TRUSS DESC. | Reconstruction | | |

Locke Truss div of 976711 Ont. Inc., Brockville, ON K6V 5T4

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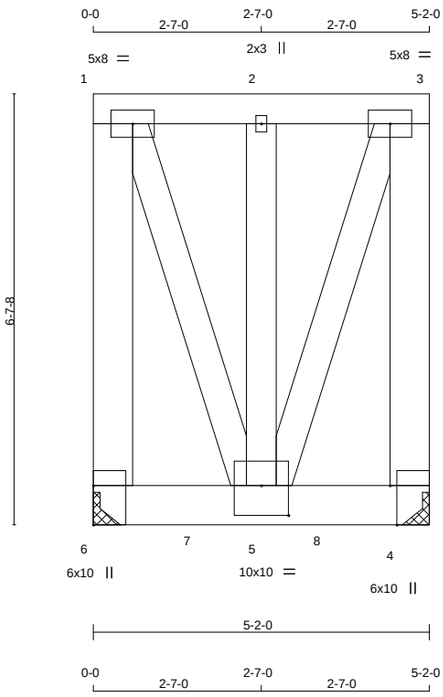


Scale = 1:32.4

DO NOT INVERT TRUSS

TOTAL WEIGHT = 3 X 79 = 236 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 6 - 1 | 2x8 | DRY | No.2 | SPF |
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 4 - 3 | 2x8 | DRY | No.2 | SPF |
| 6 - 4 | 2x8 | DRY | 1950F 1.7E | SPF |
| ALL WEBS | 2x6 | DRY | 2100F 1.8E | SPF |

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 3 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

| CHORDS | #ROWS | SURFACE SPACING (IN) | LOAD(PLF) |
|---|---|---|---|
| TOP CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 6- 1 | 2 | 12 | TOP |
| 3- 4 | 2 | 12 | TOP |
| 1- 3 | 2 | 12 | TOP |
| BOTTOM CHORDS : (0.122"X3") SPIRAL NAILS | | | |
| 6- 4 | 4 | 4 | SIDE(1734.8) |
| WEBS : (0.122"X3") SPIRAL NAILS | | | |
| 2x6 | 2 | 6 | |

STAGGER NAILS BY HALF THE SURFACE SPACING IN ADJACENT PLIES.

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 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 TRANSFERING. 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 |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 5.0 | 8.0 | | |
| 2 | TMW+w | MT20 | 2.0 | 3.0 | | |
| 3 | TMVW-t | MT20 | 5.0 | 8.0 | | |
| 4 | BMV1+t | MT20 | 6.0 | 10.0 | Edge | 1.25 |
| 5 | BMWWW-t | MT20 | 10.0 | 10.0 | 5.50 | 5.00 |
| 6 | BMV1+t | MT20 | 6.0 | 10.0 | 7.25 | |

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

PEO
Certificate No. 10889485


July 3,2019

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 7889 | 0 | 7889 | -280 | -388 | MECHANICAL | |
| 4 | 7893 | 0 | 7893 | 0 | -327 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 6, 4. MINIMUM BEARING LENGTH AT JOINT 6 = 5-0, JOINT 4 = 5-0.

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 388 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 327 LBS FACTORED UPLIFT

PROVIDE FOR 280 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 5674 | 4251 / 0 | 355 / 0 | 0 / 0 | 228 / -964 | 1068 / 0 | 0 / 0 |
| 4 | 5676 | 4253 / 0 | 355 / 0 | 0 / 0 | 184 / -920 | 1069 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 200 / -200 | 0 / 0 | 0 /0 |

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 6- 1 | -6021 / 342 | 0.0 | 0.0 | 0.71 (1) | 7.81 | 1- 5 | -350 / 5928 | 0.09 (1) |
| 1- 2 | -2314 / 174 | -452.9 | -452.9 | 0.08 (1) | 6.25 | 5- 2 | -1215 / 45 | 0.07 (1) |
| 2- 3 | -2314 / 174 | -452.9 | -452.9 | 0.08 (1) | 6.25 | 5- 3 | -315 / 5928 | 0.09 (1) |
| 4- 3 | -6021 / 285 | 0.0 | 0.0 | 0.71 (1) | 7.81 | | | |
| 6- 7 | -179 / 240 | -27.5 | -27.5 | 0.22 (1) | 6.25 | | | |
| 7- 5 | -179 / 240 | -27.5 | -27.5 | 0.22 (1) | 6.25 | | | |
| 5- 8 | -42 / 108 | -27.5 | -27.5 | 0.22 (1) | 6.25 | | | |
| 8- 4 | -42 / 108 | -27.5 | -27.5 | 0.22 (1) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 7 | 1-7-0 | -6650 | -6650 | 213 | BACK | VERT | TOTAL | --- | C1 |
| 8 | 3-7-0 | -6650 | -6650 | 213 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.

[M]

**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 = | 50.1 | PSF |
| | | DL = | 10.0 | PSF |
| BOT | CH. | LL = | 10.0 | PSF |
| | | DL = | 7.0 | PSF |
| TOTAL | LOAD | = | 77.1 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 50.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/180 (0.34")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.71/1.00 (1-6:1) , BC=0.22/1.00 (4-5:1) , WB=0.09/1.00 (1-5:1) , SSI=0.87/1.00 (5-6:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.85 (1) (INPUT = 0.90 )
JSI METAL= 0.33 (5) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | D05-GT | 1 | 1 | Communal Building Fire Reconstruction | | P5836425 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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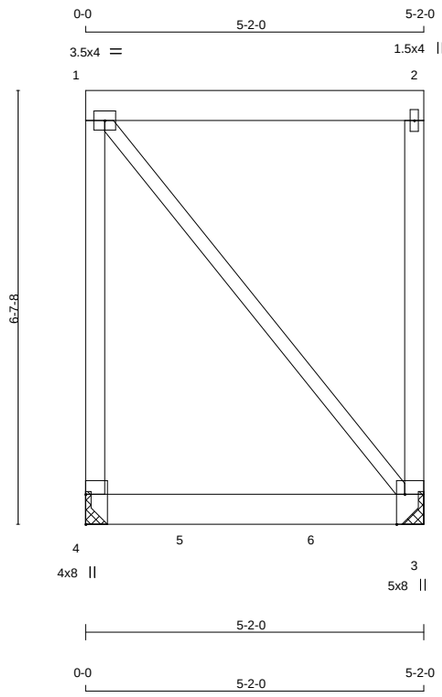


Scale: 3/8"=1'

DO NOT INVERT TRUSS

TOTAL WEIGHT = 37 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 4 - 1 | 2x4 | DRY | No.2 | SPF |
| 1 - 2 | 2x6 | DRY | 2100F 1.8E | SPF |
| 3 - 2 | 2x4 | DRY | No.2 | SPF |
| 4 - 3 | 2x6 | DRY | 2100F 1.8E | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TMVW-t | MT20 | 3.5 | 4.0 | | |
| 2 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 3 | BMVW1+t | MT20 | 5.0 | 8.0 | Edge | 1.50 |
| 4 | BMV1+t | MT20 | 4.0 | 8.0 | 5.50 | |

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

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

PROVIDE ADEQUATE DRAINAGE TO PREVENT PONDING

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 4 | 2078 | 0 | 2139 | -283 | -657 | MECHANICAL | |
| 3 | 2078 | 0 | 2122 | 0 | -597 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 4, 3. MINIMUM BEARING LENGTH AT JOINT 4 = 4-0, JOINT 3 = 4-0.

PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 657 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 3 FOR 597 LBS FACTORED UPLIFT

PROVIDE FOR 283 LBS FACTORED HORIZONTAL REACTION AT JOINT 4

**UNFACTORED REACTIONS**

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

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 4 | 1496 | 1117 / 0 | 96 / 0 | 0 / 0 | 272 / -652 | 284 / 0 | 0 / 0 |
| 3 | 1497 | 1117 / 0 | 96 / 0 | 0 / 0 | 229 / -609 | 284 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 4 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 202 / -202 | 0 / 0 | 0 /0 |

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 4- 1 | -1216 / 211 | 0.0 | 0.0 | 0.93 (1) | 7.27 | 1- 3 | -220 / 220 | 0.26 (11) |
| 1- 2 | -43 / 109 | -452.9 | -452.9 | 0.60 (1) | 6.25 | | | |
| 3- 2 | -1170 / 42 | 0.0 | 0.0 | 0.93 (1) | 7.25 | | | |
| 4- 5 | -182 / 243 | -27.5 | -27.5 | 0.57 (1) | 6.25 | | | |
| 5- 6 | -182 / 243 | -27.5 | -27.5 | 0.57 (1) | 6.25 | | | |
| 6- 3 | -182 / 243 | -27.5 | -27.5 | 0.57 (1) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 1-7-0 | -837 | -877 | 479 | FRONT | VERT | TOTAL | --- | C1 |
| 6 | 3-7-0 | -837 | -877 | 479 | FRONT | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**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 = | 50.1 | PSF | |
| | DL = | 10.0 | PSF | |
| BOT CH. | LL = | 10.0 | PSF | |
| | DL = | 7.0 | PSF | |
| TOTAL LOAD | = | 77.1 | PSF | |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 0.00/12

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(80 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 50.1 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 650 (0.10")
ALLOWABLE DEFL.(TL)= L/180 (0.34")
CALCULATED VERT. DEFL.(TL) = L/ 489 (0.13")

CSI: TC=0.93/1.00 (1-4:1) , BC=0.57/1.00 (3-4:1) , WB=0.26/1.00 (1-3:11) , SSI=0.78/1.00 (1-2:1)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (1) (INPUT = 0.90 )
JSI METAL= 0.29 (2) (INPUT = 1.00 )

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July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.
For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E01 | 38 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836426 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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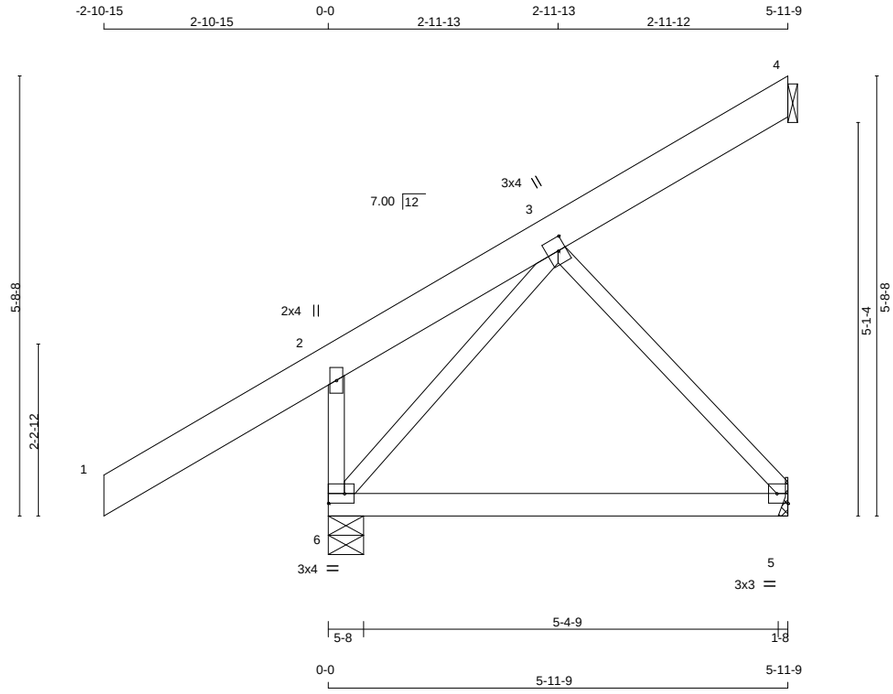


TOTAL WEIGHT = 38 X 34 = 1288 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 6 - 2 | 2x3 | DRY | No.2 | SPF |
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 6 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW+t | MT20 | 3.0 | 4.0 | 2.00 | 1.25 |
| 5 | BMW1-t | MT20 | 3.0 | 3.0 | 1.50 | Edge |
| 6 | BMVW1-t | MT20 | 3.0 | 4.0 | 1.50 | Edge |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| | FACTORED GROSS REACTION | | MAXIMUM FACTORED GROSS REACTION | | | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| JT | VERT | HORZ | DOWN | HORZ | UPLIFT | IN-SX | IN-SX |
| 6 | 1178 | 0 | 1389 | 360 | -111 | 5-8 | 2-0 |
| 4 | 244 | 0 | 291 | 0 | -101 | 1-8 | 1-8 |
| 5 | 197 | 0 | 220 | 0 | -161 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) 4

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 161 LBS FACTORED UPLIFT

PROVIDE FOR 360 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| | 1ST LCASE | MAX./MIN. COMPONENT REACTIONS | | | | | |
|---|---|---|---|---|---|---|---|
| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
| 6 | 843 | 815 / 0 | 59 / 0 | 0 / 0 | 40 / -149 | 109 / 0 | 0 / 0 |
| 4 | 165 | 181 / 0 | 0 / 0 | 0 / 0 | 40 / -82 | 15 / 0 | 0 / 0 |
| 5 | 179 | 86 / -134 | 59 / 0 | 0 / 0 | 87 / -131 | 48 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 257 / -164 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS | | | | | WEBS | | | |
|---|---|---|---|---|---|---|---|---|
| MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) TO | | MAX CSI (LC) | MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
| 6- 2 | -1173 / 367 | 0.0 | 0.0 | 0.19 (2) | 6.47 | 6- 3 | -285 / 252 | 0.09 (13) |
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 3- 5 | -195 / 256 | 0.07 (7) |
| 2- 3 | -180 / 233 | -162.1 | -162.1 | 0.59 (19) | 6.25 | | | |
| 3- 4 | -58 / 30 | -162.1 | -162.1 | 0.15 (2) | 6.25 | | | |
| 6- 5 | -162 / 123 | -27.5 | -27.5 | 0.31 (6) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.20")
CALCULATED VERT. DEFL.(LL) = L/ 963 (0.07")
ALLOWABLE DEFL.(TL)= L/180 (0.39")
CALCULATED VERT. DEFL.(TL) = L/ 566 (0.12")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.31/1.00 (5-6:6) , WB=0.09/1.00 (3-6:13) , SSI=0.31/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (6) (INPUT = 0.90 )
JSI METAL= 0.28 (2) (INPUT = 1.00 )




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Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E01A | 6 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836427 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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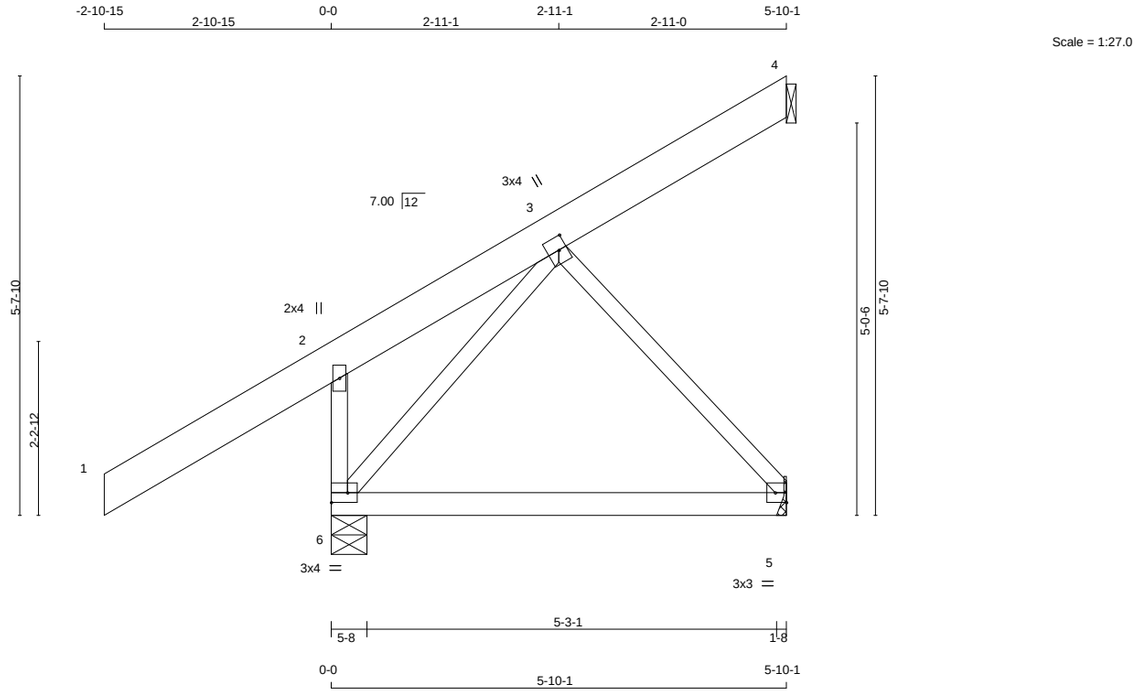


TOTAL WEIGHT = 6 X 33 = 200 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 6 - 2 | 2x3 | DRY | No.2 | SPF |
| 1 - 4 | 2x6 | DRY | No.2 | SPF |
| 6 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMV+p | MT20 | 2.0 | 4.0 | | |
| 3 | TMWW+t | MT20 | 3.0 | 4.0 | 2.00 | 1.25 |
| 5 | BMW1-t | MT20 | 3.0 | 3.0 | 1.50 | Edge |
| 6 | BMVW1-t | MT20 | 3.0 | 4.0 | 1.50 | Edge |

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

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 6 | 1169 | 0 | 1378 | 356 | -110 | 5-8 | 2-0 |
| 4 | 241 | 0 | 287 | 0 | -100 | 1-8 | 1-8 |
| 5 | 186 | 0 | 206 | 0 | -166 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) 4

PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 166 LBS FACTORED UPLIFT

PROVIDE FOR 356 LBS FACTORED HORIZONTAL REACTION AT JOINT 6

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 6 | 836 | 810 / 0 | 58 / 0 | 0 / 0 | 39 / -148 | 108 / 0 | 0 / 0 |
| 4 | 163 | 179 / 0 | 0 / 0 | 0 / 0 | 39 / -81 | 15 / 0 | 0 / 0 |
| 5 | 170 | 79 / -136 | 58 / 0 | 0 / 0 | 85 / -129 | 47 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 6 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 254 / -162 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM TO (PLF) | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|
| 6- 2 | -1175 / 367 | 0.0 0.0 | 0.19 (2) | 6.45 | 6- 3 | -287 / 257 | 0.09 (13) |
| 1- 2 | 0 / 147 | -162.1 -162.1 | 0.61 (2) | 10.00 | 3- 5 | -181 / 260 | 0.06 (7) |
| 2- 3 | -184 / 233 | -162.1 -162.1 | 0.59 (19) | 6.25 | | | |
| 3- 4 | -57 / 31 | -162.1 -162.1 | 0.14 (2) | 6.25 | | | |
| 6- 5 | -164 / 114 | -27.5 -27.5 | 0.29 (6) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.07")
ALLOWABLE DEFL.(TL)= L/180 (0.38")
CALCULATED VERT. DEFL.(TL) = L/ 604 (0.11")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.29/1.00 (5-6:6) , WB=0.09/1.00 (3-6:13) , SSI=0.31/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 1.00
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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (6) (INPUT = 0.90 )
JSI METAL= 0.28 (2) (INPUT = 1.00 )




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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E02 | 2 | 1 | Communal Building Fire Reconstruction | | P5836428 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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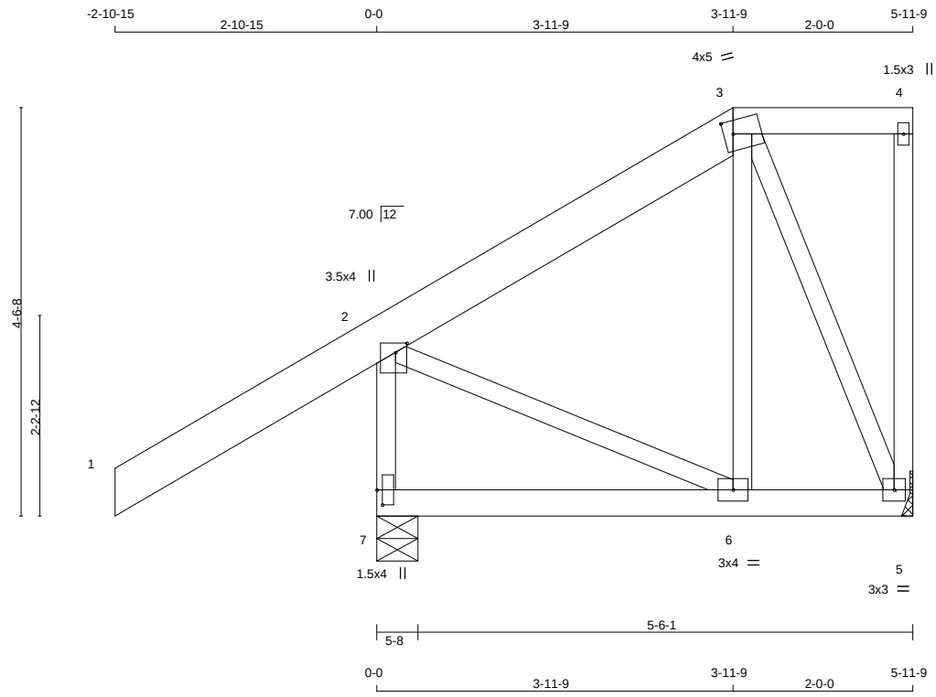


TOTAL WEIGHT = 2 X 38 = 77 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 2 | 2x3 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW+p | MT20 | 3.5 | 4.0 | 1.25 | 1.50 |
| 3 | TTWW-m | MT20 | 4.0 | 5.0 | 1.75 | 1.25 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 3.0 | | |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 7 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 5 | 441 | 0 | 452 | 0 | -134 | MECHANICAL | |
| 7 | 1180 | 0 | 1331 | 252 | -218 | 5-8 | 3-3 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 218 LBS FACTORED UPLIFT

PROVIDE FOR 252 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 344 | 221 / -93 | 60 / 0 | 0 / 0 | 103 / -137 | 64 / 0 | 0 / 0 |
| 7 | 845 | 776 / 0 | 60 / 0 | 0 / 0 | 63 / -226 | 110 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 180 / -132 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 6- 3 | -14 / 176 | 0.04 (17) |
| 2- 3 | -250 / 78 | -162.1 | -162.1 | 0.59 (2) | 6.25 | 3- 5 | -304 / 106 | 0.10 (1) |
| 3- 4 | -29 / 73 | -162.1 | -162.1 | 0.13 (3) | 6.25 | 2- 6 | -68 / 164 | 0.03 (12) |
| 5- 4 | -203 / 50 | 0.0 | 0.0 | 0.19 (13) | 7.81 | | | |
| 7- 2 | -1283 / 238 | 0.0 | 0.0 | 0.20 (2) | 6.23 | | | |
| 7- 6 | -220 / 170 | -27.5 | -27.5 | 0.10 (17) | 6.25 | | | |
| 6- 5 | -71 / 129 | -27.5 | -27.5 | 0.11 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 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/180 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.11/1.00 (5-6:17) , WB=0.10/1.00 (3-5:1) , SSI=0.31/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (7) (INPUT = 0.90 )
JSI METAL= 0.32 (7) (INPUT = 1.00 )




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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E02A | 2 | 1 | Communal Building Fire Reconstruction | | P5836429 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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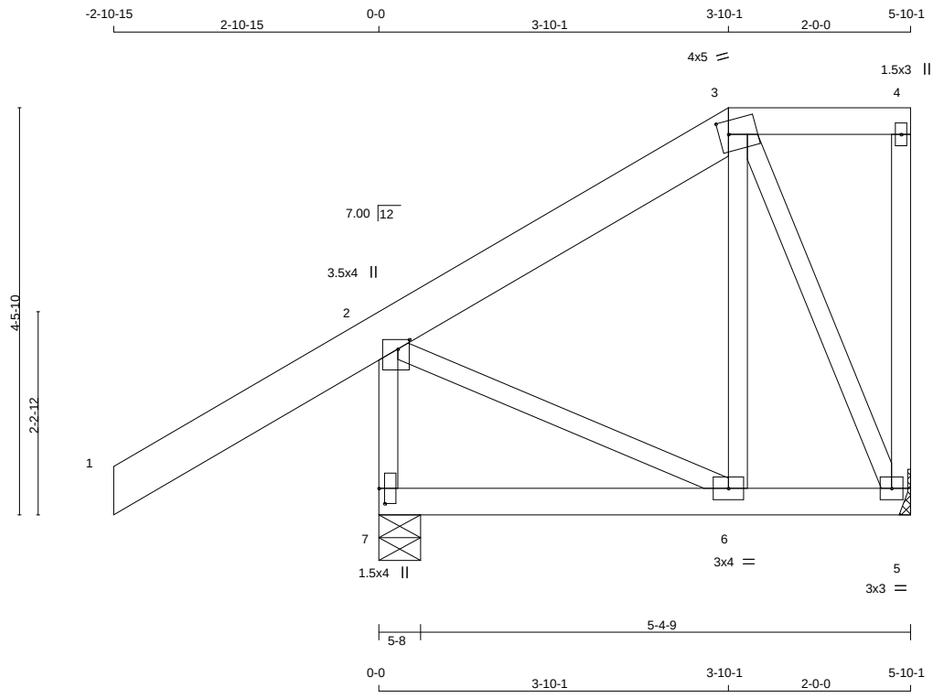


TOTAL WEIGHT = 2 X 38 = 75 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 2 | 2x3 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW+p | MT20 | 3.5 | 4.0 | 1.25 | 1.50 |
| 3 | TTWW-m | MT20 | 4.0 | 5.0 | 1.75 | 1.25 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 3.0 | | |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 7 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 5 | 426 | 0 | 438 | 0 | -131 | MECHANICAL | |
| 7 | 1171 | 0 | 1319 | 249 | -216 | 5-8 | 3-2 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 216 LBS FACTORED UPLIFT

PROVIDE FOR 249 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 333 | 213 / -95 | 58 / 0 | 0 / 0 | 101 / -133 | 62 / 0 | 0 / 0 |
| 7 | 838 | 770 / 0 | 58 / 0 | 0 / 0 | 62 / -224 | 108 / 0 | 0 / 0 |

HORIZONTAL REACTIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 178 / -131 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX (PLF) CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | 6- 3 | -16 / 170 | 0.04 (17) |
| 2- 3 | -247 / 79 | -162.1 | -162.1 | 0.59 (2) | 6.25 | 3- 5 | -287 / 112 | 0.09 (1) |
| 3- 4 | -29 / 72 | -162.1 | -162.1 | 0.13 (3) | 6.25 | 2- 6 | -67 / 161 | 0.03 (12) |
| 5- 4 | -203 / 50 | 0.0 | 0.0 | 0.19 (13) | 7.81 | | | |
| 7- 2 | -1273 / 236 | 0.0 | 0.0 | 0.20 (2) | 6.26 | | | |
| 7- 6 | -217 / 168 | -27.5 | -27.5 | 0.09 (17) | 6.25 | | | |
| 6- 5 | -71 / 124 | -27.5 | -27.5 | 0.11 (17) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/180 (0.39")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.11/1.00 (5-6:17) , WB=0.09/1.00 (3-5:1) , SSI=0.31/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (7) (INPUT = 0.90 )
JSI METAL= 0.31 (7) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.

For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E03 | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836430 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:43 2019 Page 1

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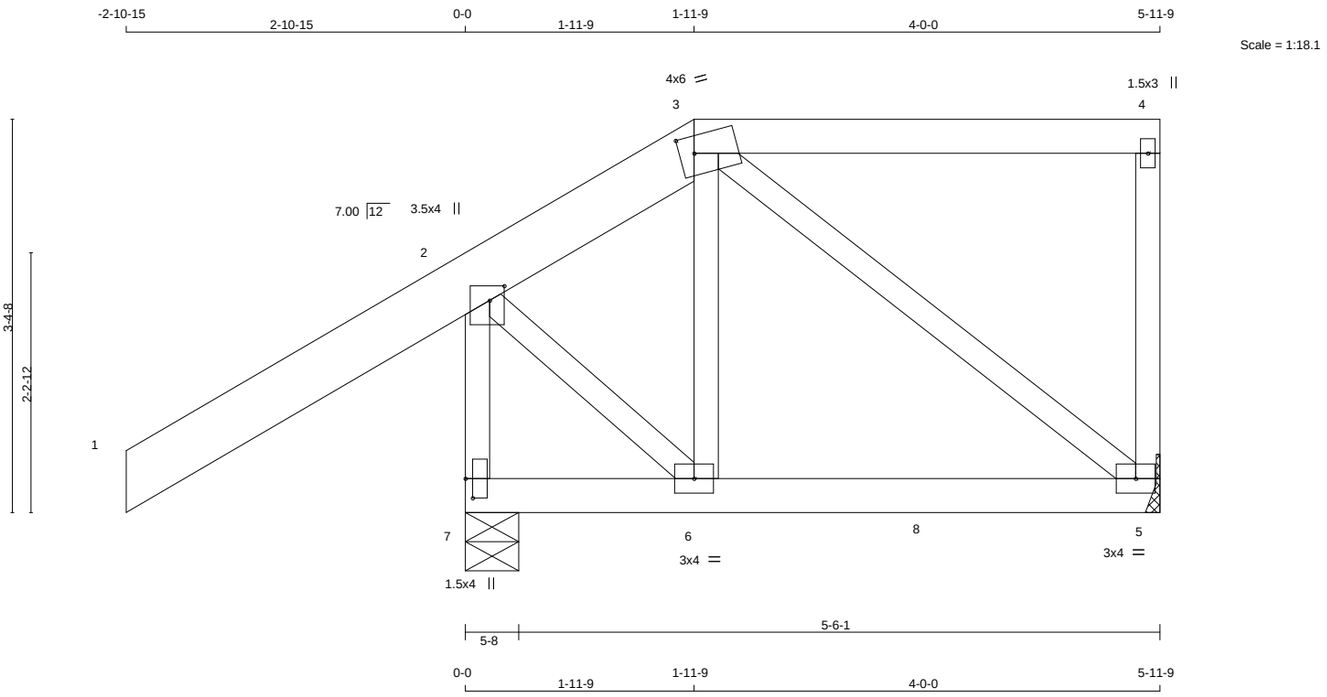


TOTAL WEIGHT = 2 X 33 = 67 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 2 | 2x3 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW+p | MT20 | 3.5 | 4.0 | 1.50 | 1.50 |
| 3 | TTWW-m | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 7 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 5 | 442 | 0 | 613 | 0 | -223 | MECHANICAL | |
| 7 | 1182 | 0 | 1199 | 193 | -339 | 5-8 | 2-13 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 223 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 339 LBS FACTORED UPLIFT

PROVIDE FOR 193 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 347 | 320 / -93 | 63 / 0 | 0 / 0 | 132 / -200 | 64 / 0 | 0 / 0 |
| 7 | 848 | 676 / 0 | 62 / 0 | 0 / 0 | 121 / -313 | 110 / 0 | 0 / 0 |

HORIZONTAL REACTIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 138 / -107 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. | FR-TO | FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| | 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.67 (2) | 10.00 | 6- 3 | -152 / 199 | 0.05 (19) |
| | 2- 3 | -327 / 228 | -162.1 | -162.1 | 0.65 (2) | 6.25 | 3- 5 | -284 / 203 | 0.11 (10) |
| | 3- 4 | -21 / 53 | -162.1 | -162.1 | 0.58 (3) | 6.25 | 2- 6 | -224 / 284 | 0.07 (3) |
| | 5- 4 | -405 / 104 | 0.0 | 0.0 | 0.13 (13) | 7.81 | | | |
| | 7- 2 | -1193 / 365 | 0.0 | 0.0 | 0.20 (1) | 6.41 | | | |
| | 7- 6 | -161 / 134 | -27.5 | -27.5 | 0.10 (15) | 6.25 | | | |
| | 6- 8 | -167 / 226 | -27.5 | -27.5 | 0.12 (6) | 6.25 | | | |
| | 8- 5 | -167 / 226 | -27.5 | -27.5 | 0.12 (6) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 2-0-5 | -1 | -22 | 105 | BACK | VERT | TOTAL | --- | C1 |
| 8 | 4-0-5 | -1 | -22 | 105 | BACK | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 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/180 (0.40")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.67/1.00 (1-2:2) , BC=0.12/1.00 (5-6:6) , WB=0.11/1.00 (3-5:10) , SSI=0.36/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (2) (INPUT = 0.90 )
JSI METAL= 0.29 (7) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.

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For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E03A | 2 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836431 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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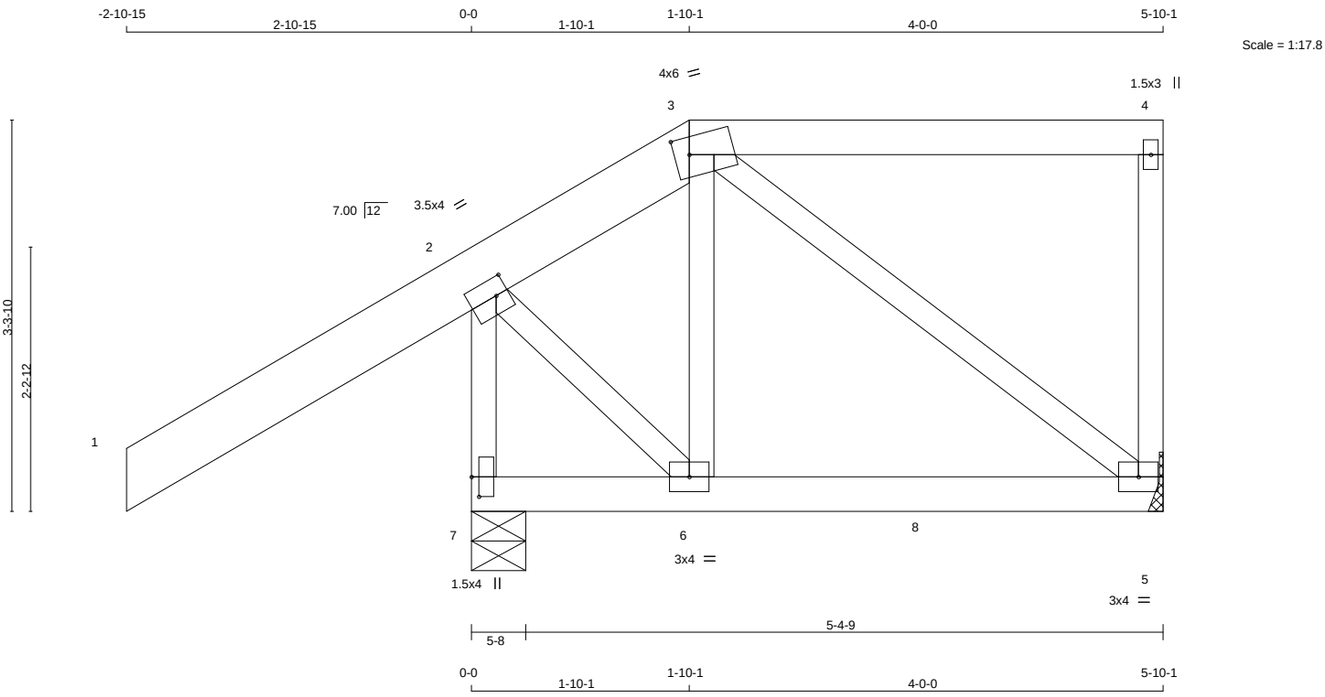


TOTAL WEIGHT = 2 X 33 = 65 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 3 - 4 | 2x4 | DRY | No.2 | SPF |
| 5 - 4 | 2x3 | DRY | No.2 | SPF |
| 7 - 2 | 2x3 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW-t | MT20 | 3.5 | 4.0 | 1.75 | 1.25 |
| 3 | TTWW-m | MT20 | 4.0 | 6.0 | 1.75 | 1.50 |
| 4 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 5 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 6 | BMWW-t | MT20 | 3.0 | 4.0 | | |
| 7 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 5 | 411 | 0 | 588 | 0 | -235 | MECHANICAL | |
| 7 | 1157 | 0 | 1174 | 190 | -358 | 5-8 | 2-12 |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 5. MINIMUM BEARING LENGTH AT JOINT 5 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 235 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 7 FOR 358 LBS FACTORED UPLIFT

PROVIDE FOR 190 LBS FACTORED HORIZONTAL REACTION AT JOINT 7

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 323 | 317 / -95 | 61 / 0 | 0 / 0 | 129 / -199 | 49 / 0 | 0 / 0 |
| 7 | 828 | 671 / 0 | 61 / 0 | 0 / 0 | 121 / -317 | 95 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 7 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 136 / -105 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 7

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. | FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|
| | 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.67 (2) | 10.00 | 6- 3 | -176 / 205 | 0.05 (19) |
| | 2- 3 | -305 / 245 | -162.1 | -162.1 | 0.65 (2) | 6.25 | 3- 5 | -258 / 225 | 0.10 (10) |
| | 3- 4 | -21 / 51 | -162.1 | -162.1 | 0.58 (3) | 6.25 | 2- 6 | -258 / 267 | 0.07 (3) |
| | 5- 4 | -405 / 104 | 0.0 | 0.0 | 0.12 (13) | 7.81 | | | |
| | 7- 2 | -1166 / 388 | 0.0 | 0.0 | 0.20 (1) | 6.47 | | | |
| | 7- 6 | -158 / 132 | -27.5 | -27.5 | 0.09 (15) | 6.25 | | | |
| | 6- 8 | -181 / 206 | -27.5 | -27.5 | 0.11 (6) | 6.25 | | | |
| | 8- 5 | -181 / 206 | -27.5 | -27.5 | 0.11 (6) | 6.25 | | | |

FACTORED CONCENTRATED LOADS (LBS)

| JT | LOC. | LC1 | MAX- | MAX+ | FACE | DIR. | TYPE | HEEL | CONN. |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 1-10-13 | 15 | -5 | 123 | FRONT | VERT | TOTAL | --- | C1 |
| 8 | 3-10-13 | 15 | -5 | 123 | FRONT | VERT | TOTAL | --- | C1 |

**CONNECTION REQUIREMENTS**

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

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

LOADING IN FLAT SECTION BASED ON A SLOPE OF 7.00/12

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/180 (0.39")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.02")

CSI: TC=0.67/1.00 (1-2:2) , BC=0.11/1.00 (5-6:6) , WB=0.10/1.00 (3-5:10) , SSI=0.37/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (2) (INPUT = 0.90 )
JSI METAL= 0.29 (7) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.

For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | E04 | 4 | 1 | Communal Building Fire Reconstruction | P5836432 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:44 2019 Page 1

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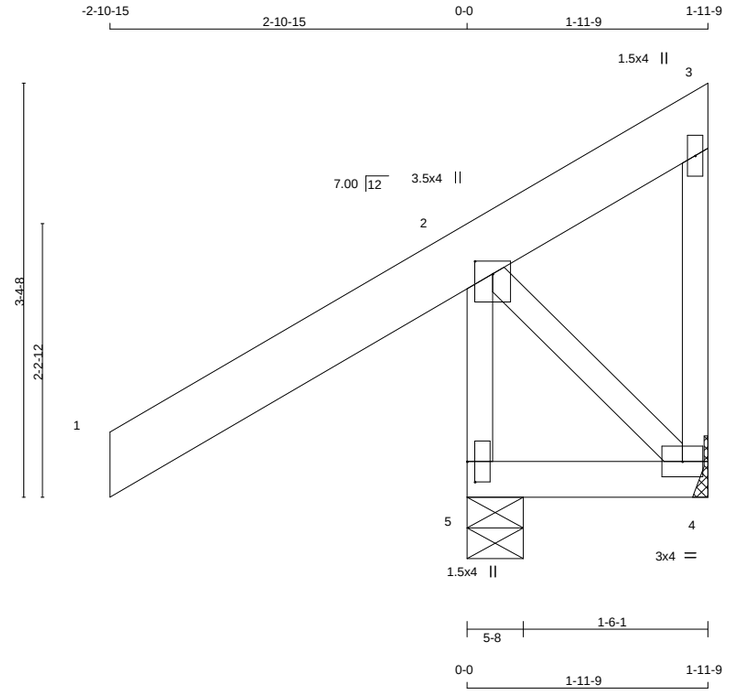


TOTAL WEIGHT = 4 X 18 = 72 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x3 | DRY | No.2 | SPF |
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 4 - 3 | 2x3 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW+p | MT20 | 3.5 | 4.0 | 1.25 | 1.75 |
| 3 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 4 | BMVW1-t | MT20 | 3.0 | 4.0 | | |
| 5 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 5 | 1055 | 0 | 1258 | -187 | -227 | 5-8 | 3-0 |
| 4 | -192 | 0 | 86 | 0 | -430 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 4. MINIMUM BEARING LENGTH AT JOINT 4 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 227 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 430 LBS FACTORED UPLIFT

PROVIDE FOR 187 LBS FACTORED HORIZONTAL REACTION AT JOINT 5

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 729 | 764 / 0 | 20 / 0 | 0 / 0 | 39 / -212 | 77 / 0 | 0 / 0 |
| 4 | -115 | 0 / -281 | 20 / 0 | 0 / 0 | 61 / -93 | 0 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 5 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 209 / -134 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. | FR-TO | FACTORED FORCE (LBS) | VERT. LOAD LC1 FROM (PLF) | TO | MAX CSI (LC) | WEBS MAX. MEMB. | UNBRAC LENGTH | FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|---|---|
| 5- 2 | | -1241 / 239 | 0.0 | 0.0 | 0.19 (2) | | 6.35 | 2- 4 | -140 / 169 | 0.03 (12) |
| 1- 2 | | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | | 10.00 | | | |
| 2- 3 | | -242 / 84 | -162.1 | -162.1 | 0.59 (2) | | 6.25 | | | |
| 4- 3 | | -85 / 442 | 0.0 | 0.0 | 0.10 (19) | | 7.81 | | | |
| 5- 4 | | -149 / 155 | -27.5 | -27.5 | 0.04 (6) | | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 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/180 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.04/1.00 (4-5:6) , WB=0.03/1.00 (2-4:12) , SSI=0.33/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.89 (2) (INPUT = 0.90 )
JSI METAL= 0.31 (5) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E04A | 4 | 1 | TRUSS DESC. | Communal Building Fire Reconstruction | P5836433 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:45 2019 Page 1

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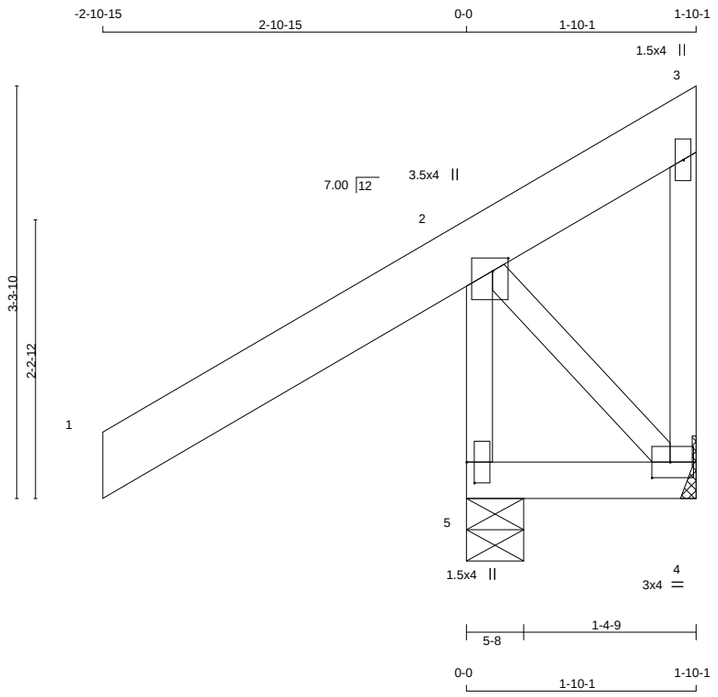


Scale = 1:16.9

TOTAL WEIGHT = 4 X 17 = 70 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 5 - 2 | 2x3 | DRY | No.2 | SPF |
| 1 - 3 | 2x6 | DRY | No.2 | SPF |
| 4 - 3 | 2x3 | DRY | No.2 | SPF |
| 5 - 4 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMVW+p | MT20 | 3.5 | 4.0 | 1.25 | 1.50 |
| 3 | TMV+p | MT20 | 1.5 | 4.0 | | |
| 4 | BMVW1-t | MT20 | 3.0 | 4.0 | 1.50 | 1.75 |
| 5 | BMV1+p | MT20 | 1.5 | 4.0 | 2.00 | 0.75 |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG | REQRD BRG |
|---|---|---|---|---|---|---|---|
| 5 | 1069 | 0 | 1276 | -185 | -232 | 5-8 | 3-0 |
| 4 | -230 | 0 | 85 | 0 | -462 | MECHANICAL | |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 4. MINIMUM BEARING LENGTH AT JOINT 4 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 232 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 462 LBS FACTORED UPLIFT

PROVIDE FOR 185 LBS FACTORED HORIZONTAL REACTION AT JOINT 5

**UNFACTORED REACTIONS**

1ST LCASE — MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 5 | 738 | 776 / 0 | 18 / 0 | 0 / 0 | 40 / -216 | 77 / 0 | 0 / 0 |
| 4 | -141 | 0 / -300 | 18 / 0 | 0 / 0 | 63 / -94 | 0 / -3 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 5 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 206 / -132 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 5

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 5- 2 | -1260 / 244 | 0.0 | 0.0 | 0.20 (2) | 6.31 | 2- 4 | -143 / 170 | 0.03 (12) |
| 1- 2 | 0 / 147 | -162.1 | -162.1 | 0.61 (2) | 10.00 | | | |
| 2- 3 | -256 / 89 | -162.1 | -162.1 | 0.59 (2) | 6.25 | | | |
| 4- 3 | -97 / 473 | 0.0 | 0.0 | 0.11 (19) | 7.81 | | | |
| 5- 4 | -145 / 153 | -27.5 | -27.5 | 0.03 (6) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 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/180 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.00")

CSI: TC=0.61/1.00 (1-2:2) , BC=0.03/1.00 (4-5:6) , WB=0.03/1.00 (2-4:12) , SSI=0.34/1.00 (2-3:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (5) (INPUT = 0.90 )
JSI METAL= 0.31 (5) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | E05 | 4 | 1 | Communal Building Fire Reconstruction | | P5836434 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4, Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:45 2019 Page 1

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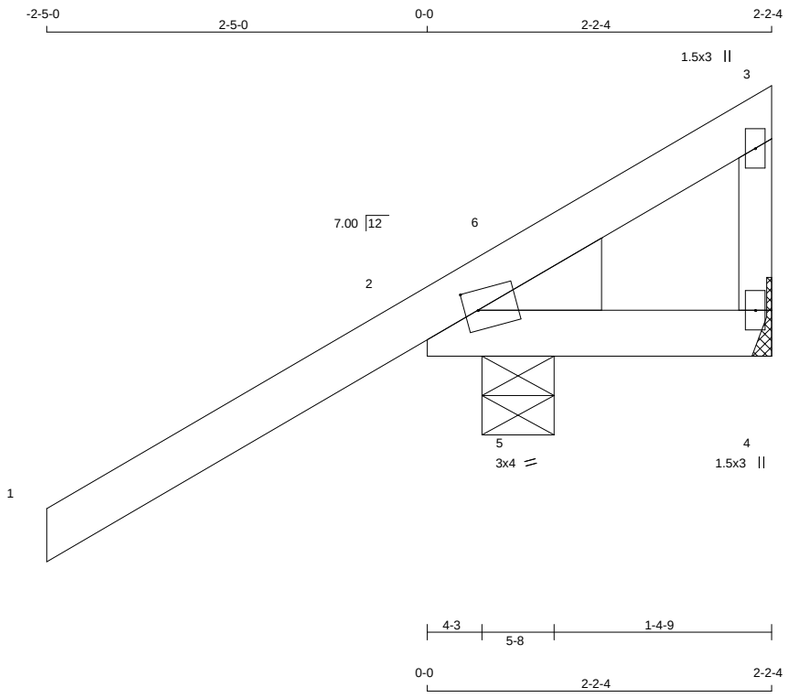


Scale = 1:13.4

TOTAL WEIGHT = 4 X 11 = 44 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | 2100F 1.8E | SPF |
| 4 - 3 | 2x3 | DRY | No.2 | SPF |
| 2 - 4 | 2x4 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 2 | TMBH1-m | MT20 | 3.0 | 4.0 | 1.50 | 1.00 |
| 3 | TMV+p | MT20 | 1.5 | 3.0 | | |
| 4 | BMV1+p | MT20 | 1.5 | 3.0 | | |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX | HEEL WEDGE |
|---|---|---|---|---|---|---|---|---|
| 4 | -22 | 0 | 56 | 0 | -250 | MECHANICAL | | |
| 2 | 841 | 0 | 996 | 107 | -199 | 5-8 | 1-8 | 2x6 L |

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT 4. MINIMUM BEARING LENGTH AT JOINT 4 = 1-8.

PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 250 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 2 FOR 199 LBS FACTORED UPLIFT

PROVIDE FOR 107 LBS FACTORED HORIZONTAL REACTION AT JOINT 2

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 4 | 2 | 0 / -171 | 22 / 0 | 0 / 0 | 21 / -16 | 12 / 0 | 0 / 0 |
| 2 | 586 | 603 / 0 | 22 / 0 | 0 / 0 | 51 / -184 | 65 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 2 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 77 / -44 | 0 / 0 | 0 /0 |

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

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (19)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM TO (PLF) | MAX CSI (LC) | WEBS MAX. MEMB. UNBRAC LENGTH FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|
| 1- 2 | 0 / 113 | -162.1 -162.1 | 0.55 (2) | 10.00 5- 6 | -75 / 557 | 0.00 (1) |
| 2- 6 | -454 / 61 | -162.1 -162.1 | 0.54 (2) | 6.25 | | |
| 6- 3 | -59 / 22 | -162.1 -162.1 | 0.16 (19) | 6.25 | | |
| 4- 3 | -58 / 107 | 0.0 0.0 | 0.02 (19) | 7.81 | | |
| 2- 5 | -12 / 25 | -27.5 -27.5 | 0.33 (19) | 6.25 | | |
| 5- 4 | -12 / 25 | -27.5 -27.5 | 0.33 (19) | 6.25 | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | |
|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED
-OVERHANG NOT TO BE ALTERED OR CUT OFF.

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.01")
ALLOWABLE DEFL.(TL)= L/180 (0.19")
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.01")

CSI: TC=0.55/1.00 (1-2:2) , BC=0.33/1.00 (2-5:19) , WB=0.00/1.00 (5-6:1) , SSI=0.48/1.00 (2-6:2)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.78 (2) (INPUT = 0.90 )
JSI METAL= 0.15 (2) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473C rev. 10/02/2015 BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage.

For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see TPIC Appendix G - Manufacturing and material variances available from www.tpic.ca and BCSI CANADA Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | F01 | 1 | 1 | Communal Building Fire Reconstruction | P5836435 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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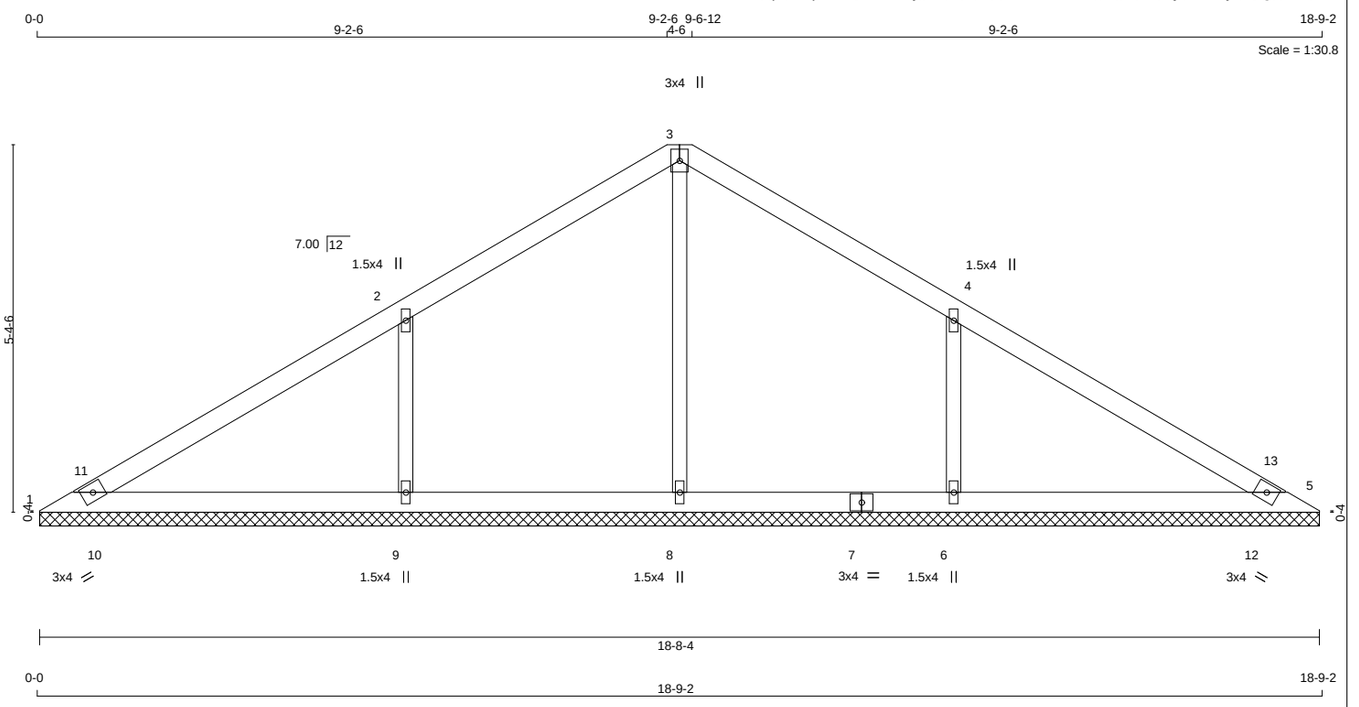


TOTAL WEIGHT = 53 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 5 | 2x4 | DRY | No.2 | SPF |
| 1 - 7 | 2x4 | DRY | No.2 | SPF |
| 7 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 2 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 3 | TTW+p | MT20 | 3.0 | 4.0 | | |
| 4 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 5 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 6, 8, 9 | | | | | | |
| 6 | BMW1+w | MT20 | 1.5 | 4.0 | | |
| 7 | BS-t | MT20 | 3.0 | 4.0 | | |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 1 | 223 | 0 | 347 | -187 | -58 | 18-8-4 ( 6-8-4 ) | 6-7-4 |
| 5 | 222 | 0 | 347 | 0 | -47 | 18-8-4 ( 6-8-4 ) | 6-7-4 |
| 8 | 932 | 0 | 932 | 0 | -26 | 18-8-4 ( 6-8-4 ) | 6-7-4 |
| 9 | 1083 | 0 | 1269 | 0 | -343 | 18-8-4 ( 6-8-4 ) | 6-7-4 |
| 6 | 1083 | 0 | 1270 | 0 | -341 | 18-8-4 ( 6-8-4 ) | 6-7-4 |

VALUE IN PARENTHESIS INDICATES EFFECTIVE BEARING LENGTH

PROVIDE ANCHORAGE AT BEARING JOINT 1 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 9 FOR 343 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 341 LBS FACTORED UPLIFT

PROVIDE FOR 187 LBS FACTORED HORIZONTAL REACTION AT JOINT 1

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 1 | 166 | 204 / -58 | 19 / 0 | 0 / 0 | 22 / -32 | 26 / 0 | 0 / 0 |
| 5 | 165 | 204 / -58 | 19 / 0 | 0 / 0 | 20 / -31 | 26 / 0 | 0 / 0 |
| 8 | 723 | 472 / 0 | 119 / 0 | 0 / 0 | 54 / -103 | 131 / 0 | 0 / 0 |
| 9 | 816 | 699 / -4 | 108 / 0 | 0 / 0 | 179 / -331 | 133 / 0 | 0 / 0 |
| 6 | 816 | 699 / -4 | 108 / 0 | 0 / 0 | 177 / -330 | 133 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 1 | --- | 0 / 0 | | 0 / 0 | 134 / -134 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 1, 5, 8, 9, 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | WEBS MAX. UNBRAC LENGTH | MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1-11 | -264 / 405 | -162.1 | -162.1 | 0.09 (4) | 6.25 | 8- 3 | -898 / 87 | 0.40 (1) |
| 11- 2 | -176 / 458 | -162.1 | -162.1 | 0.67 (2) | 6.25 | 9- 2 | -1022 / 370 | 0.19 (2) |
| 2- 3 | -3 / 374 | -162.1 | -162.1 | 0.66 (2) | 10.00 | 6- 4 | -1023 / 369 | 0.19 (3) |
| 3- 4 | 0 / 375 | -162.1 | -162.1 | 0.66 (3) | 10.00 | 10-11 | -363 / 162 | 0.00 (1) |
| 4-13 | -124 / 441 | -162.1 | -162.1 | 0.68 (3) | 6.25 | 12-13 | -358 / 172 | 0.00 (1) |
| 13- 5 | -216 / 385 | -162.1 | -162.1 | 0.09 (4) | 6.25 | | | |
| 1-10 | -394 / 211 | -27.5 | -27.5 | 0.35 (2) | 6.25 | | | |
| 10- 9 | -354 / 201 | -27.5 | -27.5 | 0.35 (2) | 6.25 | | | |
| 9- 8 | -377 / 206 | -27.5 | -27.5 | 0.21 (2) | 6.25 | | | |
| 8- 7 | -377 / 206 | -27.5 | -27.5 | 0.21 (3) | 6.25 | | | |
| 7- 6 | -377 / 206 | -27.5 | -27.5 | 0.21 (3) | 6.25 | | | |
| 6-12 | -353 / 196 | -27.5 | -27.5 | 0.35 (3) | 6.25 | | | |
| 12- 5 | -395 / 213 | -27.5 | -27.5 | 0.35 (3) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.68/1.00 (4-13:3) , BC=0.35/1.00 (9-10:2) , WB=0.40/1.00 (3-8:1) , SSI=0.36/1.00 (4-13:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.83 (4) (INPUT = 0.90 )
JSI METAL= 0.32 (2) (INPUT = 1.00 )




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100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | F02 | 1 | 1 | Communal Building Fire Reconstruction | P5836436 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

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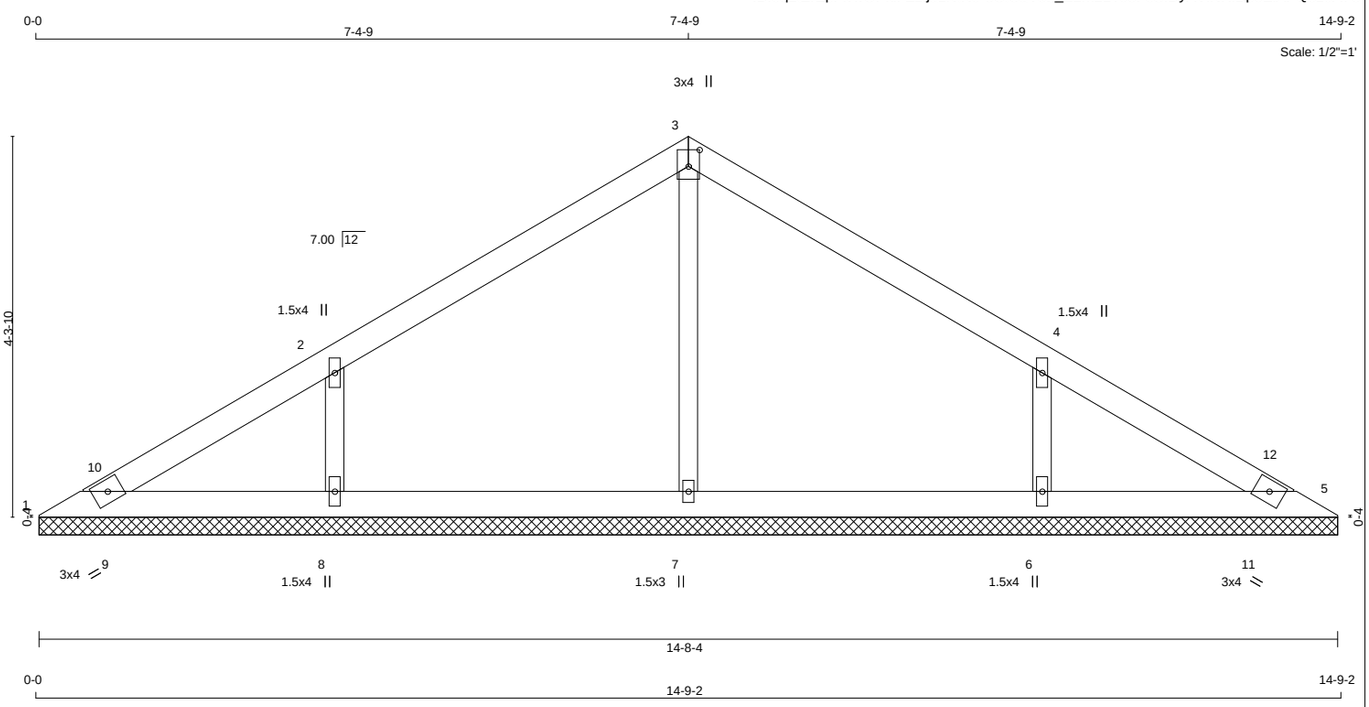


TOTAL WEIGHT = 40 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| 3 - 5 | 2x4 | DRY | No.2 | SPF |
| 1 - 5 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 2 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 3 | TTW+p | MT20 | 3.0 | 4.0 | 2.25 | 1.50 |
| 4 | TMW+w | MT20 | 1.5 | 4.0 | | |
| 5 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 6 | BMW1+w | MT20 | 1.5 | 4.0 | | |
| 7 | BMW1+w | MT20 | 1.5 | 3.0 | | |
| 8 | BMW1+w | MT20 | 1.5 | 4.0 | | |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 1 | 234 | 0 | 274 | -146 | -24 | 14-8-4 | 6-7-14 |
| 5 | 234 | 0 | 273 | 0 | -8 | 14-8-4 | 6-7-14 |
| 7 | 688 | 0 | 688 | 0 | 0 | 14-8-4 | 6-7-14 |
| 8 | 906 | 0 | 1045 | 0 | -229 | 14-8-4 | 6-7-14 |
| 6 | 906 | 0 | 1045 | 0 | -227 | 14-8-4 | 6-7-14 |

PROVIDE ANCHORAGE AT BEARING JOINT 1 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 5 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 8 FOR 229 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 6 FOR 227 LBS FACTORED UPLIFT

PROVIDE FOR 146 LBS FACTORED HORIZONTAL REACTION AT JOINT 1

**UNFACTORED REACTIONS**

1ST LCASE MAX./MIN. COMPONENT REACTIONS

| JT | COMBINED | SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 1 | 176 | 144 / -1 | 20 / 0 | 0 / 0 | 29 / -41 | 38 / 0 | 0 / 0 |
| 5 | 176 | 144 / -1 | 20 / 0 | 0 / 0 | 12 / -30 | 38 / 0 | 0 / 0 |
| 7 | 543 | 319 / 0 | 95 / 0 | 0 / 0 | 35 / -60 | 130 / 0 | 0 / 0 |
| 8 | 681 | 548 / 0 | 80 / 0 | 0 / 0 | 139 / -258 | 147 / 0 | 0 / 0 |
| 6 | 681 | 548 / 0 | 80 / 0 | 0 / 0 | 137 / -257 | 147 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 1 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 104 / -104 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 1, 5, 7, 8, 6

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 (PLF) FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1-10 | -118 / 75 | -174.6 | -174.6 | 0.10 (2) | 6.25 | 7- 3 | -599 / 20 | 0.16 (1) |
| 10- 2 | -98 / 94 | -174.6 | -174.6 | 0.48 (2) | 6.25 | 8- 2 | -899 / 269 | 0.13 (2) |
| 2- 3 | -50 / 132 | -174.6 | -174.6 | 0.47 (2) | 6.25 | 6- 4 | -899 / 268 | 0.13 (3) |
| 3- 4 | -33 / 106 | -174.6 | -174.6 | 0.47 (3) | 6.25 | 9-10 | -96 / 33 | 0.00 (1) |
| 4-12 | -48 / 63 | -174.6 | -174.6 | 0.48 (3) | 6.25 | 11-12 | -92 / 40 | 0.00 (1) |
| 12- 5 | -81 / 30 | -174.6 | -174.6 | 0.10 (3) | 6.25 | | | |
| 1- 9 | -47 / 95 | -27.5 | -27.5 | 0.10 (2) | 6.25 | | | |
| 9- 8 | -43 / 94 | -27.5 | -27.5 | 0.10 (2) | 6.25 | | | |
| 8- 7 | -48 / 100 | -27.5 | -27.5 | 0.10 (17) | 6.25 | | | |
| 7- 6 | -48 / 100 | -27.5 | -27.5 | 0.10 (17) | 6.25 | | | |
| 6-11 | -40 / 88 | -27.5 | -27.5 | 0.10 (3) | 6.25 | | | |
| 11- 5 | -45 / 90 | -27.5 | -27.5 | 0.10 (3) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 10.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 10.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 76.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.48/1.00 (4-12:3) , BC=0.10/1.00 (6-11:3) , WB=0.16/1.00 (3-7:1) , SSI=0.34/1.00 (3-4:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.72 (2) (INPUT = 0.90 )
JSI METAL= 0.28 (4) (INPUT = 1.00 )

PEO
Certificate No. 10889485


July 3,2019




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | | DRWG NO. |
|---|---|---|---|---|---|---|
| 1904-0607 | F03 | 1 | 1 | Communal Building Fire Reconstruction | | P5836437 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:47 2019 Page 1

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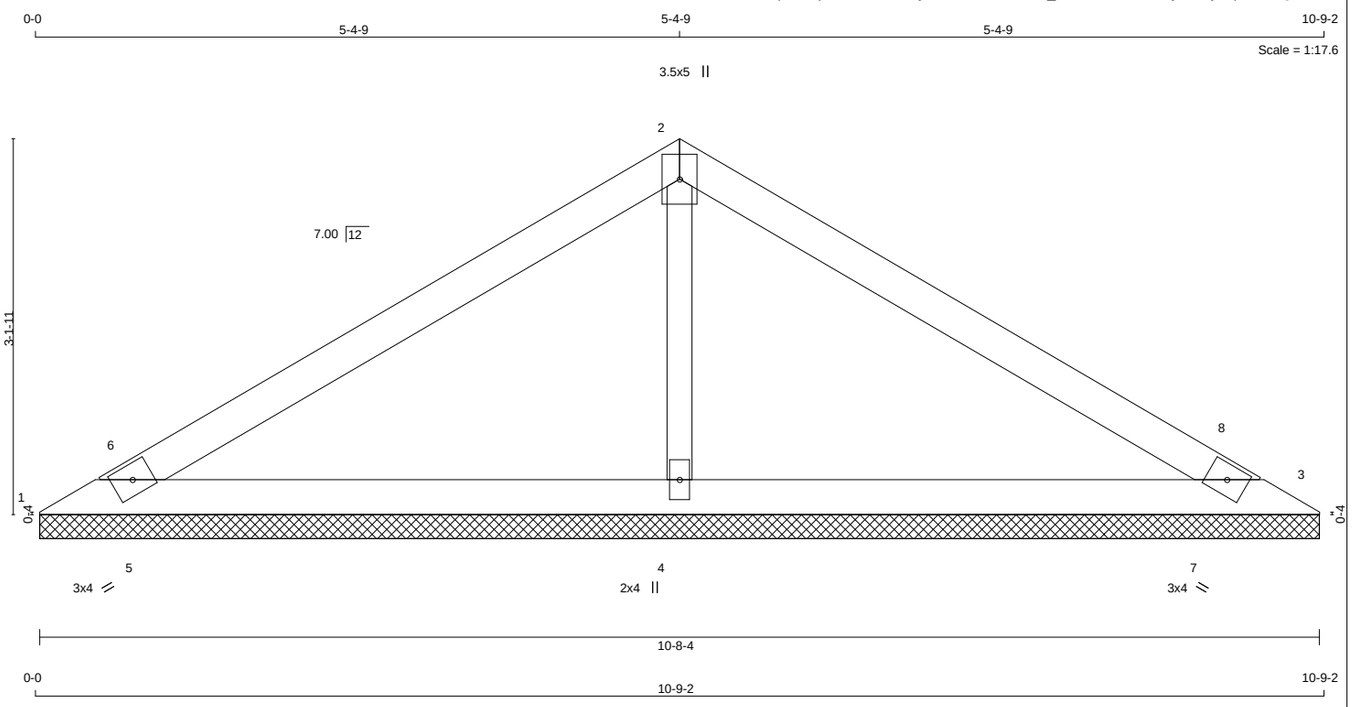


TOTAL WEIGHT = 27 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x4 | DRY | No.2 | SPF |
| 2 - 3 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 2 | TTW+p | MT20 | 3.5 | 5.0 | | |
| 3 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 4 | BMW1+w | MT20 | 2.0 | 4.0 | | |

PEO
Certificate No. 10889485


July 3,2019

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 1 | 38 | 0 | 269 | -105 | -214 | 10-8-4 | 9-0-6 |
| 3 | 39 | 0 | 270 | 0 | -213 | 10-8-4 | 9-0-6 |
| 4 | 1950 | 0 | 1950 | 0 | -355 | 10-8-4 | 9-0-6 |

PROVIDE ANCHORAGE AT BEARING JOINT 1 FOR 214 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 3 FOR 213 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 355 LBS FACTORED UPLIFT

PROVIDE FOR 105 LBS FACTORED HORIZONTAL REACTION AT JOINT 1

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 1 | 31 | 171 / -151 | 7 / 0 | 0 / 0 | 20 / -18 | 7 / 0 | 0 / 0 |
| 3 | 32 | 172 / -150 | 7 / 0 | 0 / 0 | 36 / -35 | 7 / 0 | 0 / 0 |
| 4 | 1473 | 1031 / 0 | 199 / 0 | 0 / 0 | 140 / -410 | 243 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 1 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 75 / -75 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 1, 3, 4

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 5.99 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 6 | -340 / 945 | -162.1 | -162.1 | 0.34 (1) | 6.25 | 4- 2 | -1591 / 356 | 0.29 (1) |
| 6- 2 | -215 / 905 | -162.1 | -162.1 | 0.68 (2) | 6.25 | 5- 6 | -576 / 246 | 0.00 (1) |
| 2- 8 | -184 / 905 | -162.1 | -162.1 | 0.68 (3) | 6.25 | 7- 8 | -574 / 252 | 0.00 (1) |
| 8- 3 | -312 / 932 | -162.1 | -162.1 | 0.34 (1) | 6.25 | | | |
| 1- 5 | -860 / 283 | -27.5 | -27.5 | 0.51 (2) | 5.99 | | | |
| 5- 4 | -800 / 269 | -27.5 | -27.5 | 0.52 (2) | 6.16 | | | |
| 4- 7 | -800 / 269 | -27.5 | -27.5 | 0.52 (3) | 6.16 | | | |
| 7- 3 | -865 / 295 | -27.5 | -27.5 | 0.51 (3) | 5.99 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.68/1.00 (2-8:3) , BC=0.52/1.00 (4-7:3) , WB=0.29/1.00 (2-4:1) , SSI=0.33/1.00 (3-7:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) 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 (2) (INPUT = 0.90 )
JSI METAL= 0.32 (2) (INPUT = 1.00 )




MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

| JOB NAME | TRUSS NAME | QUANTITY | PLY | JOB DESC. / TRUSS DESC. | DRWG NO. |
|---|---|---|---|---|---|
| 1904-0607 | F04 | 1 | 1 | Communal Building Fire Reconstruction | P5836438 |

Locke Truss Div of 976711 Ont Inc., Brockville, ON - K6V 5T4,

Version 8.310 S Jun 26 2019 MiTek Industries, Inc. Tue Jul 2 08:52:48 2019 Page 1

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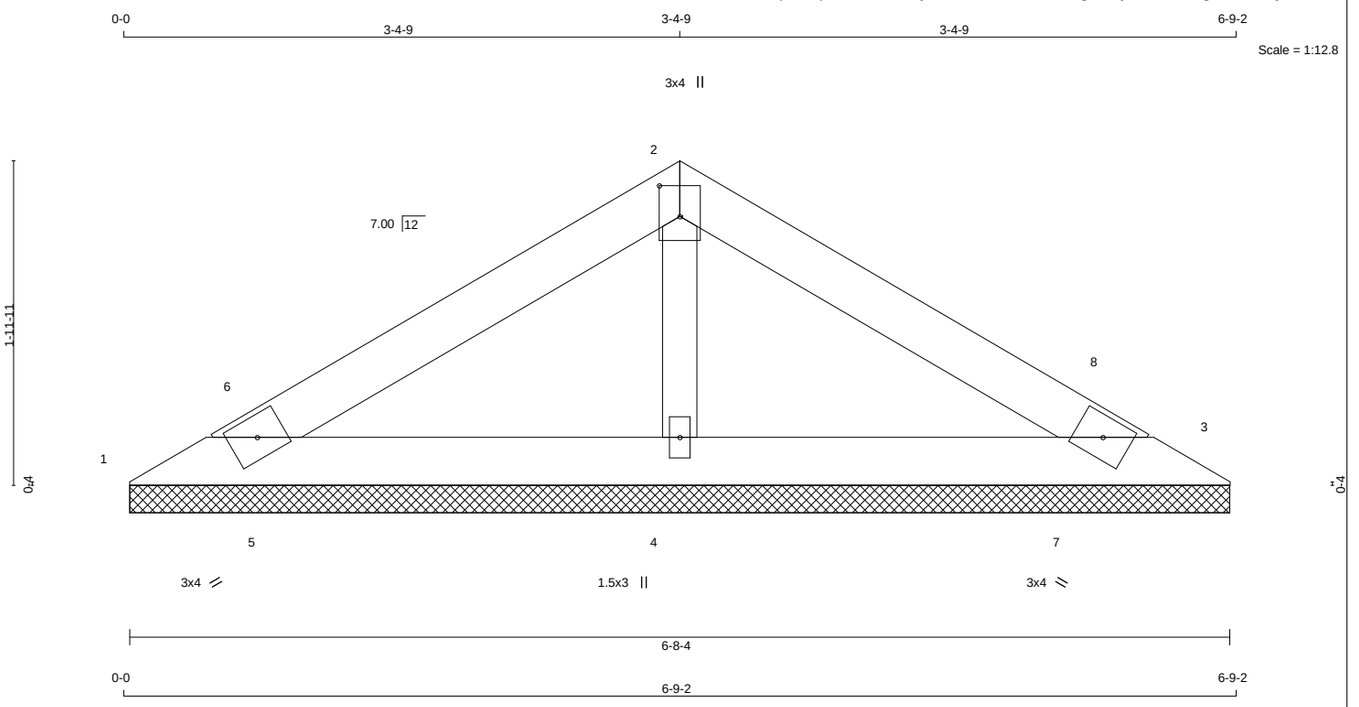



TOTAL WEIGHT = 16 lb

**LUMBER**

N. L. G. A. RULES

| CHORDS | SIZE | | LUMBER | DESCR. |
|---|---|---|---|---|
| 1 - 2 | 2x4 | DRY | No.2 | SPF |
| 2 - 3 | 2x4 | DRY | No.2 | SPF |
| 1 - 3 | 2x4 | DRY | No.2 | SPF |
| ALL WEBS | 2x3 | DRY | No.2 | SPF |

DRY: SEASONED LUMBER.

**PLATES (table is in inches)**

| JT | TYPE | PLATES | W | LEN | Y | X |
|---|---|---|---|---|---|---|
| 1 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 2 | TTW+p | MT20 | 3.0 | 4.0 | 2.25 | 1.50 |
| 3 | TBM1-h | MT20 | 3.0 | 4.0 | | |
| 4 | BMW1+w | MT20 | 1.5 | 3.0 | | |

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

**BEARINGS**

| JT | FACTORED GROSS REACTION VERT | HORZ | MAXIMUM FACTORED GROSS REACTION DOWN | HORZ | UPLIFT | INPUT BRG IN-SX | REQRD BRG IN-SX |
|---|---|---|---|---|---|---|---|
| 1 | 140 | 0 | 247 | -64 | -55 | 6-8-4 | 2-10-5 |
| 3 | 141 | 0 | 248 | 0 | -55 | 6-8-4 | 2-10-5 |
| 4 | 987 | 0 | 987 | 0 | -162 | 6-8-4 | 2-10-5 |

PROVIDE ANCHORAGE AT BEARING JOINT 1 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 3 FOR 150 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT 4 FOR 162 LBS FACTORED UPLIFT

PROVIDE FOR 64 LBS FACTORED HORIZONTAL REACTION AT JOINT 1

**UNFACTORED REACTIONS**

| JT | 1ST LCASE COMBINED | MAX./MIN. COMPONENT REACTIONS SNOW | LIVE | PERM.LIVE | WIND | DEAD | SOIL |
|---|---|---|---|---|---|---|---|
| 1 | 106 | 146 / -56 | 14 / 0 | 0 / 0 | 17 / -30 | 17 / 0 | 0 / 0 |
| 3 | 106 | 146 / -56 | 14 / 0 | 0 / 0 | 28 / -37 | 17 / 0 | 0 / 0 |
| 4 | 749 | 518 / 0 | 105 / 0 | 0 / 0 | 69 / -196 | 126 / 0 | 0 / 0 |
| HORIZONTAL REACTIONS | | | | | | | |
| 1 | --- | 0 / 0 | 0 / 0 | 0 / 0 | 45 / -45 | 0 / 0 | 0 /0 |

BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) 1, 3, 4

**BRACING**

MAX. UNBRACED TOP CHORD LENGTH = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (18)

| CHORDS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | FACTORED VERT. LOAD LC1 FROM | TO | MAX CSI (LC) | MAX. UNBRAC LENGTH | WEBS MEMB. FR-TO | MAX. FACTORED FORCE (LBS) | MAX CSI (LC) |
|---|---|---|---|---|---|---|---|---|
| 1- 6 | -129 / 323 | -162.1 | -162.1 | 0.07 (2) | 6.25 | 4- 2 | -722 / 148 | 0.10 (1) |
| 6- 2 | -67 / 326 | -162.1 | -162.1 | 0.24 (2) | 6.25 | 5- 6 | -277 / 117 | 0.00 (1) |
| 2- 8 | -48 / 326 | -162.1 | -162.1 | 0.24 (3) | 6.25 | 7- 8 | -276 / 120 | 0.00 (1) |
| 8- 3 | -112 / 316 | -162.1 | -162.1 | 0.07 (3) | 6.25 | | | |
| 1- 5 | -313 / 116 | -27.5 | -27.5 | 0.22 (2) | 6.25 | | | |
| 5- 4 | -287 / 110 | -27.5 | -27.5 | 0.22 (2) | 6.25 | | | |
| 4- 7 | -287 / 110 | -27.5 | -27.5 | 0.22 (3) | 6.25 | | | |
| 7- 3 | -315 / 121 | -27.5 | -27.5 | 0.22 (3) | 6.25 | | | |

TRUSS HAS BEEN CHECKED FOR UNBALANCED LOADING AS PER NBCC 4.1.6.2.(8)

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE OF { 8.6} PSF AT {30-0-0} FT-IN-SX REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFFICIENTS, CpCg, BASED ON THE {MAIN WIND FORCE RESISTING SYSTEM}.INTERNAL WIND PRESSURE IS BASED ON DESIGN {CATEGORY 2}. BUILDING MAY BE LOCATED ON {OPEN TERRAIN}, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST {0-0} FT-IN-SX AWAY FROM EAVE.TRUSS UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF AND 7.0 PSF RESPECTIVELY.

[M]

**DESIGN CRITERIA**

SPECIFIED LOADS:

| | | | | |
|---|---|---|---|---|
| TOP CH. | LL = | 49.9 | PSF |
| | DL = | 5.0 | PSF |
| BOT CH. | LL = | 10.0 | PSF |
| | DL = | 7.0 | PSF |
| TOTAL LOAD | = | 71.9 | PSF |

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

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2010

THIS DESIGN COMPLIES WITH:
- PART 4 OF OBC 2012 , BCBC 2012 , ABC 2014
- CSA 086-09
- TPIC 2011

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR USED

(79 % OF 52.2 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 49.9 P.S.F. SPECIFIED ROOF LIVE LOAD

CSI: TC=0.24/1.00 (2-8:3) , BC=0.22/1.00 (4-7:3) , WB=0.10/1.00 (2-4:1) , SSI=0.16/1.00 (2-8:3)

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

SNOW LOAD IMPORTANCE FACTOR = 1.00
WIND LOAD IMPORTANCE FACTOR = 1.00
LIVE LOAD IMPORTANCE FACTOR = 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) (PSI) MAX | MIN | SHEAR (PLI) MAX | MIN | SECTION (PLI) MAX | MIN |
|---|---|---|---|---|---|---|
| MT20 | 618 | 354 | 1667 | 822 | 2284 | 1656 |

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.75 (4) (INPUT = 0.90 )
JSI METAL= 0.18 (4) (INPUT = 1.00 )

PEO
Certificate No. 10889485

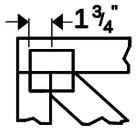

July 3,2019



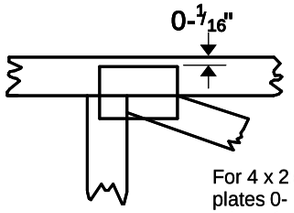

MiTek®
100 Industrial Road
Bradford, ON L3Z 3G7

# Symbols

## PLATE LOCATION AND ORIENTATION




Center plate on joint unless x, y offsets are indicated.
Dimensions are in ft-in-sixteenths or mm.
Apply plates to both sides of truss and fully embed teeth.




For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

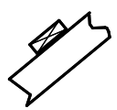
* Plate location details available in MiTek software or upon request.

## PLATE SIZE

4 x 4

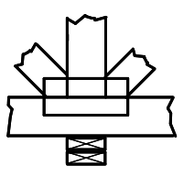
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

## BEARING

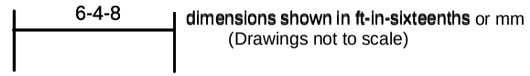


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min. size shown is for crushing only.

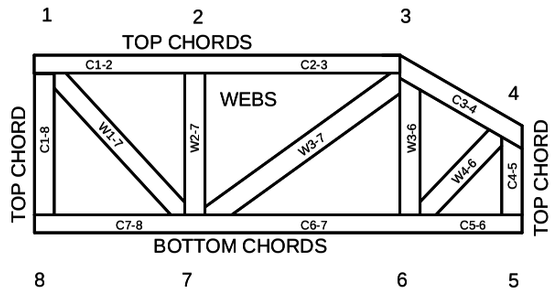
**Industry Standards:**

TPIC: Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses
DSB-89: Design Standard for Bracing.
BCSI1: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System




dimensions shown in ft-in-sixteenths or mm
(Drawings not to scale)




**JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.**

**CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.**

## PRODUCT CODE APPROVALS

CCMC Reports:

11996-L, 10319-L, 13270-L, 12691-R



MiTek

MiTek Engineering Reference Sheet: MII-7473C rev. 09/13/2012

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI1.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by TPIC.
7. Design assumes trusses will be suitably protected from the environment in accord with TPIC.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with TPIC Quality Criteria.