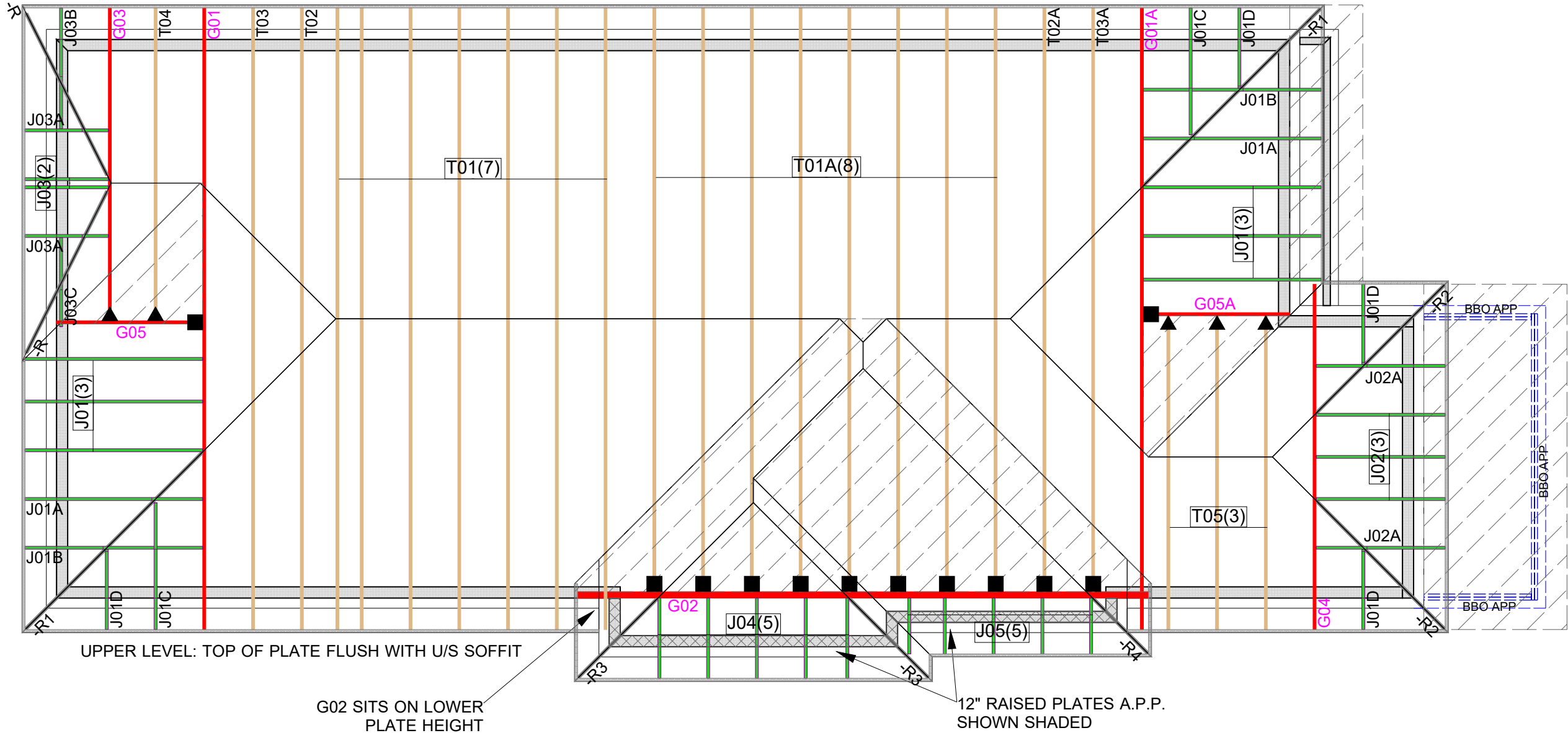


CORPORATION OF THE CITY OF OSHAWA  
TRUE COPY  
OF PERMIT PLANS  
Nov 22 2023  
PER:   
CHIEF BUILDING OFFICIAL

MHP 23026



Hanger Name	Symbol	QTY
LUS24	▲	5
LJS26DS	■	12



#### CONVENTIONAL FRAMING BY OTHERS

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

#### JOB INFORMATION

Customer	GREENPARK GROUP
Job #	23-00086R0
Address	ZADORRA ESTATES ZADORRA ESTATES INC OSHAWA, ON
Model	RIVER 9-3
Sales Rep	RALPH MIRIGELLO
Designer	LI
Date	2023-07-05
Path	C:\MITEK\CA\JOBS\GREENPARK GROUP\ZADORRA ESTATES\MODELS\RIVER 9\RIVER 9-3\T-RIVE

#### DESIGN INFORMATION

Code	NBCC 2015
Bldg	Residential - HSB (NBCC Part 9)
TC LL	34.8 lb/ft <sup>2</sup>
TC DL	6.0 lb/ft <sup>2</sup>
BC LL	0.0 lb/ft <sup>2</sup>
BC DL	7.3 lb/ft <sup>2</sup>
Deflection	LL=L/360 TL=L/360
Spacing	24" O/C unless otherwise noted
Complies With	OBC 2012 (2019 Amendment) CSA O86-14 and TPIC 2014

#### IMPORTANT INFORMATION

Hangers and Fasteners to be installed as per manufacturer

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

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

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

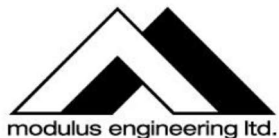
Field erection, handling and bracing are not the responsibility of KOTT, or KOTT Engineering

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

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

KOTT Inc.  
14 Anderson Blvd.  
Uxbridge, ON  
905.642.4400





## General Guidelines for Truss Manufacturer and Installer on Reading Truss Component Drawings



**Read Carefully Prior to  
Manufacture and Installation**

**Note:** It is important that all information on the truss component drawing is understood by all interested parties. If clarification is required, please contact your truss supplier prior to installation of the trusses

### Standard Design Loading:

Standard loading is indicated on the drawing legend for the top and bottom chords, for snow, live and dead loads where indicated. Actual panel UDL is further indicated for individual panels in the body of the truss drawing.

### Non-Standard Loading:

Additional uniform loading is included in individual panel loading. Concentrated loads are noted in a separate table in the body of the drawing.

### Reactions:

Factored gross reactions are indicated as Maximum Factored Reactions, not necessarily for the load case outlined on the drawing. Includes vertical, horizontal and uplift.

### Lumber size and Grade:

The member size and grade is indicated in the lumber table. The truss must be manufactured with the same size and species noted but may be an equal or better grade than indicated.

### Plates sizes:

Plate sizes are noted as Width x Length, where the plate slot direction is parallel to the plate length. Plate sizes indicated are the minimum required and may be increased.

### Plate location:

Plates are centred on the joint unless an x-y offset is indicated. If clarification of placement is required prior to manufacture or during inspection, additional detail on plate placement is available from the truss manufacturer.

### Bearing:

In most cases, input bearing size (input by designer) and minimum required bearing are indicated on the drawing. In cases where the bearing capacity has been enhanced by using a bearing block, bearing enhancer or flush plate, the bearing required will match the input bearing even where the required bearing might be less than what is indicated

### Ply to ply connection:

Where the truss is designed for 2 or more plys, the individual truss plys must be fastened together. A nailing chart will be included which includes nails size, type, spacing and rows for each member. For 4 ply trusses, bolts or structural screws may also be noted

### Building Code:

The truss will be designed as Part 9, Part 4 or Farm and will be noted in the legend. In certain cases, wind loading will also be required and will be outlined on the drawing, including information pertaining to location, building height, exposure class and opening size. TPIC requires that some non-triangulated frames such as attic trusses and gambrel arches be designed Part 4 even though the building itself might meet the requirements of Part 9.

### Chord Bracing:

Minimum spacing for bracing for the top and bottom chord is clearly indicated. This can also be achieved when suitable sheathing is directly connected to the top chord and when a suitable ceiling is directly connected to the bottom chord. For large cantilevers where there is typically not a directly connected ceiling, care should be taken to meet the bracing criteria noted. The base truss for piggyback situations must have 2x4 purlins (max truss spacing 24" o/c) connected at a maximum of 24" o/c along the flat top chord section. Additional x-bracing may be required in the plane of the purlins.

### Web Bracing:

Requirements for individual web bracing will be indicated on the drawing. This will either be a lateral brace or T-brace. Where a T-brace is specified, size, grade and nailing requirement will be noted. For a lateral brace, a 1x4 minimum is required. Note: The building designer is responsible for ensuring adequate load transfer from the individual lateral braces into the overall structure.

### Design Results:

Axial forces for load case 1 are indicated on the drawing. Other load case results can be supplied upon request. Maximum stress indices are also indicated for both the lumber and plates. Maximum deflection is indicated, both allowable and calculated.

### Manufacturing tolerances:

Tolerances for plate placement as outlined in TPIC Appendix G are noted on each truss component drawing.

**Failure to follow these guidelines could cause property damage and personal injury**

1. Additional stability bracing for truss system, e.g. diagonal or xbracing is always required. Consult **BCSI-CANADA** for installation requirements (copies available from your truss supplier or from [www.sbcindustry.com](http://www.sbcindustry.com))

2. Truss bracing must be designed by an engineer. Individual lateral braces shown in truss drawings must be incorporated into overall structure through connection to diaphragm or other means.

3. Never exceed the design loading shown and never stack building materials on inadequately braced trusses

4. Provide copies of truss component drawings to the building department, erection supervisor, property owner and all interested parties (e.g. Building designer where required)

5. Cut members to bear tightly against one another

6. Place plates on each face of truss at each joint and use proper roller or hydraulic press. Knots and warps at locations are regulated by TPIC Appendix G

7. Design assumes trusses will be suitably protected from the environment in accordance with TPIC

8. Unless otherwise noted, MC of lumber shall not exceed 19% at time of manufacture

9. Unless expressly noted, this design is not applicable for fire retardant, preservative treatment or green lumber nor for use in a corrosive environment

10. Connections not shown are the responsibility of others

11. Do not cut or alter truss members or plates without prior approval of an engineer

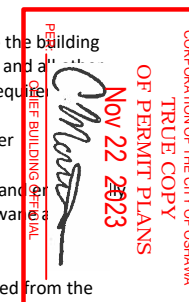
12. Install and load vertically unless otherwise noted

13. Review all portions of this design including all notes. Reviewing pictures alone is not sufficient

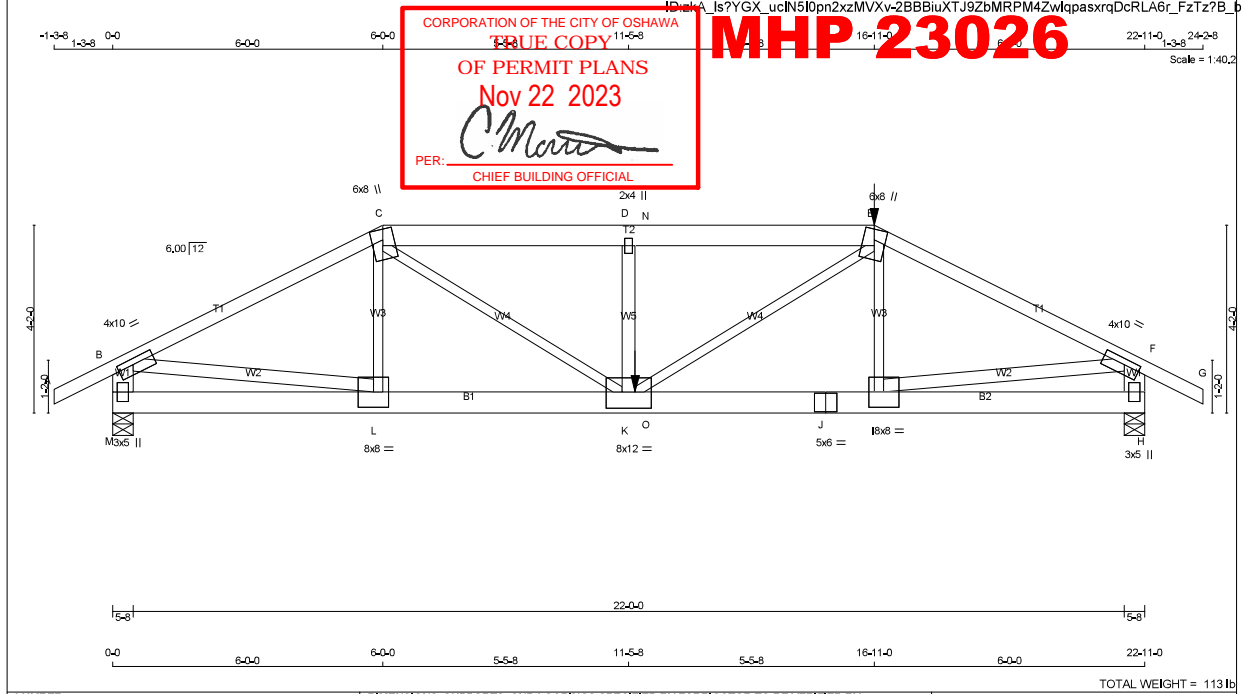
14. Design assumes manufactured in accordance with TPIC Quality criteria as outlined in Appendix G

16. Building designer must review individual component drawings to ensure they are suitable for the structure

15. Not designed for solar panels unless specifically noted



**MHP 23026**



LUMBER					DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER										DESIGN CRITERIA								
N, L, G, A, RULES					LUMBER					DESCR.					BEARINGS		*** SPECIAL LOADS ANALYSIS ***						
CHORDS					SIZE					SPF					GROSS REACTION					GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.			
A - C	2x4	DRY	2100F 1.8E		SPF					FACTORED					MAXIMUM FACTORED					INPUT		REQRD	
C - E	2x6	DRY	No.2		SPF					GROSS REACTION					GROSS REACTION					BRG		BRG	
E - G	2x4	DRY	2100F 1.8E		SPF					JT	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX	3-14					
M - B	2x6	DRY	No.2		SPF					M	2888	0	2888	0	0	5-8	5-8	LOADS WERE DERIVED FROM USER INPUT					
H - F	2x6	DRY	No.2		SPF					H	3373	0	3373	0	0	5-8	5-7	NO FURTHER MODIFICATIONS WERE MADE					
M - J	2x6	DRY	No.2		SPF																		
J - H	2x6	DRY	No.2		SPF																		
ALL WEBS EXCEPT					SPF <th colspan="10">UNFACTORED REACTIONS<th colspan="2">SPECIFIED LOADS:</th></th>					UNFACTORED REACTIONS <th colspan="2">SPECIFIED LOADS:</th>										SPECIFIED LOADS:			
										1ST CASE					MAX./MIN. COMPONENT REACTIONS								
K - D	2x4	DRY	No.2		SPF					JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL	TOP CH. LL = 34.8 PSF					
B - L	2x4	DRY	No.2		SPF					M	2015	1477 / 0	0 / 0	0 / 0	0 / 0	538 / 0	0 / 0	OT CH. LL = 6.0 PSF					
I - F	2x4	DRY	No.2		SPF					H	2357	1706 / 0	0 / 0	0 / 0	0 / 0	651 / 0	0 / 0	BOT CH. LL = 0.0 PSF					
																				TOTAL LOAD = 48.1 PSF			

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW4	MT20	4.0	10.0	1.50	4.25
C	TTVW+m	MT20	6.0	8.0	2.75	3.00
D	TMVW+w	MT20	2.0	4.0		
E	TTVW+m	MT20	6.0	8.0	2.75	3.00
F	TMVW4	MT20	4.0	10.0	1.50	4.25
H	BMV1+p	MT20	3.0	5.0		
I	BMVW4	MT20	8.0	8.0		
J	BS4	MT20	5.0	6.0		
K	BMVWVW4	MT20	8.0	12.0	4.25	6.00
L	BMVW4	MT20	8.0	8.0		
M	BMV1+p	MT20	3.0	5.0		

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

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

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

ALLOWABLE DEFLECT, (LL) = L/360 (0.76")  
CALCULATED VERT. DEFLECT, (LL) = L/999 (0.18")  
ALLOWABLE DEFLECT, (TL) = L/360 (0.76")  
CALCULATED VERT. DEFLECT, (TL) = L/901 (0.31")

CSL TC=0.92/1.00 (E-F:1), BC=0.71/1.00 (I-K:1), WB=0.79/1.00 (F-1:1), SSL=0.43/1.00 (D-E:1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

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

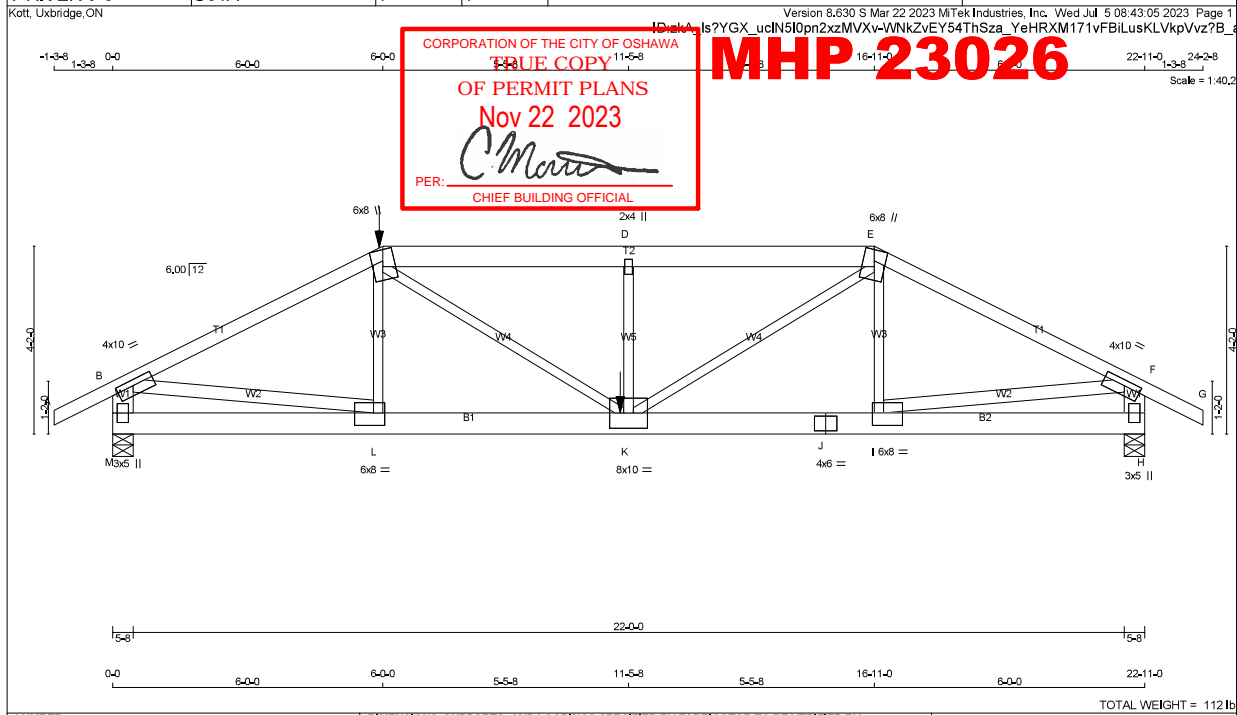
JSI GRIP= 0.89 (F) (INPUT = 0.90)  
JSI METAL= 0.79 (J) (INPUT = 1.00)

REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED IN MODULUS ENGINEERING LTD. NOTES ME-TC001 (VER 06/2017) BEFORE USE.

Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for individual building components. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult TPIC Appendix G - Minimum quality Manufacturing Criteria available from www.tpica.ca and BCSI-CANADA (Building Component Safety Information) available from TPI, 781 N. Lee Street, Suite 212, Alexandria, VA 22314 or www.sbindustry.com



<div>LUMBER</div> <div>N, L, G, A, RULES</div> <table><tr><th>CHORDS</th><th>SIZE</th><th>LUMBER</th><th>DESCR.</th></tr><tr><td>A - C</td><td>2x4</td><td>DRY</td><td>2100F 1.8E</td></tr><tr><td>C - E</td><td>2x6</td><td>DRY</td><td>No.2</td></tr><tr><td>E - G</td><td>2x4</td><td>DRY</td><td>2100F 1.8E</td></tr><tr><td>M - B</td><td>2x6</td><td>DRY</td><td>No.2</td></tr><tr><td>H - F</td><td>2x6</td><td>DRY</td><td>No.2</td></tr><tr><td>M - J</td><td>2x6</td><td>DRY</td><td>No.2</td></tr><tr><td>J - H</td><td>2x6</td><td>DRY</td><td>No.2</td></tr></table> <div>ALL WEBS</div> <table><tr><th>CHORDS</th><th>SIZE</th><th>LUMBER</th><th>DESCR.</th></tr><tr><td>B - L</td><td>2x4</td><td>DRY</td><td>No.2</td></tr><tr><td>I - F</td><td>2x4</td><td>DRY</td><td>No.2</td></tr></table> <div>DRY: SEASONED LUMBER.</div>				CHORDS	SIZE	LUMBER	DESCR.	A - C	2x4	DRY	2100F 1.8E	C - E	2x6	DRY	No.2	E - G	2x4	DRY	2100F 1.8E	M - B	2x6	DRY	No.2	H - F	2x6	DRY	No.2	M - J	2x6	DRY	No.2	J - H	2x6	DRY	No.2	CHORDS	SIZE	LUMBER	DESCR.	B - L	2x4	DRY	No.2	I - F	2x4	DRY	No.2	<div>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</div> <div>BEARINGS</div> <table><tr><th>FACTORED</th><th>MAXIMUM FACTORED</th><th>INPUT</th><th>REQRD</th></tr><tr><th>GROSS REACTION</th><th>GROSS REACTION</th><th>BRG</th><th>BRG</th></tr><tr><th>JT VERT</th><th>HORZ</th><th>DOWN</th><th>HORZ</th></tr><tr><td>M</td><td>3312</td><td>0</td><td>3312</td></tr><tr><td>H</td><td>2826</td><td>0</td><td>2826</td></tr></table> <div>UNFACTORED REACTIONS</div> <table><tr><th>1ST LCASE</th><th>MAX./MIN.</th><th>COMPONENT REACTIONS</th></tr><tr><th>JT</th><th>COMBINED</th><th>SNOW LIVE PERM.LIVE</th></tr><tr><td>M</td><td>2315</td><td>1675 / 0</td></tr><tr><td>H</td><td>1972</td><td>1446 / 0</td></tr></table> <div>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) M, H</div> <div>BRACING</div> <div>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 2.83 FT.</div> <div>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.</div> <div>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.</div> <div>LOADING</div> <div>TOTAL LOAD CASES: (4)</div> <table><tr><th colspan="4">CHORDS</th><th colspan="4">WEBS</th></tr><tr><th>MEMB.</th><th>FORCE (LBS)</th><th>FACTORED VERT. LOAD</th><th>MAX. (LC1)</th><th>MEMB.</th><th>FORCE (LBS)</th><th>FACTORED MAX. (LC)</th><th>MAX. (LC)</th></tr><tr><td>FR-TO</td><td></td><td>FROM TO</td><td></td><td>FR-TO</td><td></td><td></td><td></td></tr><tr><td>A-B</td><td>0 / 36</td><td>-119.4 -119.4</td><td>0.11 (1)</td><td>L-C</td><td>-321 / 108</td><td>0.08 (1)</td><td></td></tr><tr><td>B-C</td><td>-4819 / 0</td><td>-119.4 -119.4</td><td>0.91 (1)</td><td>C-K</td><td>0 / 1880</td><td>0.47 (1)</td><td></td></tr><tr><td>C-D</td><td>-5880 / 0</td><td>-225.2 -225.2</td><td>0.71 (1)</td><td>K-D</td><td>-1171 / 0</td><td>0.29 (1)</td><td></td></tr><tr><td>D-E</td><td>-5880 / 0</td><td>-119.4 -119.4</td><td>0.55 (1)</td><td>E-K</td><td>0 / 2737</td><td>0.68 (1)</td><td></td></tr><tr><td>E-F</td><td>-4030 / 0</td><td>-119.4 -119.4</td><td>0.81 (1)</td><td>F-E</td><td>-330 / 7</td><td>0.08 (1)</td><td></td></tr><tr><td>F-G</td><td>0 / 36</td><td>-119.4 -119.4</td><td>0.11 (1)</td><td>G-L</td><td>0 / 4357</td><td>0.77 (1)</td><td></td></tr><tr><td>M-B</td><td>-3224 / 0</td><td>0.0 0.0</td><td>0.23 (1)</td><td>L-F</td><td>0 / 3644</td><td>0.64 (1)</td><td></td></tr><tr><td>H-F</td><td>-2781 / 0</td><td>0.0 0.0</td><td>0.20 (1)</td><td></td><td></td><td></td><td></td></tr><tr><td>M-L</td><td>0 / 0</td><td>-34.4 -34.4</td><td>0.14 (4)</td><td></td><td></td><td></td><td></td></tr><tr><td>L-K</td><td>0 / 4329</td><td>-34.4 -34.4</td><td>0.69 (1)</td><td></td><td></td><td></td><td></td></tr><tr><td>K-J</td><td>0 / 3622</td><td>-18.2 -18.2</td><td>0.57 (1)</td><td></td><td></td><td></td><td></td></tr><tr><td>J-I</td><td>0 / 3622</td><td>-18.2 -18.2</td><td>0.57 (1)</td><td></td><td></td><td></td><td></td></tr><tr><td>I-H</td><td>0 / 0</td><td>-18.2 -18.2</td><td>0.07 (4)</td><td></td><td></td><td></td><td></td></tr></table> <div>FACTORED CONCENTRATED LOADS (LBS)</div> <table><tr><th>JT</th><th>LOC.</th><th>LC1</th><th>MAX.</th><th>MAX+</th><th>FACE</th><th>DIR.</th><th>TYPE</th><th>HEEL</th><th>CONN.</th></tr><tr><td>C</td><td>6-0-0</td><td>-537</td><td>-537</td><td>---</td><td>FRONT</td><td>VERT</td><td>TOTAL</td><td>---</td><td>C1</td></tr><tr><td>K</td><td>11-3-4</td><td>-1359</td><td>-1359</td><td>---</td><td>FRONT</td><td>VERT</td><td>TOTAL</td><td>---</td><td>C1</td></tr></table> <div>CONNECTION REQUIREMENTS</div> <div>1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.</div>				FACTORED	MAXIMUM FACTORED	INPUT	REQRD	GROSS REACTION	GROSS REACTION	BRG	BRG	JT VERT	HORZ	DOWN	HORZ	M	3312	0	3312	H	2826	0	2826	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS	JT	COMBINED	SNOW LIVE PERM.LIVE	M	2315	1675 / 0	H	1972	1446 / 0	CHORDS				WEBS				MEMB.	FORCE (LBS)	FACTORED VERT. LOAD	MAX. (LC1)	MEMB.	FORCE (LBS)	FACTORED MAX. (LC)	MAX. (LC)	FR-TO		FROM TO		FR-TO				A-B	0 / 36	-119.4 -119.4	0.11 (1)	L-C	-321 / 108	0.08 (1)		B-C	-4819 / 0	-119.4 -119.4	0.91 (1)	C-K	0 / 1880	0.47 (1)		C-D	-5880 / 0	-225.2 -225.2	0.71 (1)	K-D	-1171 / 0	0.29 (1)		D-E	-5880 / 0	-119.4 -119.4	0.55 (1)	E-K	0 / 2737	0.68 (1)		E-F	-4030 / 0	-119.4 -119.4	0.81 (1)	F-E	-330 / 7	0.08 (1)		F-G	0 / 36	-119.4 -119.4	0.11 (1)	G-L	0 / 4357	0.77 (1)		M-B	-3224 / 0	0.0 0.0	0.23 (1)	L-F	0 / 3644	0.64 (1)		H-F	-2781 / 0	0.0 0.0	0.20 (1)					M-L	0 / 0	-34.4 -34.4	0.14 (4)					L-K	0 / 4329	-34.4 -34.4	0.69 (1)					K-J	0 / 3622	-18.2 -18.2	0.57 (1)					J-I	0 / 3622	-18.2 -18.2	0.57 (1)					I-H	0 / 0	-18.2 -18.2	0.07 (4)					JT	LOC.	LC1	MAX.	MAX+	FACE	DIR.	TYPE	HEEL	CONN.	C	6-0-0	-537	-537	---	FRONT	VERT	TOTAL	---	C1	K	11-3-4	-1359	-1359	---	FRONT	VERT	TOTAL	---	C1	<div>DESIGN CRITERIA</div> <div>*** SPECIAL LOADS ANALYSIS ***</div> <div>GEOMETRY AND/OR BASIC LOADS CHANGED BY USER.</div> <div>LOADS WERE DERIVED FROM USER INPUT</div> <div>NO FURTHER MODIFICATIONS WERE MADE</div> <div>SPECIFIED LOADS:</div> <table><tr><td>TOP CH.</td><td>LL</td><td>=</td><td>34.8</td><td>PSF</td></tr><tr><td>DL</td><td></td><td>=</td><td>6.0</td><td>PSF</td></tr><tr><td>BOT CH.</td><td>LL</td><td>=</td><td>0.0</td><td>PSF</td></tr><tr><td>DL</td><td></td><td>=</td><td>7.3</td><td>PSF</td></tr><tr><td>TOTAL LOAD</td><td></td><td>=</td><td>48.1</td><td>PSF</td></tr></table> <div>SPACING = 24.0 IN. G/C</div> <div>LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM</div> <div>GIRDER TYPE: CPrimeHip</div> <div>SIDE SETBACK = 6-0-0</div> <div>END SETBACK = 6-0-0</div> <div>END WALL WIDTH = 5-8</div> <div>CORNER FRAMING TYPE: CONVENTIONAL</div> <div>END JACK TYPE: CONVENTIONAL</div> <div>APPLIED TO FRONT SIDE</div> <div>- ADDTL LOADS BASED ON 55 % OF GSL.</div> <div>LOADS APPLIED TO FIRST 11-3-4 OF SPAN MEASURED FROM THE LEFT.</div> <div>*** NON STANDARD GIRDER ***</div> <div>ADDTL USERDEFINED LOADS APPLIED TO ALL LOAD CASES.</div> <div>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015</div> <div>THIS DESIGN COMPLIES WITH:</div> <div>- PART 9 OF BCBC 2018, NBC-2019AE</div> <div>- PART 9 OF OBC 2012 (2019 AMENDMENT)</div> <div>- CSA 086-14</div> <div>- TPIC 2014</div> <div>(55 % OF 48.1 P.S.F., G.S.L. PLUS 8.4 P.S.F., RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD</div> <div>ALLOWABLE DEFL.(LL)= L/360 (0.76")</div> <div>CALCULATED VERT. DEFL.(LL) = L/999 (0.17")</div> <div>ALLOWABLE DEFL.(TL)= L/360 (0.76")</div> <div>CALCULATED VERT. DEFL.(TL) = L/928 (0.30")</div> <div>CSI: TC=0.91/1.00 (B-C-1), BC=0.69/1.00 (K-L-1), WB=0.77/1.00 (B-L-1), SSI=0.46/1.00 (C-D-1)</div> <div>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS= 1.00</div> <div>COMPANION LIVE LOAD FACTOR = 1.00</div> <div>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.</div> <div>NAIL VALUES</div> <table><tr><th>PLATE</th><th>GRIP(DRY)</th><th>SHEAR (PSI)</th><th>SECTION (PLI)</th></tr><tr><td>MT20</td><td>650</td><td>371</td><td>1747</td></tr><tr><td></td><td></td><td>788</td><td>1987</td></tr><tr><td></td><td></td><td></td><td>1873</td></tr></table> <div>PLATE PLACEMENT TOL. = 0.250 inches</div> <div>PLATE ROTATION TOL. = 5.0 Deg.</div> <div>JSI GRIP= 0.89 (F) (INPUT = 0.90 )</div> <div>JSI METAL= 0.99 (J) (INPUT = 1.00 )</div>				TOP CH.	LL	=	34.8	PSF	DL		=	6.0	PSF	BOT CH.	LL	=	0.0	PSF	DL		=	7.3	PSF	TOTAL LOAD		=	48.1	PSF	PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)	MT20	650	371	1747			788	1987				1873
CHORDS	SIZE	LUMBER	DESCR.																																																																																																																																																																																																																																																																																											
A - C	2x4	DRY	2100F 1.8E																																																																																																																																																																																																																																																																																											
C - E	2x6	DRY	No.2																																																																																																																																																																																																																																																																																											
E - G	2x4	DRY	2100F 1.8E																																																																																																																																																																																																																																																																																											
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M - J	2x6	DRY	No.2																																																																																																																																																																																																																																																																																											
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M	3312	0	3312																																																																																																																																																																																																																																																																																											
H	2826	0	2826																																																																																																																																																																																																																																																																																											
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FR-TO		FROM TO		FR-TO																																																																																																																																																																																																																																																																																										
A-B	0 / 36	-119.4 -119.4	0.11 (1)	L-C	-321 / 108	0.08 (1)																																																																																																																																																																																																																																																																																								
B-C	-4819 / 0	-119.4 -119.4	0.91 (1)	C-K	0 / 1880	0.47 (1)																																																																																																																																																																																																																																																																																								
C-D	-5880 / 0	-225.2 -225.2	0.71 (1)	K-D	-1171 / 0	0.29 (1)																																																																																																																																																																																																																																																																																								
D-E	-5880 / 0	-119.4 -119.4	0.55 (1)	E-K	0 / 2737	0.68 (1)																																																																																																																																																																																																																																																																																								
E-F	-4030 / 0	-119.4 -119.4	0.81 (1)	F-E	-330 / 7	0.08 (1)																																																																																																																																																																																																																																																																																								
F-G	0 / 36	-119.4 -119.4	0.11 (1)	G-L	0 / 4357	0.77 (1)																																																																																																																																																																																																																																																																																								
M-B	-3224 / 0	0.0 0.0	0.23 (1)	L-F	0 / 3644	0.64 (1)																																																																																																																																																																																																																																																																																								
H-F	-2781 / 0	0.0 0.0	0.20 (1)																																																																																																																																																																																																																																																																																											
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L-K	0 / 4329	-34.4 -34.4	0.69 (1)																																																																																																																																																																																																																																																																																											
K-J	0 / 3622	-18.2 -18.2	0.57 (1)																																																																																																																																																																																																																																																																																											
J-I	0 / 3622	-18.2 -18.2	0.57 (1)																																																																																																																																																																																																																																																																																											
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C	6-0-0	-537	-537	---	FRONT	VERT	TOTAL	---	C1																																																																																																																																																																																																																																																																																					
K	11-3-4	-1359	-1359	---	FRONT	VERT	TOTAL	---	C1																																																																																																																																																																																																																																																																																					
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MODULUS ENGINEERING LTD.

LICENSED PROFESSIONAL ENGINEER

07/05/2023

D. A. SHERMAN

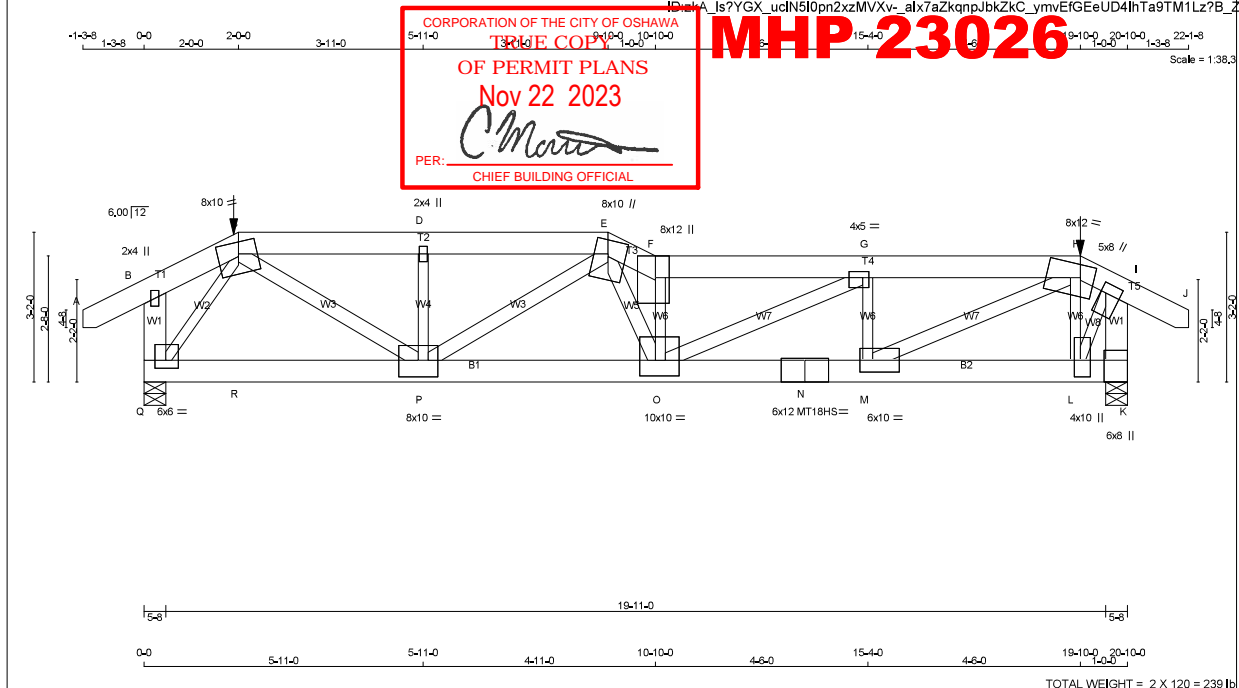
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PROVINCE OF ONTARIO

REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT  
VOIDS THE ENGINEERS SEAL





<b>LUMBER</b> N, L, G, A, RULES CHORDS SIZE LUMBER DESCR. A - C 2x6 DRY No.2 SPF C - E 2x6 DRY No.2 SPF E - F 2x6 DRY No.2 SPF F - H 2x6 DRY No.2 SPF H - J 2x6 DRY No.2 SPF Q - B 2x6 DRY No.2 SPF K - I 2x6 DRY No.2 SPF Q - N 2x6 DRY 2100F 1.8E SPF N - K 2x6 DRY 2100F 1.8E SPF  ALL WEBS EXCEPT C - P 2x4 DRY No.2 SPF P - E 2x4 DRY No.2 SPF E - O 2x4 DRY 2100F 1.8E SPF O - G 2x4 DRY 2100F 1.8E SPF M - H 2x4 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 A-C 2 12 SIDE(0,0) C-E 2 12 SIDE(6,8) E-F 2 12 SIDE(6,1) F-H 2 12 SIDE(6,8) H-J 2 12 SIDE(0,0) Q-B 2 12 TOP K-I 2 12 TOP BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS Q-N 2 8 SIDE(347,6) N-K 2 8 SIDE(347,6) WEBS : (0.122"x3") SPIRAL NAILS 2x3 1 6 2x4 1 6  NAILS TO BE DRIVEN FROM ONE SIDE ONLY.  GIRDER NAILING ASSUMES NAILED HANGERS ARE FASTENED WITH MIN. 3/4 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 TRANSFERRING. REMAINING PLF MUST BE APPLIED ON THE OPPOSITE SIDE OR ON THE TOP.  MODULUS ENGINEERING LTD.			<b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b> <b>BEARINGS</b> FACTORED GROSS REACTION MAXIMUM FACTORED GROSS REACTION INPUT REQRD JT VERT HORZ DOWN HORZ UPLIFT IN-SX IN-SX Q 8711 0 8711 0 0 5-8 4-8 K 8703 0 8703 0 0 5-8 5-8  <b>UNFACTORED REACTIONS</b> 1ST LOASE MAX./MIN. COMPONENT REACTIONS JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL Q 6085 4420 / 0 0 / 0 0 / 0 1665 / 0 0 / 0 K 6079 4415 / 0 0 / 0 0 / 0 1664 / 0 0 / 0  BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) Q, K BEARING SIZE FACTOR = 1.15 AT JNT(S) Q, K ( BASED ON SUPPORT DEPTH = 1-8 )  <b>BRACING</b> TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 1.91 FT. MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.  ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.  <b>LOADING</b> TOTAL LOAD CASES: (4)  C H O R D S MAX. FACTORED FACTORED W E B S MEMB. FORCE VERT. LOAD LC1 MAX. MAX. MEMB. FORCE MAX. (LBS) (PLF) CSI (LC) UNBRAC (LBS) CSI (LC) FR-TO FROM TO LENGTH FR-TO A-B 0 / 36 -119.4 -119.4 0.04 (1) 10.00 C-P 0 / 11005 0.97 (1) B-C 0 / 0 -119.4 -119.4 0.02 (1) 10.00 P-D -183 / 18 0.02 (1) C-D -14040 / 0 -105.7 -105.7 0.39 (1) 2.99 P-E -2490 / 0 0.34 (1) D-E -14040 / 0 -105.7 -105.7 0.39 (1) 2.99 E-O 0 / 12342 0.51 (1) E-F -23221 / 0 -105.7 -105.7 0.66 (1) 1.91 O-F -10784 / 0 0.91 (1) F-G -20259 / 0 -105.7 -105.7 0.68 (1) 2.12 O-G 0 / 4944 0.20 (1) G-H -15840 / 0 -105.7 -105.7 0.47 (1) 2.73 M-G -2516 / 0 0.21 (1) H-I -4985 / 0 -119.4 -119.4 0.07 (1) 5.16 M-H 0 / 12934 0.53 (1) I-J 0 / 36 -119.4 -119.4 0.04 (1) 10.00 L-H -3703 / 0 0.31 (1) Q-B -279 / 0 0.0 0.0 0.01 (1) 7.81 Q-C -8344 / 0 0.85 (1) K-I -9267 / 0 0.0 0.0 0.36 (1) 4.96 L-I 0 / 7799 0.99 (1)  Q-R 0 / 4973 -711.4 -711.4 0.57 (1) 10.00 R-P 0 / 4973 -711.4 -711.4 0.57 (1) 10.00 P-O 0 / 16090 -711.4 -711.4 0.86 (1) 10.00 O-N 0 / 15840 -711.4 -711.4 0.66 (1) 10.00 N-M 0 / 15840 -711.4 -711.4 0.66 (1) 10.00 M-L 0 / 4215 -711.4 -711.4 0.32 (1) 10.00 L-K 0 / 0 -711.4 -711.4 0.21 (1) 10.00  FACTORED CONCENTRATED LOADS (LBS) JT LOC. LC1 MAX- MAX+ FACE DIR. TYPE HEEL CONN. C 2-0-0 -20 -20 -- BACK VERT TOTAL -- C1 H 19-10-0 -10 -10 -- BACK VERT TOTAL -- C1  <b>CONNECTION REQUIREMENTS</b> 1) C1: A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED.			<b>DESIGN CRITERIA</b>  SPECIFIED LOADS: TOP CH. LL = 34.8 PSF DL = 6.0 PSF BOT CH. LL = 0.0 PSF DL = 7.3 PSF TOTAL LOAD = 48.1 PSF  <b>SPACING = 24.0 IN. GIG</b>  LOADING IN ALL FLAT SECTIONS BASED ON A SLOPE OF 2.00/12 MINIMUM  GIRDER TYPE: CStdGirder START DISTANCE = 0-0 START SPAN CARRIED = 22-7-14 END DISTANCE = 20-10-0 END SPAN CARRIED = 22-7-14 END WALL WIDTH = 5-8 APPLIED TO FRONT SIDE OF BOTTOM CHORD. -ADDTL LOADS BASED ON 55 % OF GSL.  GIRDER TYPE: CPrimeHip LEFT SETBACK = 2-0-0 RIGHT SETBACK = 1-0-0 END SETBACK = 2-0-0 END WALL WIDTH = 5-8 CORNER FRAMING TYPE: CONVENTIONAL END JACK TYPE: CONVENTIONAL APPLIED TO BACK SIDE -ADDTL LOADS BASED ON 55 % OF GSL.  THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015  THIS DESIGN COMPLIES WITH: - PART 9 OF CBC 2018 / NBC-2019AE - PART 9 OF OBC 2012 (2019 AMENDMENT) - CSA 086-14 - TPIC 2014  DESIGN ASSUMPTIONS - OVERHANG NOT TO BE ALTERED OR CUT OFF.  (55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD  ALLOWABLE DEFL.(LL) = L/360 (0.69") CALCULATED VERT. DEFL.(LL) = L/ 841 (0.30") ALLOWABLE DEFL.(TL) = L/360 (0.69") CALCULATED VERT. DEFL.(TL) = L/ 490 (0.51")  CSI TC=0.68/1.00 (F-G-1), BC=0.86/1.00 (O-P-1), WB=0.99/1.00 (L-I), SSI=0.82/1.00 (P-Q-1)  DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00  COMPANION LIVE LOAD FACTOR = 1.00  AUTOSOLVE RIGHT HEEL ONLY  TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.  NAIL VALUES PLATE GRIP(DRY) SHEAR SECTION (PSI) (PLI) (PLI) MAX MIN MAX MIN MAX MIN MT20 650 371 1747 788 1987 1673 MT18HS 586 403 2455 1382 3163 3004  PLATE PLACEMENT TOL. = 0.250 inches  PLATE ROTATION TOL. = 5.0 Deg.  JSI GRIP= 0.90 (L) (INPUT = 0.90 ) JSI METAL= 0.99 (E) (INPUT = 1.00 )  TOTAL WEIGHT = 2 X 120 = 239 lb		
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PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0		
C	TTWW-m	MT20	8.0	10.0	3.00	4.75
D	TMV+w	MT20	2.0	4.0		
E	TTWW+m	MT20	8.0	10.0	3.50	3.50
F	TTW+p	MT20	8.0	12.0	Edge	3.50
G	TMWW-H	MT20	4.0	5.0	1.50	1.50
H	TTWW-m	MT20	8.0	12.0	3.25	3.50
I	TMVW+t	MT20	5.0	8.0	2.50	1.25
K	BMV1+t	MT20	6.0	8.0	Edge	0.50
L	BMWW+t	MT20	4.0	10.0	4.25	1.50
M	BMWW-H	MT20	6.0	10.0	3.00	3.25
N	BS-t	MT18HS	6.0	12.0		
O	BMWWW-H	MT20	10.0	10.0	4.00	4.00
P	BMWWW-H	MT20	8.0	10.0	4.25	5.00
Q	BMVW1-t	MT20	6.0	6.0	2.00	2.75


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

CORPORATION OF THE CITY OF OSHAWA

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OF PERMIT PLANS


Nov 22 2023

PER: 

CHIEF BUILDING OFFICIAL

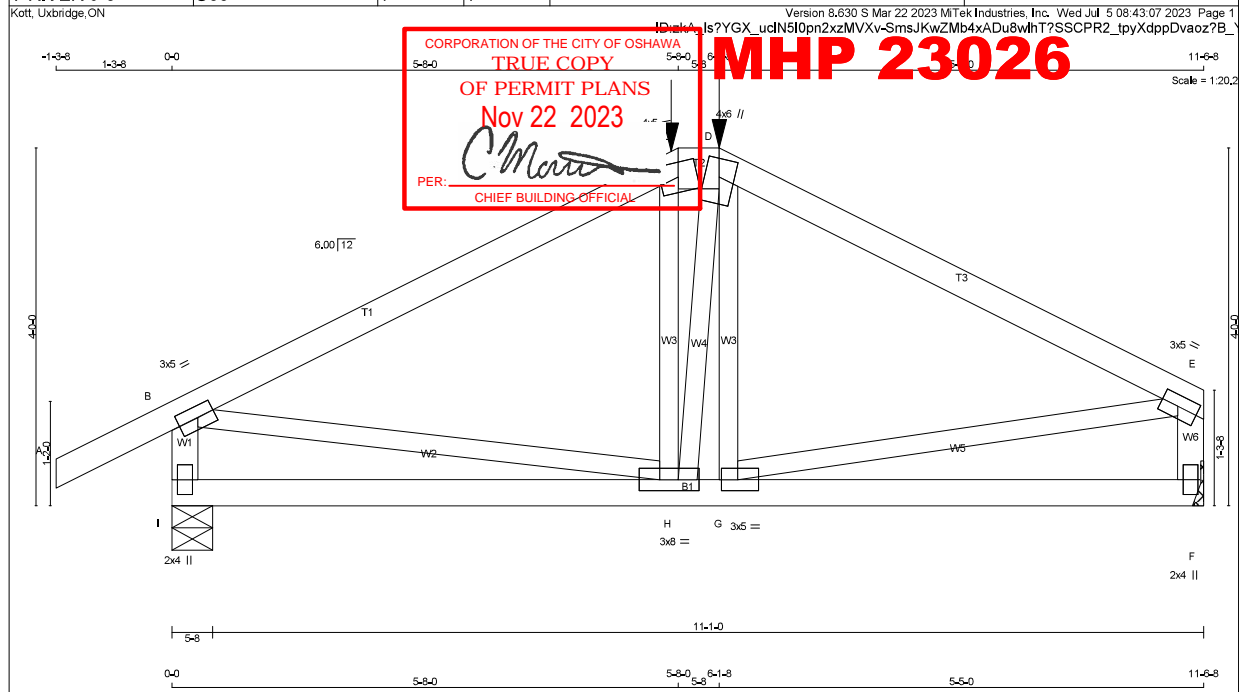
MHP 23026

MODULUS ENGINEERING LTD.



REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT  
VOIDS THE ENGINEER'S SEAL



LUMBER		N. L. G. A. RULES		CHORDS SIZE		LUMBER		DESCR.		DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER		DESIGN CRITERIA	
A - C		2x4		DRY		No.2		SPF		FACTORED		SPECIFIED LOADS:	
C - D		2x6		DRY		No.2		SPF		GROSS REACTION		TOP CH. LL = 34.8 PSF	
D - E		2x4		DRY		No.2		SPF		DOWN		DL = 6.0 PSF	
I - B		2x4		DRY		No.2		SPF		1013 0		BOT CH. LL = 0.0 PSF	
F - E		2x4		DRY		No.2		SPF		854 0		DL = 7.3 PSF	
I - F		2x4		DRY		No.2		SPF		854 0 0		TOTAL LOAD = 48.1 PSF	
ALL WEBS		2x3		DRY		No.2		SPF		A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT F. MINIMUM BEARING LENGTH AT JOINT F = 1-8.		SPACING = 240 IN.CIC	
EXCEPT												LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM	
DRY: SEASONED LUMBER.												ORDER TYPE: CPrimeHip	
												LEFT SETBACK = 5-8-0	
												RIGHT SETBACK = 5-5-0	
												END SETBACK = 2-1-8	
												END WALL WIDTH = 5-8	
												CORNER FRAMING TYPE: CONVENTIONAL	
												END JACK TYPE: CONVENTIONAL	
												APPLIED TO FRONT SIDE	
												• ADDTL LOADS BASED ON 55 % OF GSL.	
												THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015	
												THIS DESIGN COMPLIES WITH:	
												• PART 9 OF CBC 2018, NBC-2019AE	
												• PART 9 OF OBC 2012 (2019 AMENDMENT)	
												• CSA 086-14	
												• TPIC 2014	
												(55 % OF 48.1 P.S.F., G.S.L., PLUS 8.4 P.S.F., RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD	
												ALLOWABLE DEFL.(LL)= L/360 (0.38")	
												CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")	
												ALLOWABLE DEFL.(TL)= L/360 (0.38")	
												CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")	
												CSI: TC=0.78/1.00 (B-C-1), BC=0.20/1.00 (G-H-1), WB=0.18/1.00 (B-H-1), SS=0.29/1.00 (B-C-1)	
												DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.00 COMP=1.00 SHEAR=1.00 TENS=1.00	
												COMPANION LIVE LOAD FACTOR = 1.00	
												TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.	
												NAIL VALUES	
												PLATE GRIP(DRY) SHEAR SECTION	
												(PSI) (PLI) (PLI)	
												MAX MIN MAX MIN MAX MIN	
												MT20 650 371 1747 788 1987 1873	
												PLATE PLACEMENT TOL. = 0.250 inches	
												PLATE ROTATION TOL. = 5.0 Deg.	
												JSI GRIP= 0.86 (B) (INPUT = 0.90 )	
												JSI METAL= 0.30 (B) (INPUT = 1.00 )	

MODULUS ENGINEERING LTD.

07/05/2023

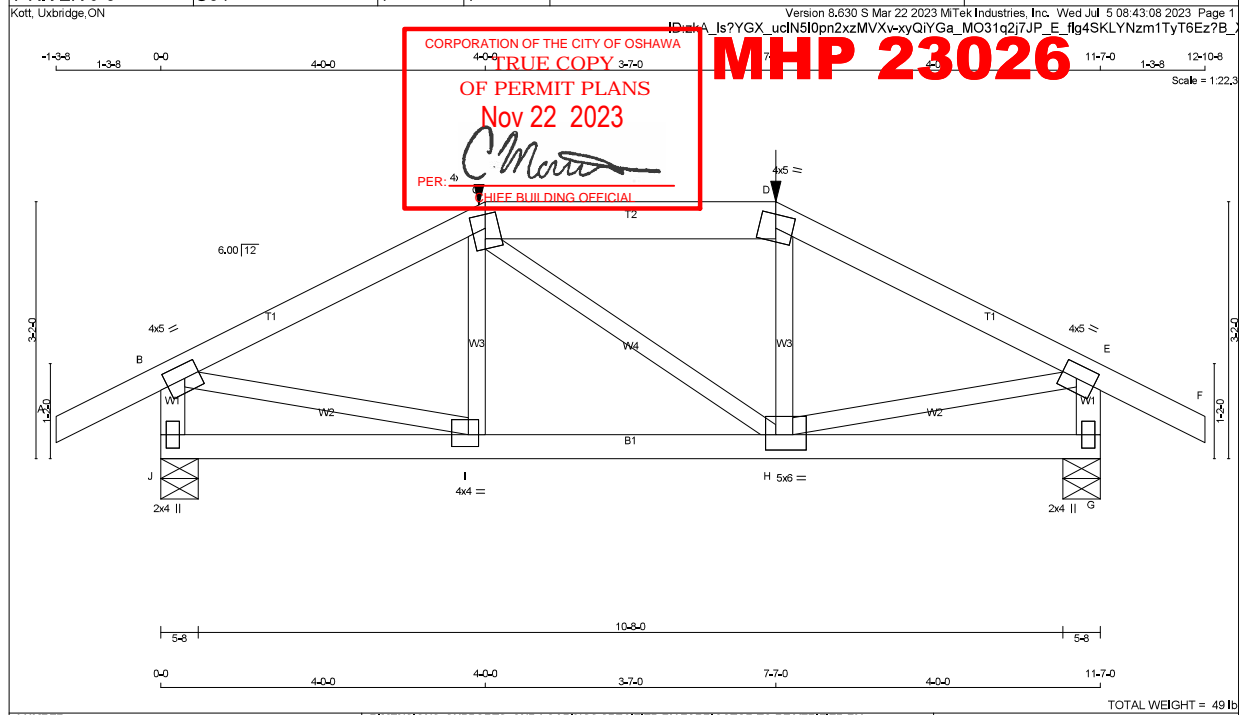
D. A. SHERMAN

100123373

PROVINCE OF ONTARIO

REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEERS SEAL



<b>LUMBER</b>				<b>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</b>				<b>DESIGN CRITERIA</b>			
N. L. G. A. RULES				<b>BEARINGS</b>				SPECIFIED LOADS:			
CHORDS	SIZE	LUMBER	DESCR.	FACTORED	MAXIMUM FACTORED	INPUT	REQD	TOP CH.	LL	=	34.8 PSF
A - C	2x4	DRY	No.2	GROSS REACTION	GROSS REACTION	BRG	BRG	DL	=	6.0 PSF	
C - D	2x4	DRY	No.2	VERT	DOWN	HORZ	UPLIFT	BOT CH.	LL	=	0.0 PSF
D - F	2x4	DRY	No.2	J	1282	0	1282	DL	=	7.3 PSF	
J - B	2x4	DRY	No.2	G	1282	0	1282	TOTAL LOAD	=	48.1 PSF	
G - E	2x4	DRY	No.2								
J - G	2x4	DRY	No.2								
ALL WEBS EXCEPT				<b>UNFACTORED REACTIONS</b>				<b>SPACING = 24.0 IN. GIG</b>			
2x3 DRY No.2 SPF				1ST CASE MAX./MIN. COMPONENT REACTIONS				LOADING IN FLAT SECTION BASED ON A SLOPE OF 2.00/12 MINIMUM			
DRY: SEASONED LUMBER,				JT	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
				J	893	662 / 0	0 / 0	0 / 0	0 / 0	231 / 0	0 / 0
				G	893	662 / 0	0 / 0	0 / 0	0 / 0	231 / 0	0 / 0

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

**BRACING**  
 TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.07 FT.  
 MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

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

MEMB.				MEMB.				THIS DESIGN COMPLIES WITH:	
FR-TO	FORCE (LBS)	VERT. (PLF)	MAX. CSI (LC)	MAX. UNBRAC	FR-TO	FORCE (LBS)	MAX. CSI (LC)	- PART 9 OF CBC2018 , NBC-2019AE	
FR-TO	FROM	TO	LENGTH	FR-TO	FROM	TO	LENGTH	- PART 9 OF OBC 2012 (2019 AMENDMENT)	
A-B	0 / 36	-119.4	-119.4	0.17 (1)	10.00	I-C	-158 / 48	0.03 (1)	
B-C	-1310 / 0	-119.4	-119.4	0.40 (1)	5.99	C-H	0 / 3	0.00 (4)	
C-D	-1184 / 0	-185.5	-185.5	0.20 (1)	6.25	H-D	-152 / 50	0.03 (1)	
D-E	-1319 / 0	-119.4	-119.4	0.40 (1)	5.07	B-I	0 / 1204	0.30 (1)	
E-F	0 / 36	-119.4	-119.4	0.17 (1)	10.00	H-E	0 / 1211	0.30 (1)	
F-G	-1238 / 0	0.0	0.0	0.14 (1)	7.18				
G-H	-1237 / 0	0.0	0.0	0.14 (1)	7.19				
J-I	0 / 0	-25.3	-25.3	0.09 (4)	10.00				
I-H	0 / 1182	-25.3	-25.3	0.25 (1)	10.00				
H-G	0 / 0	-25.3	-25.3	0.09 (4)	10.00				

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

ALLOWABLE DEFL.(LL)= L/ 360 (0.39")  
CALCULATED VERT. DEFL.(LL) = L/ 999 (0.02")  
ALLOWABLE DEFL.(TL)= L/ 360 (0.39")  
CALCULATED VERT. DEFL.(TL) = L/ 999 (0.04")

<b>FACTORED CONCENTRATED LOADS (LBS)</b>				<b>CONNECTION REQUIREMENTS</b>			
JT	LOC.	LC1	MAX.	FACE	DIR.	TYPE	HEEL
C	4-4-0	-199	-199	FRONT	VERT	TOTAL	C1
D	7-7-0	-199	-199	FRONT	VERT	TOTAL	C1

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

**COMPANION LIVE LOAD FACTOR = 1.00**

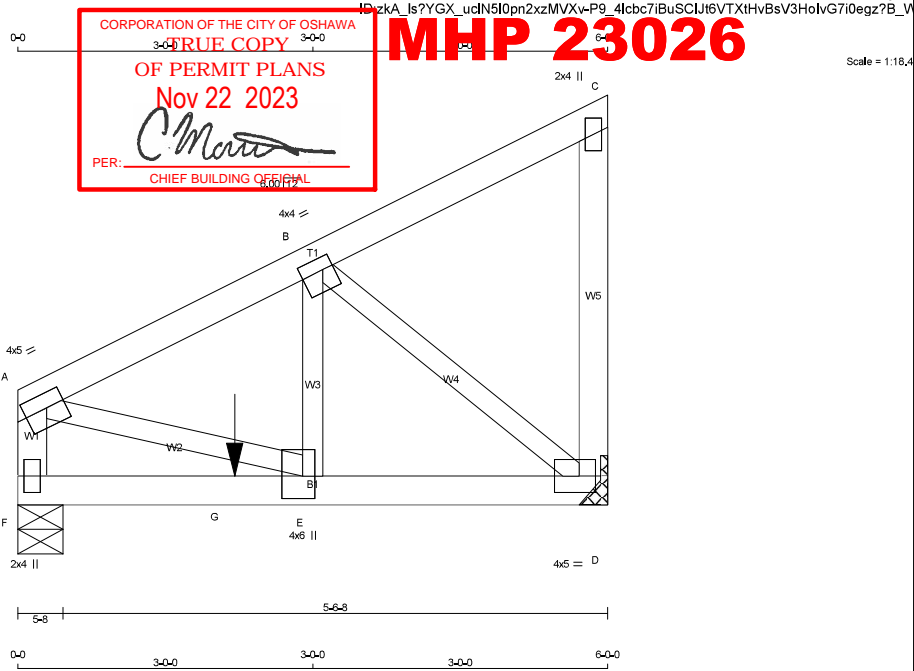
TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT.

<b>NAIL VALUES</b>			
PLATE	GRIP(DRY)	SHEAR	SECTION
	(PSI)	(FUI)	(FUI)
MT20	650	371	1747

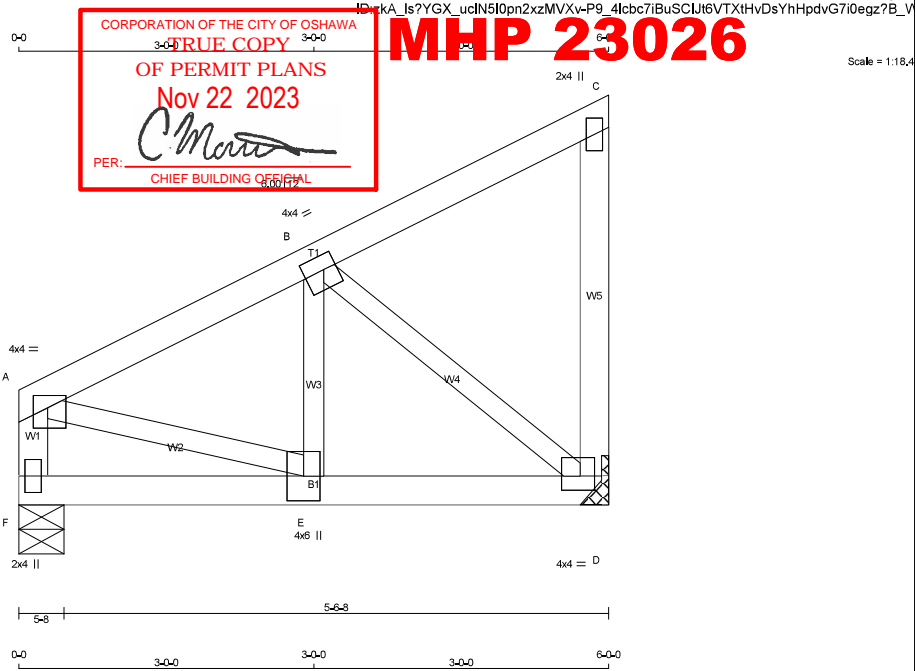
PLATE PLACEMENT TOL. = 0.250 inches  
 PLATE ROTATION TOL. = 5.0 Deg.  
 JSI GRIP= 0.87 (E) (INPUT = 0.90 )  
 JSI METAL= 0.41 (E) (INPUT = 1.00 )

REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT VOIDS THE ENGINEER'S SEAL







TOTAL WEIGHT = 26 lb

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

CHORDS	SIZE	DRY	NO.2
F - A	2x4	DRY	No.2
A - C	2x4	DRY	No.2
D - C	2x4	DRY	No.2
F - D	2x4	DRY	No.2

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

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

BEARINGS	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG
JT	VERT	DOWN	HORZ	UPLIFT
F	1355	0	1355	0
D	1355	0	1355	0

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

**DESIGN CRITERIA**

SPECIFIED LOADS:	TOP CH.	LL	DL
TOP CH.	LL	DL	6.0 PSF
BOT CH.	LL	DL	0.0 PSF
BOT CH.	LL	DL	7.3 PSF
TOTAL LOAD			48.1 PSF

SPACING = 24.0 IN. G.C

GIRDER TYPE: CStdGirder  
START DISTANCE = 0-0  
START SPAN CARRIED = 11-7-0  
END DISTANCE = 6-0-0  
END SPAN CARRIED = 11-7-0  
END WALL WIDTH = 5-8  
APPLIED TO FRONT SIDE OF BOTTOM CHORD.  
- ADDTL LOADS BASED ON 55 % OF GSL.

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

THIS DESIGN COMPLIES WITH:  
- PART 9 OF CBC 2018, NBC-2019AE  
- PART 9 OF OBC 2012 (2019 AMENDMENT)  
- CSA 085-14  
- TPIC 2014

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

ALLOWABLE DEFL.(LL) = L/360 (0.20")  
CALCULATED VERT. DEFL.(LL) = L/999 (0.03")  
ALLOWABLE DEFL.(TL) = L/360 (0.20")  
CALCULATED VERT. DEFL.(TL) = L/999 (0.04")

CSI TC=0.18/1.00 (A-B 1) , BC=0.69/1.00 (D-E 1) , WB=0.34/1.00 (B-D 1) , SSI=0.52/1.00 (E-F 1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP = 0.87 (E) (INPUT = 0.90 )  
JSI METAL = 0.47 (E) (INPUT = 1.00 )

**PLATES (table is in inches)**

JT	TYPE	PLATES	W	LEN	Y	X
A	TMVW+p	MT20	4.0	4.0	1.50	1.75
B	TMVW+4	MT20	4.0	4.0	1.75	1.50
C	TMV+p	MT20	2.0	4.0		
D	BMVW+1+	MT20	4.0	4.0	1.75	1.75
E	BMVW+1+	MT20	4.0	6.0		
F	BMV+1+	MT20	2.0	4.0		

**UNFACTORED REACTIONS**

JT	1ST LCASE	MAX./MIN.	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
F	947	685 / 0	0 / 0
D	947	685 / 0	0 / 0

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

**BRACING**

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 5.67 FT.  
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.

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

**LOADING**

TOTAL LOAD CASES: (4)

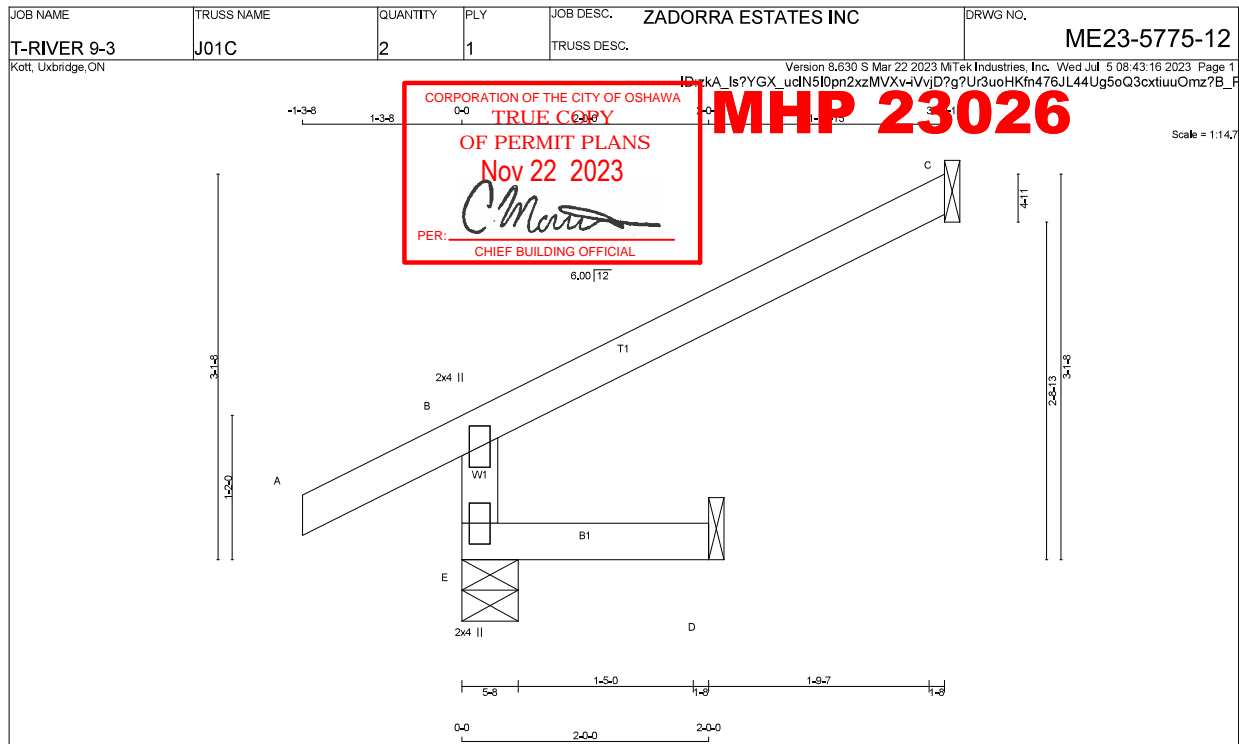
CHORDS	MAX. FACTORED MEMB. FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. UNBRACED LENGTH (LC)	W E B S	MAX. FACTORED MEMB. FORCE (LBS)	MAX. UNBRACED LENGTH (LC)
FR-TO		FROM	TO	FR-TO		
F-A	-968 / 0	0.0	0.0	0.11 (1)	7.81	A-E
A-B	-1158 / 0	-119.4	-119.4	0.18 (1)	5.67	E-B
B-C	-16 / 0	-119.4	-119.4	0.16 (1)	6.25	B-D
D-C	-143 / 0	0.0	0.0	0.04 (1)	7.81	
F-E	0 / 0	-332.3	-332.3	0.50 (1)	10.00	
E-D	0 / 1050	-332.3	-332.3	0.69 (1)	10.00	





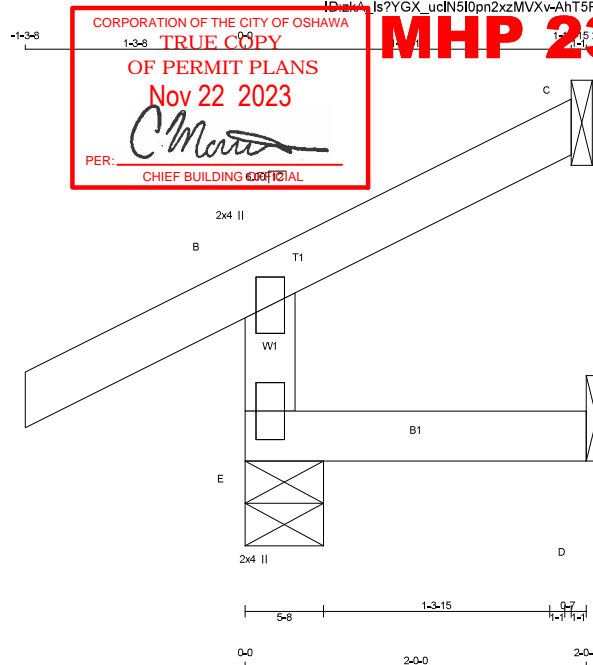






<div>LUMBER</div> <div>N. L. G. A. RULES</div> <div>CHORDS SIZE LUMBER</div> <div>E - B 2x4 DRY No.2</div> <div>A - C 2x4 DRY No.2</div> <div>E - D 2x4 DRY No.2</div> <div>DESCR. SPF</div> <div>SPF</div> <div>SPF</div> <div>DRY: SEASONED LUMBER.</div>		<div>DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER</div> <div>BEARINGS</div> <div>FACTORED GROSS REACTION</div> <div>MAXIMUM FACTORED GROSS REACTION</div> <div>INPUT BRG IN-SX</div> <div>REQD BRG IN-SX</div> <div>JT VERT HORZ DOWN HORZ UPLIFT</div> <div>E 474 0 474 0 0 5-8 1-8</div> <div>C 175 0 175 0 0 1-8 1-8</div> <div>D 16 0 18 0 0 1-8 1-8</div> <div>SEE MITEK STANDARD DETAIL MSD2015-H FOR CONNECTION TO JOINT(S) C , D</div> <div>UNFACTORED REACTIONS</div> <div>1ST LCASE MAX./MIN. COMPONENT REACTIONS</div> <div>JT COMBINED SNOW LIVE PERM.LIVE WIND DEAD SOIL</div> <div>E 326 265 / 0 0 / 0 0 / 0 62 / 0 0 / 0</div> <div>C 120 102 / 0 0 / 0 0 / 0 18 / 0 0 / 0</div> <div>D 13 0 / 0 0 / 0 0 / 0 0 / 0 13 / 0 0 / 0</div> <div>BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) E</div> <div>BRACING</div> <div>TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.</div> <div>MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT. OR RIGID CEILING DIRECTLY APPLIED.</div> <div>ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE Laterally RESTRAINED.</div> <div>LOADING</div> <div>TOTAL LOAD CASES: (5)</div> <div>CHORDS WEBS</div> <div>MAX. FACTORED VERT. LOAD LC1 MAX. MAX. MEMB. MAX. FACTORED</div> <div>MEMB. FORCE (LBS) (PLF) CSI (LC) UNBRACED FORCE MAX</div> <div>FR-TO FROM TO LENGTH FR-TO (LBS) CSI (LC)</div> <div>E- B -454 / 0 0.0 0.0 0.01 (4) 7.81</div> <div>A- B 0 / 36 -119.4 -119.4 0.16 (1) 10.00</div> <div>B- C -26 / 0 -119.4 -119.4 0.31 (1) 6.25</div> <div>E- D 0 / 0 -18.2 -18.2 0.02 (4) 10.00</div> <div>CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN</div> <div>PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.</div>		<div>DESIGN CRITERIA</div> <div>SPECIFIED LOADS:</div> <div>TOP CH. LL = 34.8 PSF</div> <div>DL = 6.0 PSF</div> <div>BOT CH. LL = 0.0 PSF</div> <div>DL = 7.3 PSF</div> <div>TOTAL LOAD = 48.1 PSF</div> <div>SPACING = 24.0 IN. G/C</div> <div>THIS TRUSS IS DESIGNED FOR RESIDENTIAL OR SMALL BUILDING REQUIREMENTS OF PART 9, NBCC 2015</div> <div>THIS DESIGN COMPLIES WITH:</div> <div>- PART 9 OF CBC 2018, NBC-2019AE</div> <div>- PART 9 OF OBC 2012 (2019 AMENDMENT)</div> <div>- CSA 086-14</div> <div>- TPIC 2014</div> <div>DESIGN ASSUMPTIONS</div> <div>-OVERHANG NOT TO BE ALTERED OR CUT OFF.</div> <div>(55 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) EQUALS 34.8 P.S.F. SPECIFIED ROOF LIVE LOAD</div> <div>ALLOWABLE DEFL.(LL)= L/360 (0.19")</div> <div>CALCULATED VERT. DEFL.(LL) = L/999 (0.00")</div> <div>ALLOWABLE DEFL.(TL)= L/360 (0.19")</div> <div>CALCULATED VERT. DEFL.(TL) = L/999 (0.00")</div> <div>CSI TC=0.31/1.00 (B-C:1) BC=0.02/1.00 (D-E:4) ,</div> <div>WB=0.00/1.00 (n/a:0) , SSI=0.20/1.00 (B-C:1)</div> <div>DOL LUMBER=1.00 NAIL=1.00 LS BEND=1.10</div> <div>COMP=1.10 SHEAR=1.10 TENS=1.10</div> <div>COMPANION LIVE LOAD FACTOR = 1.00</div> <div>TRUSS PLATE MANUFACTURER IS NOT RESPONSIBLE FOR QUALITY CONTROL IN THE TRUSS MANUFACTURING PLANT .</div> <div>NAIL VALUES</div> <div>PLATE GRIP(DRY) SHEAR SECTION</div> <div>(PSI) (PLI) (PLI)</div> <div>MAX MIN MAX MIN MAX MIN</div> <div>MT20 650 371 1747 788 1987 1873</div> <div>PLATE PLACEMENT TOL. = 0.250 inches</div> <div>PLATE ROTATION TOL. = 5.0 Deg.</div> <div>JSI GRIP= 0.25 (B) (INPUT = 0.90 )</div> <div>JSI METAL= 0.19 (B) (INPUT = 1.00 )</div>	
<div>MODULUS ENGINEERING LTD.</div> <div><div><div>07/05/2023</div><div>D. A. SHERMAN</div><div>100123373</div></div><div><div>LICENSED PROFESSIONAL ENGINEER</div><div>PROVINCE OF ONTARIO</div></div></div> <div>REVIEW FOR TRUSS COMPONENT ONLY</div> <div>NOTE: ALTERING THIS DOCUMENT</div> <div>VOIDS THE ENGINEERS SEAL</div>					





CORPORATION OF THE CITY OF OSHAWA  
 TRUE COPY  
 OF PERMIT PLANS  
 Nov 22 2023  
 PER: *[Signature]*  
 CHIEF BUILDING OFFICIAL

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

**PLATES (table is in inches)**

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

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

**BEARINGS**

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG IN-SX	REQRD BRG IN-SX
	VERT	HORZ	DOWN	HORZ		
E	324	0	324	0	5-8	1-8
C	86	0	86	0	1-8	1-8
D	16	0	18	0	1-8	1-8

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

**UNFACTORED REACTIONS**

JT	1ST LCASE		MAX./MIN. COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD	SOIL
E	224	177 / 0	0 / 0	0 / 0	0 / 0	47 / 0	0 / 0
C	59	50 / 0	0 / 0	0 / 0	0 / 0	9 / 0	0 / 0
D	13	0 / 0	0 / 0	0 / 0	0 / 0	13 / 0	0 / 0

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

**BRACING**

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

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

**LOADING**

TOTAL LOAD CASES: (5)

MEMB.	CHORDS		FACTORED		WEBS	
	MAX. FACTORED FORCE (LBS)	VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED FORCE (LBS)	MAX. FACTORED FORCE (LBS)
FR-TO						
E-B	-304 / 0	0.0	0.0	0.01 (4)	7.81	
A-B	0 / 36	-119.4	-119.4	0.16 (1)	10.00	
B-C	-12 / 0	-119.4	-119.4	0.07 (1)	6.25	
E-D	0 / 0	-18.2	-18.2	0.02 (4)	10.00	

CANTILEVER ANALYSIS HAS BEEN CONSIDERED IN THIS DESIGN

PATTERN-LOADING CHECK APPLIED TO THIS TRUSS.

**DESIGN CRITERIA**

**SPECIFIED LOADS:**  
 TOP CH. LL = 34.8 PSF  
 DL = 6.0 PSF  
 BOT CH. LL = 0.0 PSF  
 DL = 7.3 PSF  
 TOTAL LOAD = 48.1 PSF

**SPACING = 240 IN. G/C**

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

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

**DESIGN ASSUMPTIONS**

-OVERHANG NOT TO BE ALTERED OR CUT OFF.

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

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

CSI: TC=0.16/1.00 (A-B 1), BC=0.02/1.00 (D-E 4), WB=0.00/1.00 (n/a 0), SSI=0.11/1.00 (A-B 1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.17 (B) (INPUT = 0.90 )  
 JSI METAL= 0.13 (B) (INPUT = 1.00 )

MODULUS ENGINEERING LTD.



REVIEW FOR TRUSS COMPONENT ONLY

NOTE: ALTERING THIS DOCUMENT  
 VOIDS THE ENGINEER'S SEAL

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED IN MODULUS ENGINEERING LTD. NOTES ME-TCD01 (VER 06/2017) BEFORE USE.  
 Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for individual building components. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult  
 TPIC Appendix G - Minimum quality Manufacturing Criteria available from [www.tpica.ca](http://www.tpica.ca) and BCSI-CANADA (Building Component Safety Information) available from TPI, 781 N. Lee Street, Suite 312, Alexandria, VA 22314 or [www.sbindustry.com](http://www.sbindustry.com)

