

Hanger Name	Symbol	QTY
(1) H2.5A	▲	24
(2) H2.5A	■	2
HGUS26	●	7

PIGGYBACK TRUSSES TO BE SUPPORTED ON 2X4 SPF #1/2 MEMBERS @ 24"O/C PLACED PERPENDICULAR TO THE PIGGYBACK DIRECTION. PLACE 2X4 MEMBERS BETWEEN THE BOTTOM CHORD OF THE PIGGYBACK TRUSS AND THE TOP CHORD OF THE SUPPORTING TRUSS.

Additional 5 psf dead load has been added to Top Chord loading to account for weight of solar panels. Solar panels must be installed as per Detail in Engineering Package



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

Roof components shown on this layout with clear span less than 40ft are designed for loads as shown conforming to Part 9 building occupancy. Trusses or girder trusses exceeding 40 ft clear span or girders carrying roof trusses exceeding 40 ft clear span are designed for snow loads calculated according to Division B Part 4 Section 4.1.6.2 of OBC (O.Reg. 332/12): $S = Is[Ss(Cb \cdot Cw \cdot Cs \cdot Ca) + Sr]$ Where $Is=1.0$, $Ss=2.3kPa$, $Sr=0.4$, $Cb=0.8$, $Cw=1.0$, $Ca=1.0$ and Cs calculated according to Section 4.1.6.2 Subsection 5, 6 and 7



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 HOMES
Job #	T20-00760
Address	TRINAR HALL EAST GWILLIMBURY, ON
Model	GLENWAY 2A ELEV 1
Sales Rep	RALPH MIRIGELLO
Designer	DM
Date	12/16/2020
Path	C:\DATA\JOBS\GREENPARK\TRINAR HALL\MODELS\GLENWAY 2A\ELEV 1\T-GLENWAY2A-1\

DESIGN INFORMATION

Code	NBCC 2015
Bldg	Residential - HSB (NBCC Part 9)
TC LL	34.8 lb/ft²
TC DL	8.0 lb/ft²
BC LL	10.5 lb/ft²
BC DL	7.3 lb/ft²
Deflection	LL=L/360 TL=L/360
Spacing	24" O/C unless otherwise noted
Complies With	OBC 2012 (2019 Amendment) CSA O86-14 and TPIC 2014

IMPORTANT INFORMATION

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

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

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

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

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

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

KOTT Inc.
14 Anderson Blvd.
Uxbridge, ON
905.642.4400





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Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

NE1220-106
GREENPARK - TRINAR
HALL - GLENWAY 2A ELE 1

ENGINEERING NOTE PAGE (ENP-1)

PLEASE READ PRIOR TO INSTALLATION

RESPONSIBILITIES

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

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

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

USE AND OCCUPANCY

- The building is of the type indicated on the drawing

LOADING

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

HANDLING, INSTALLATION AND BRACING

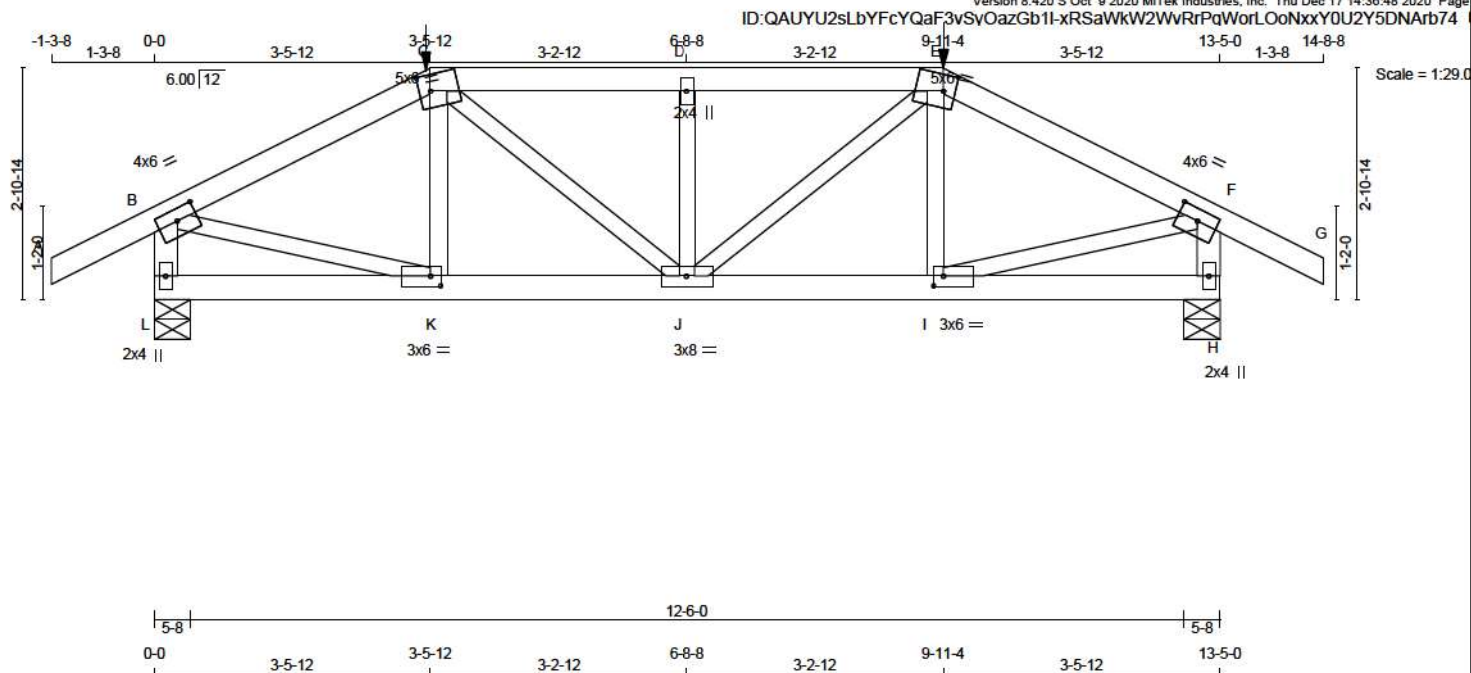
- The trusses must be handled and installed by a qualified professional as per the supplied document titled *Information for Truss Installers* and the BCSI-B1 and BCSI-B3 Summary Sheets
- The compression chords are laterally braced by continuous rigid diaphragm sheathing or as specified on the drawing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

SUPPORTS

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

DIMENSIONS

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



TOTAL WEIGHT = 54 lb

LUMBER				N. L. G. A. RULES	
CHORDS	SIZE	LUMBER	DESCR.	SPF	
A - C	2x4	DRY	No.2	SPF	
C - E	2x4	DRY	No.2	SPF	
E - G	2x4	DRY	No.2	SPF	
L - B	2x4	DRY	No.2	SPF	
H - F	2x4	DRY	No.2	SPF	
L - H	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
DRY: SEASONED LUMBER.					

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW-t	MT20	4.0	6.0	1.75 3.00
C	TTWW-m	MT20	5.0	6.0	2.50 1.75
D	TMVW-w	MT20	2.0	4.0	
E	TTWW-m	MT20	5.0	6.0	2.50 1.75
F	TMVW-t	MT20	4.0	6.0	1.75 3.00
H	BMV1-p	MT20	2.0	4.0	
I	BMWW-t	MT20	3.0	6.0	1.50 1.50
J	BMWW-t	MT20	3.0	6.0	
K	BMWW-t	MT20	3.0	6.0	1.50 1.50
L	BMV1-p	MT20	2.0	4.0	

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

BEARINGS					
FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG		
JT VERT	1813	0	1813	0	0
L H	1813	0	1813	0	0

UNFACTORED REACTIONS					
1ST CASE	MAX	MIN	COMPONENT REACTIONS		
JT COMBINED	1334	793 / 0	211 / 0	PERM. LIVE	0 / 0
L H	1334	793 / 0	211 / 0	0 / 0	0 / 0

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

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 4.01 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 10.00 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.

LOADING					
TOTAL LOAD CASES: (4)					
CHORDS			WEBS		
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX	MAX. UNBRAC	MEMB. MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO	LENGTH	FR-TO	
A-B	0 / 38	-124.4 -124.4	0.18 (1)	10.00	K-C
B-C	-2021 / 0	-124.4 -124.4	0.36 (1)	4.34	C-J
C-D	-2336 / 0	-186.6 -186.6	0.36 (1)	4.01	J-D
D-E	-2336 / 0	-186.6 -186.6	0.36 (1)	4.01	J-E
E-F	-2021 / 0	-124.4 -124.4	0.36 (1)	4.34	I-E
F-G	0 / 38	-124.4 -124.4	0.18 (1)	10.00	B-K
L-B	-1724 / 0	0.0	0.0	0.19 (1)	6.29
H-F	-1724 / 0	0.0	0.0	0.19 (1)	6.29
L-K	0 / 0	-58.9	-58.9	0.14 (3)	10.00
K-J	0 / 1798	-58.9	-58.9	0.41 (1)	10.00
J-I	0 / 1798	-58.9	-58.9	0.41 (1)	10.00
I-H	0 / 0	-58.9	-58.9	0.14 (3)	10.00

FACTORED CONCENTRATED LOADS (LBS)					
JT	LOC.	LC1	MAX-	MAX+	FACE DIR.
C	3-5-12	-213	-213	---	FRONT VERT
E	9-11-4	-213	-213	---	FRONT VERT

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 3-5-12
END SETBACK = 4-5-8
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 BCBC 2018, ABC 2019
- PART 9 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

ALLOWABLE DEFL (LL) = L/360 (0.45")
CALCULATED VERT. DEFL (LL) = L/999 (0.05")
ALLOWABLE DEFL (TL) = L/360 (0.45")
CALCULATED VERT. DEFL (TL) = L/999 (0.08")

CSI: TC=0.39/1.00 (C-D:1), BC=0.41/1.00 (J-K:1), WB=0.48/1.00 (B-K:1), SSI=0.31/1.00 (C-D:1)

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

COMPANION LIVE LOAD FACTOR = 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= 0.88 (B) (INPUT = 0.90)
JSI METAL = 0.52 (B) (INPUT = 1.00)



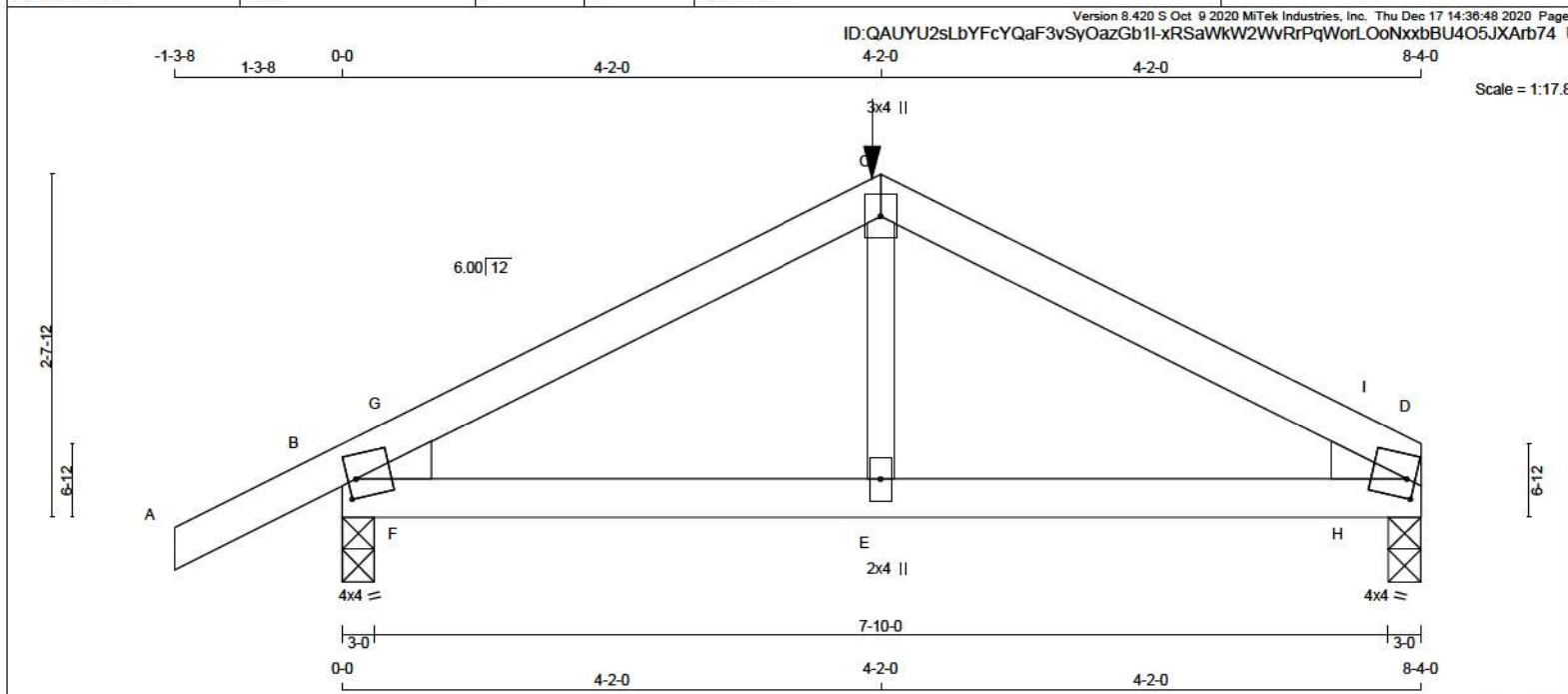
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Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			





LUMBER

N. L. G. A. RULES

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

ALL WEBS 2x3 DRY No.2

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH1-m	MT20	4.0	4.0	1.75	0.75
C	TTW+p	MT20	3.0	4.0		
D	TMBH1-m	MT20	4.0	4.0	1.75	0.75
E	BMW+w	MT20	2.0	4.0		

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

BEARINGS

JT	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQRD BRG	HEEL
	VERT	HORZ	DOWN	HORZ			
B	894	0	894	0	3-0	1-8	2x4 L
D	725	0	725	0	3-0	1-8	2x4 R

UNFACTORED REACTIONS

JT	1ST LCASE MAX/MIN COMPONENT REACTIONS					
	COMBINED	SNOW	LIVE	PERM.LIVE	WIND	DEAD
B	651	409 / 0	88 / 0	0 / 0	0 / 0	155 / 0
D	535	314 / 0	88 / 0	0 / 0	0 / 0	133 / 0

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

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

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

LOADING
TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED LC1 MAX (LC)	MAX. UNBRACED LENGTH (FT)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS1 (LC)
FR-TO					FR-TO		
A-B	0 / 25	-124.4	-124.4 0.18 (1)	10.00	E-C	0 / 265	0.07 (2)
B-G	-893 / 0	-124.4	-124.4 0.16 (1)	8.25	F-G	-119 / 102	0.00 (1)
G-C	-828 / 0	-124.4	-124.4 0.26 (1)	8.25	H-I	-119 / 102	0.00 (1)
C-I	-828 / 0	-124.4	-124.4 0.26 (1)	8.25			
I-D	-893 / 0	-124.4	-124.4 0.16 (1)	8.25			
B-F	0 / 730	-39.2	-39.2 0.25 (1)	10.00			
F-E	0 / 730	-39.2	-39.2 0.29 (1)	10.00			
E-H	0 / 730	-39.2	-39.2 0.29 (1)	10.00			
H-D	0 / 730	-39.2	-39.2 0.25 (1)	10.00			

FACTORED CONCENTRATED LOADS (LBS)

JT	LOC.	LC1	MAX-	MAX+	FACE	DIR.	TYPE	HEEL	CONN.
C	4-2-0	-86	-86		FRONT	VERT	TOTAL		C1

CONNECTION REQUIREMENTS

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	PSF
	DL = 8.0	PSF
BOT CH.	LL	PSF
	DL = 7.3	PSF
TOTAL LOAD = 60.6		PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CPrimeHip
SIDE SETBACK = 4-2-0
END SETBACK = 2-0-0
END WALL WIDTH = 0-0
CORNER FRAMING TYPE: CONVENTIONAL
END JACK TYPE: CONVENTIONAL
APPLIED TO FRONT SIDE
- ADDTL LOADS BASED ON 55 % OF GSL.

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.28")
CALCULATED VERT. DEFL.(LL) = L/999 (0.01")
ALLOWABLE DEFL.(TL)= L/360 (0.28")
CALCULATED VERT. DEFL.(TL) = L/999 (0.02")

CSI: TC=0.26/1.00 (C-1), BC=0.29/1.00 (E-F), WB=0.07/1.00 (C-E), SS=0.20/1.00 (C-G-1)

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

COMPANION LIVE LOAD FACTOR = 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= 0.81 (B) (INPUT = 0.90)
JSI METAL = 0.36 (D) (INPUT = 1.00)



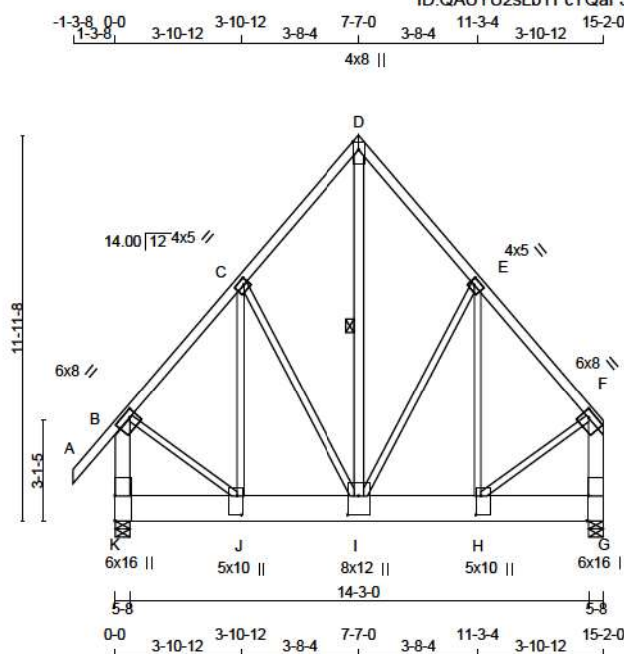
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Building Code	H. Author	43236	2021-02-08
Sewage System			
Zoning			





Scale = 1:71.5

TOTAL WEIGHT = 4 X 126 = 503 LB

LUMBER			
N. L. G. A. RULES	CHORDS	SIZE	DESCR.
A - D	2x4	DRY	No.2
D - F	2x4	DRY	No.2
K - B	2x6	DRY	No.2
G - F	2x6	DRY	No.2
K - G	2x10	DRY	No.2
ALL WEBS EXCEPT I - D	2x3	DRY	No.2
I - D	2x4	DRY	No.2

DRY: SEASONED LUMBER.

DESIGN CONSISTS OF 4 TRUSSES BUILT SEPARATELY THEN FASTENED TOGETHER AS FOLLOWS:

CHORDS#ROWS	SURFACE SPACING (IN)	LOAD(P/LF)
TOP CHORDS : (0.122"x3") SPIRAL NAILS		
A - D	12	TOP
D - F	12	TOP
K - B	12	TOP
G - F	12	TOP
BOTTOM CHORDS : (0.122"x3") SPIRAL NAILS		
K - G	4	SIDE(1719.2)
WEBS : (0.122"x3") SPIRAL NAILS		
2x3	6	
2x4	6	

STAGGER NAILS BY HALF THE SURFACE SPACING IN ADJACENT PLIES.

IN ADDITION, PRE-DRILL ONE 0.56" DIAM. HOLE IN EACH CHORD PANEL AND INSTALL 0.50" DIAM. ASTM A307 BOLTS WITH WASHERS, BOTH SIDES. FOR OTHER BOLT TYPES SEE CSA088 3.3.2.

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.

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	UPLIFT
K	19168	0	19168	327
G	18936	0	18936	0

PROVIDE ANCHORAGE AT BEARING JOINT K FOR 877 LBS FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT G FOR 881 LBS FACTORED UPLIFT

PROVIDE FOR 327 LBS FACTORED HORIZONTAL REACTION AT JOINT

UNFACTORED REACTIONS

1ST LCASE	MAX/MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW
K	13830	9243 / 0
G	13871	9112 / 0

HORIZONTAL REACTIONS

K	0 / 0	0 / 0	0 / 0	233 / -226	0 / 0	0 / 0
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BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S) K, G

BRACING

MAX. UNBRACED TOP CHORD LENGTH = 3.50 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 D-I. DBS = 20-0-0, CBF = 100 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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED HORIZ. LOAD (LBS)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED HORIZ. LOAD (LBS)	MAX. FACTORED VERT. LOAD (LBS)
FR-TO				FR-TO			
A-B	0 / 103	-165.5	-165.5 0.10 (2)	I-D	-923 / 14778	0.59 (1)	
B-C	-12084 / 828	-165.5	-165.5 0.50 (2)	I-E	-2979 / 371	0.92 (3)	
C-D	-10110 / 683	-165.5	-165.5 0.34 (2)	H-E	-176 / 3578	0.20 (2)	
D-E	-10110 / 687	-165.5	-165.5 0.34 (3)	C-I	-2677 / 386	0.92 (2)	
E-F	-12085 / 625	-165.5	-165.5 0.50 (3)	J-C	-184 / 3578	0.20 (3)	
K-B	-14772 / 705	0.0	0.0 0.40 (1)	B-J	-415 / 9368	0.53 (1)	
G-F	-14541 / 709	0.0	0.0 0.39 (1)	H-F	-404 / 9369	0.53 (1)	
K-J	-297 / 302	-2331.6	-2331.6 0.35 (2)				
J-I	-469 / 7884	-2331.6	-2331.6 0.40 (2)				
I-H	-353 / 7885	-2331.6	-2331.6 0.40 (3)				
H-G	-14 / 29	-2331.6	-2331.6 0.35 (3)				

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFF (WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED BUILDING MAY BE LOCATED ON (ROUGH TERRAIN) AT MINIMUM (1.000) A TERRAIN, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT-1 UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL = 46.9	PSF
	DL = 10.0	PSF
BOT CH.	LL = 10.5	PSF
	DL = 7.3	PSF
TOTAL LOAD	= 74.8	PSF

SPACING = 24.0 IN. C/C

GIRDER TYPE: CStd Girder

START DISTANCE = 0-0
START SPAN CARRIED = 41-8-8
END DISTANCE = 15-2-0
END SPAN CARRIED = 41-8-8
END WALL WIDTH = 5-8
APPLIED TO FRONT SIDE OF BOTTOM CHORD.
-ADDTL LOADS BASED ON 100 % OF GSL.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018, ABC 2019
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR NOT USED

(80 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)
TIMES IMPORTANCE FACTOR EQUALS 48.9 P.S.F.
SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (0.51")
CALCULATED VERT. DEFL.(LL) = L/999 (0.06")
ALLOWABLE DEFL.(TL) = L/180 (1.01")
CALCULATED VERT. DEFL.(TL) = L/999 (0.08")

CSI: TC=0.50/1.00 (E-F:3), BC=0.40/1.00 (I-J:2), WB=0.92/1.00 (E-I:3), SSI=0.56/1.00 (I-J: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 = 1.00

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

NAIL VALUES
PLATE GRIP(DRY) SHEAR SECTION (PSI)

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (J) (INPUT = 0.90)
JSI METAL= 0.71 (H) (INPUT = 1.00)

CONTINUED ON PAGE 2



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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			



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ID:QAUYU2sLbYFcYQaF3vSyOazGb1l-lqaKxPYI2WhZe8gAymRGSM1twlj7Z0jSjvcB3Ny8r

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMVW-t	MT20	6.0	8.0	2.25	2.50
C	TMWW-t	MT20	4.0	5.0	2.00	1.75
D	TTW+p	MT20	4.0	8.0	3.00	Edge
E	TMWW-t	MT20	4.0	5.0	2.00	1.75
F	TMVW-t	MT20	6.0	8.0	2.25	2.50
G	BMV1+t	MT20	6.0	16.0	Edge	0.50
H	BMWW+t	MT20	5.0	10.0	7.00	1.75
I	BMWWW+t	MT20	8.0	12.0	7.00	4.00
J	BMWW+t	MT20	5.0	10.0	7.00	1.75
K	BMV1+t	MT20	6.0	16.0	9.25	

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

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

43236

2021-02-08

Discipline

Reviewer

BCIN

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H. Authier

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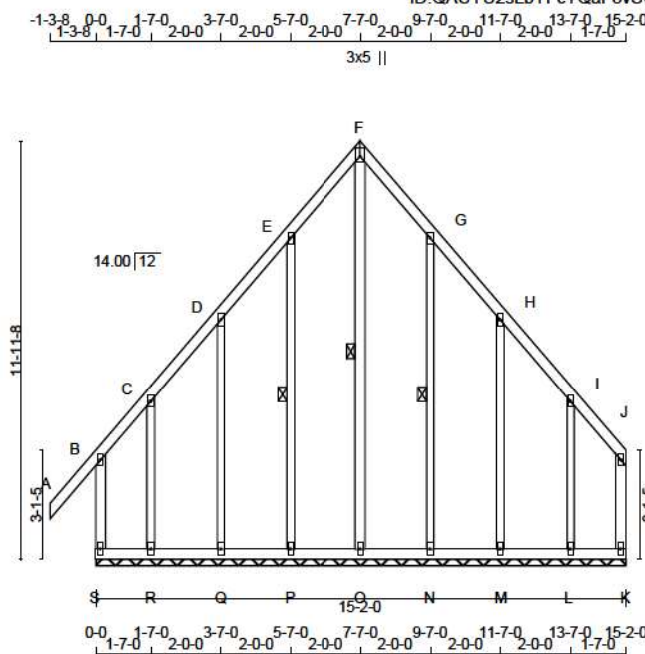
Building Code

Sewage System

Zoning

43236

202



TOTAL WEIGHT = 98 lb

LUMBER					DESCR.
N. L. G. A. RULES	CHORDS	SIZE	LUMBER		
S - B	2x4	DRY	No.2		SPF
A - F	2x4	DRY	No.2		SPF
F - J	2x4	DRY	No.2		SPF
K - J	2x4	DRY	No.2		SPF
S - K	2x4	DRY	No.2		SPF
ALL WEBS	2x3	DRY	No.2		SPF
EXCEPT					
O - F	2x4	DRY	No.2		SPF
ALL GABLE WEBS	2x3	DRY	No.2		SPF
EXCEPT					
ST2	2x4	DRY	No.2		SPF

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMV+p	MT20	2.0	4.0	
C, D, E, G, H, I					
C	TMW+w	MT20	2.0	4.0	
F	TTW+p	MT20	3.0	5.0	2.75 1.50
J	TMV+p	MT20	2.0	4.0	
K	BMV1+p	MT20	2.0	4.0	
L, M, N, O, P, Q, R					
L	BMW1+w	MT20	2.0	4.0	
S	BMV1+p	MT20	2.0	4.0	

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

BEARINGS
THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.
THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.
BEARING MATERIAL TO BE SPF NO.2 OR BETTER AT JOINT(S)

BRACING
TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.
MAX. UNBRACED BOTTOM CHORD LENGTH = 6.25 FT OR RIGID CEILING DIRECTLY APPLIED.
ALL PITCH BREAKS AND PERIMETER CORNER JOINTS MUST BE LATERALLY RESTRAINED.
1 - 1x4 LATERAL BRACE(S) AT 1/2 LENGTH OF F-O, E-P, G-N. DBS = 20-0-0 . CBF = 37 LBS.
DBS = DIAGONAL BRACE SPACING (MAX). CBF = CUMULATIVE BRACING FORCE (PER BRACE). FASTEN LATERAL BRACE(S) USING (0.122"x3") SPIRAL NAILS : 1 NAIL FOR 2x3 BRACE(S), 2 FOR 1x4, 2x4, 2x5, 3 FOR 2x6, 4 FOR 2x8, 5 FOR 2x10, AND 6 FOR 2x12.

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX. CSI (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED CSI (LC)	
FR-TO		FROM TO		FR-TO			
S-B	-320 / 0	0.0	0.0 0.03 (1)	7.81	O-F	-297 / 0	0.22 (1)
A-B	0 / 86	-124.4	-124.4 0.18 (1)	10.00	P-E	-248 / 0	0.15 (1)
B-C	-39 / 0	-124.4	-124.4 0.14 (1)	6.25	Q-D	-280 / 0	0.24 (1)
C-D	0 / 19	-124.4	-124.4 0.07 (1)	10.00	R-C	-142 / 0	0.05 (1)
D-E	0 / 14	-124.4	-124.4 0.06 (1)	10.00	N-G	-250 / 0	0.15 (1)
E-F	0 / 22	-124.4	-124.4 0.07 (1)	10.00	M-H	-247 / 0	0.23 (1)
F-G	0 / 21	-124.4	-124.4 0.07 (1)	10.00	L-I	-229 / 0	0.08 (1)
G-H	0 / 15	-124.4	-124.4 0.06 (1)	10.00			
H-I	0 / 11	-124.4	-124.4 0.06 (1)	10.00			
I-J	0 / 17	-124.4	-124.4 0.05 (1)	10.00			
K-J	-69 / 0	0.0	0.0 0.01 (1)	7.81			
S-R	-2 / 0	-39.2	-39.2 0.02 (3)	10.00			
R-Q	-6 / 0	-39.2	-39.2 0.03 (3)	10.00			
Q-P	-10 / 0	-39.2	-39.2 0.03 (3)	10.00			
P-O	-13 / 0	-39.2	-39.2 0.02 (3)	6.25			
O-N	-13 / 0	-39.2	-39.2 0.02 (3)	6.25			
N-M	-10 / 0	-39.2	-39.2 0.03 (3)	10.00			
M-L	-6 / 0	-39.2	-39.2 0.03 (3)	10.00			
L-K	0 / 1	-39.2	-39.2 0.02 (3)	10.00			

DESIGN CRITERIA

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

SPACING = 24.0 IN. C/C

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

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

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

CSI: TC=0.18/1.00 (A-B-1) , BC=0.03/1.00 (P-Q-3) ,
WB=0.24/1.00 (D-Q-1) , SSI=0.09/1.00 (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= 0.26 (J) (INPUT = 0.80)
JSI METAL= 0.16 (B) (INPUT = 1.00)



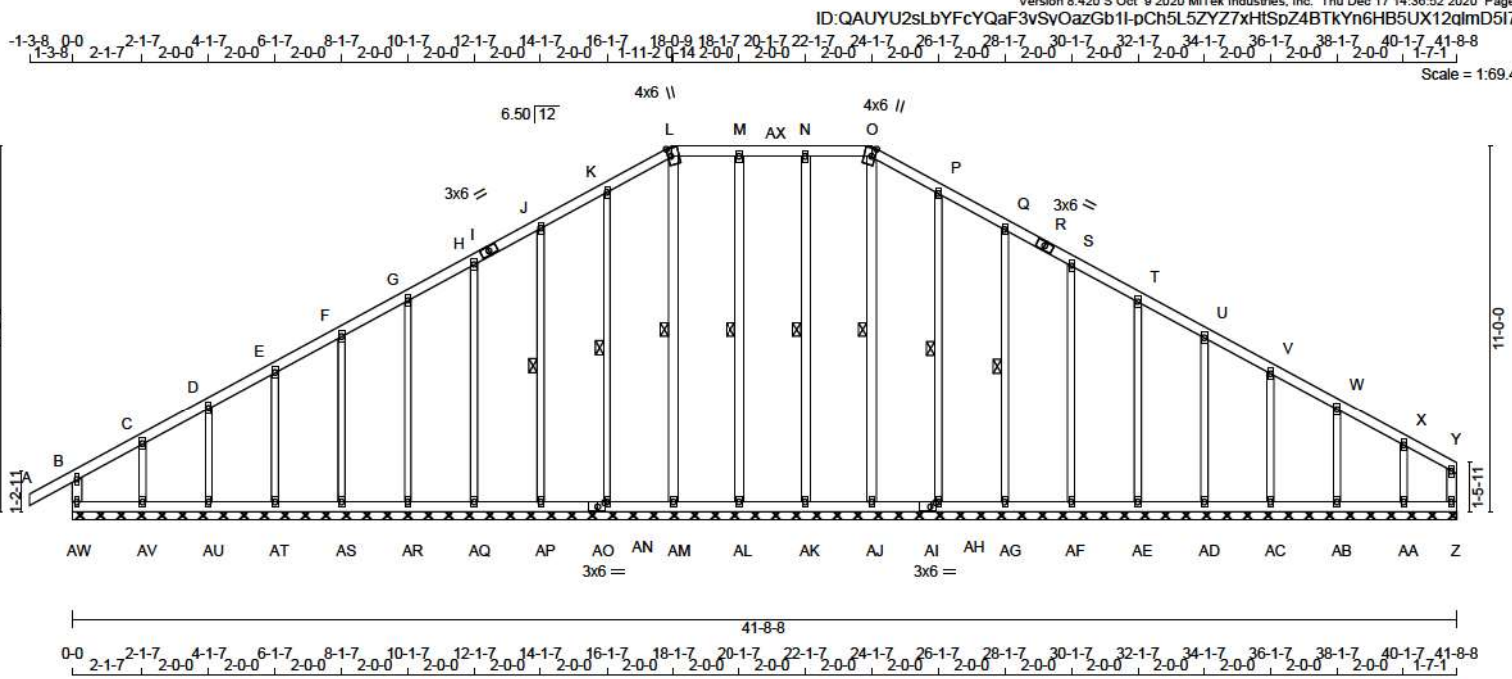
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These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code,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

Discipline	Reviewer	BCIN	Date
Building Code	H. Author	43236	2021-02-08
Sewage System			
Zoning			





LUMBER				N. L. G. A. RULES	
CHORDS	SIZE	LUMBER	DESCR.	SPF	
AW - B	2x4	DRY	No.2	SPF	
A - I	2x4	DRY	No.2	SPF	
I - L	2x4	DRY	No.2	SPF	
L - O	2x4	DRY	No.2	SPF	
O - R	2x4	DRY	No.2	SPF	
R - Y	2x4	DRY	No.2	SPF	
Z - Y	2x4	DRY	No.2	SPF	
AW - AO	2x4	DRY	No.2	SPF	
AO - AI	2x4	DRY	No.2	SPF	
AI - Z	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
AJ - O	2x4	DRY	No.2	SPF	
AK - N	2x4	DRY	No.2	SPF	
AL - M	2x4	DRY	No.2	SPF	
AM - L	2x4	DRY	No.2	SPF	
ALL GABLE WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
ST2	2x4	DRY	No.2	SPF	
ST3	2x4	DRY	No.2	SPF	
ST4	2x4	DRY	No.2	SPF	
ST5	2x4	DRY	No.2	SPF	

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2-0-0 OC.

PLATES (table is in inches)					
JT TYPE	PLATES	W	LEN	Y	X
B	TMV+p	MT20	2.0	4.0	
C, D, E, F, G, H, J, K, M, N, P, Q, S, T, U, V, W, X					
C	TMW+w	MT20	2.0	4.0	
I	TS-t	MT20	3.0	6.0	
L	TTW+m	MT20	4.0	6.0	Edge 1.25
O	TTW+m	MT20	4.0	6.0	Edge 1.25
R	TS-t	MT20	3.0	6.0	
Y	TMV+p	MT20	2.0	4.0	
Z	BMV1+p	MT20	2.0	4.0	
AA, AB, AC, AD, AE, AF, AG, AH, AJ, AK, AL, AM, AN, AP, AQ, AR, AS, AT, AU, AV					
AA	BMW1+w	MT20	2.0	4.0	



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

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

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

PROVIDE ANCHORAGE AT ALL BEARING JOINTS FOR 150 LBS FACTORED UPLIFT EXCEPT AA-163 LBS.

PROVIDE FOR 225 LBS FACTORED HORIZONTAL REACTION AT JOINTAW

HORIZONTAL REACTIONS

1ST LCASE	MAX MIN COMPONENT REACTIONS
COMBINED	SNOW LIVE PERM.LIVE WIND DEAD SOIL
AW	0/0 0/0 0/0 161/-150 0/0 0/0

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

BRACING

FOR SECTION L-O, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT. FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 8.25 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 O-AJ, N-AK, M-AL, L-AM, K-AN, J-AP, P-AH, Q-AG. DBS = 20-0-0. CBF = 53 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					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	FACTORED L1 (LC)	MAX. UNBRACED LENGTH (FT)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (FT)	MAX. FACTORED FORCE (LBS)	MAX. UNBRACED LENGTH (FT)
FR-TO					FR-TO				
AW-B	-508 / 84	0.0	0.0 0.14 (13)	7.81	AJ-O	-422 / 0	0.26 (3)		
A-B	0 / 83	-165.5 -165.5 0.26 (2)	10.00	AK-N	-377 / 30	0.23 (3)			
B-C	-165 / 119	-165.5 -165.5 0.10 (2)	6.25	AL-M	-381 / 33	0.24 (2)			
C-D	-135 / 128	-165.5 -165.5 0.09 (2)	6.25	AM-L	-421 / 0	0.26 (2)			
D-E	-105 / 140	-165.5 -165.5 0.09 (2)	6.25	AN-K	-377 / 79	0.25 (2)			
E-F	-74 / 170	-165.5 -165.5 0.09 (2)	6.25	AP-J	-390 / 90	0.20 (2)			
F-G	80 / 200	-165.5 -165.5 0.09 (2)	6.25	AQ-H	-386 / 86	0.44 (2)			
G-H	-54 / 230	-165.5 -165.5 0.09 (2)	6.25	AR-G	-387 / 86	0.28 (2)			
H-I	-49 / 280	-165.5 -165.5 0.09 (2)	6.25	AS-F	-388 / 86	0.19 (2)			
I-J	-49 / 280	-165.5 -165.5 0.09 (2)	6.25	AT-E	-385 / 86	0.12 (2)			
J-K	-47 / 292	-165.5 -165.5 0.09 (2)	6.25	AU-D	-384 / 85	0.08 (2)			
K-L	-39 / 318	-165.5 -165.5 0.10 (2)	6.25	AV-C	-384 / 85	0.06 (2)			
L-M	-35 / 296	-178.0 -178.0 0.10 (2)	2.00	AH-P	-387 / 79	0.26 (3)			
M-AX	-35 / 296	-178.0 -178.0 0.08 (1)	2.00	AG-Q	-388 / 90	0.20 (3)			
AX-N	-35 / 296	-178.0 -178.0 0.08 (1)	2.00	AF-S	-387 / 86	0.43 (3)			
N-O	-35 / 296	-178.0 -178.0 0.10 (3)	2.00	AE-T	-386 / 86	0.29 (3)			
O-P	-36 / 308	-165.5 -165.5 0.10 (3)	6.25	AD-U	-380 / 86	0.18 (3)			
P-Q	-32 / 262	-165.5 -165.5 0.09 (3)	6.25	AC-V	-383 / 87	0.12 (3)			
Q-R	-29 / 211	-165.5 -165.5 0.09 (3)	6.25	AB-W	-384 / 86	0.08 (3)			
R-S	-29 / 211	-165.5 -165.5 0.09 (3)	6.25	AA-X	-338 / 127	0.05 (3)			
S-T	-28 / 163	-165.5 -165.5 0.09 (3)	6.25						
T-U	-27 / 125	-165.5 -165.5 0.09 (3)	6.25						
U-V	-33 / 95	-165.5 -165.5 0.09 (3)	6.25						
V-W	-43 / 65	-165.5 -165.5 0.09 (3)	6.25						
W-X	-48 / 36	-165.5 -165.5 0.09 (3)	6.25						
X-Y	-62 / 22	-165.5 -165.5 0.07 (3)	6.25						
Z-Y	-173 / 16	0.0	0.0 0.07 (14)	7.81					
AW-AV	-32 / 112	-39.2 -39.2 0.07 (13)	6.25						
AV-AU	-30 / 114	-39.2 -39.2 0.03 (17)	6.25						
AU-AT	-28 / 116	-39.2 -39.2 0.03 (17)	6.25						
AT-AS	-28 / 116	-39.2 -39.2 0.03 (17)	6.25						
AS-AR	-28 / 116	-39.2 -39.2 0.03 (17)	6.25						
AR-AQ	-27 / 116	-39.2 -39.2 0.03 (17)	6.25						
AQ-AP	-27 / 117	-39.2 -39.2 0.03 (17)	6.25						
AP-AO	-26 / 117	-39.2 -39.2 0.03 (17)	6.25						
AO-AN	-26 / 117	-39.2 -39.2 0.03 (17)	6.25						
AN-AM	-26 / 118	-39.2 -39.2 0.03 (17)	6.25						
AM-AL	-26 / 117	-39.2 -39.2 0.03 (17)	6.25						
AL-AK	-26 / 117	-39.2 -39.2 0.03 (17)	6.25						

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH. LL = 46.9 PSF
DL = 10.0 PSF

BOT CH. LL = 10.5 PSF
DL = 7.3 PSF

TOTAL LOAD = 74.8 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 5.0 P.S.F.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBC 2015

THIS DESIGN COMPLIES WITH:

- PART 4 OF CBC 2018, ABC 2019
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS

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

(80 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)

TIMES IMPORTANCE FACTOR = 1.00

SPECIFIED ROOF LIVE LOAD

CSI: TC=0.26/1.00 (A-B-2), BC=0.08/1.00 (Z-AA-14), WB=0.44/1.00 (H-AQ-2), SS=0.18/1.00 (A-B-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 = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.47 (L) (INPUT = 0.80)

JSI METAL= 0.30 (B) (INPUT = 1.00)

CONTINUED ON PAGE 2



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			



ID:QAUYU2sLbYFcYQaF3vSyOazGb1I-pCh5L5ZYZ7xHtSpZ4BTkYn6HB5UX12gImD5i7Fy8

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
AI	BS-4	MT20	3.0	6.0	1.50	2.00
AO	BS-4	MT20	3.0	6.0	1.50	2.50
AW	BMV1+p	MT20	2.0	4.0		

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

LOADING									
TOTAL LOAD CASES: (18)									
CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX CSI (LC)	MAX. UNBRAC	MEMB.	MAX. FACTORED FORCE (LBS)	MAX CSI (LC)		
FR-TO		FROM TO		LENGTH	FR-TO				
AK-AJ	-26 / 117	-39.2	-39.2 0.03 (17)	6.25					
AJ-AI	-26 / 117	-39.2	-39.2 0.03 (17)	6.25					
AI-AH	-26 / 117	-39.2	-39.2 0.03 (17)	6.25					
AH-AG	-26 / 116	-39.2	-39.2 0.03 (17)	6.25					
AG-AF	-26 / 115	-39.2	-39.2 0.03 (17)	6.25					
AF-AE	-26 / 115	-39.2	-39.2 0.03 (17)	6.25					
AE-AD	-26 / 114	-39.2	-39.2 0.03 (17)	6.25					
AD-AC	-26 / 113	-39.2	-39.2 0.03 (17)	6.25					
AC-AB	-26 / 111	-39.2	-39.2 0.03 (17)	6.25					
AB-AA	-26 / 109	-39.2	-39.2 0.03 (6)	6.25					
AA-Z	-26 / 105	-39.2	-39.2 0.08 (14)	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 (7.9) PSF AT (25-4-0) 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 (ROUGH TERRAIN) AT MINIMUM (1,000) MILES DISTANCE FROM 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 5.0 PSF RESPECTIVELY.

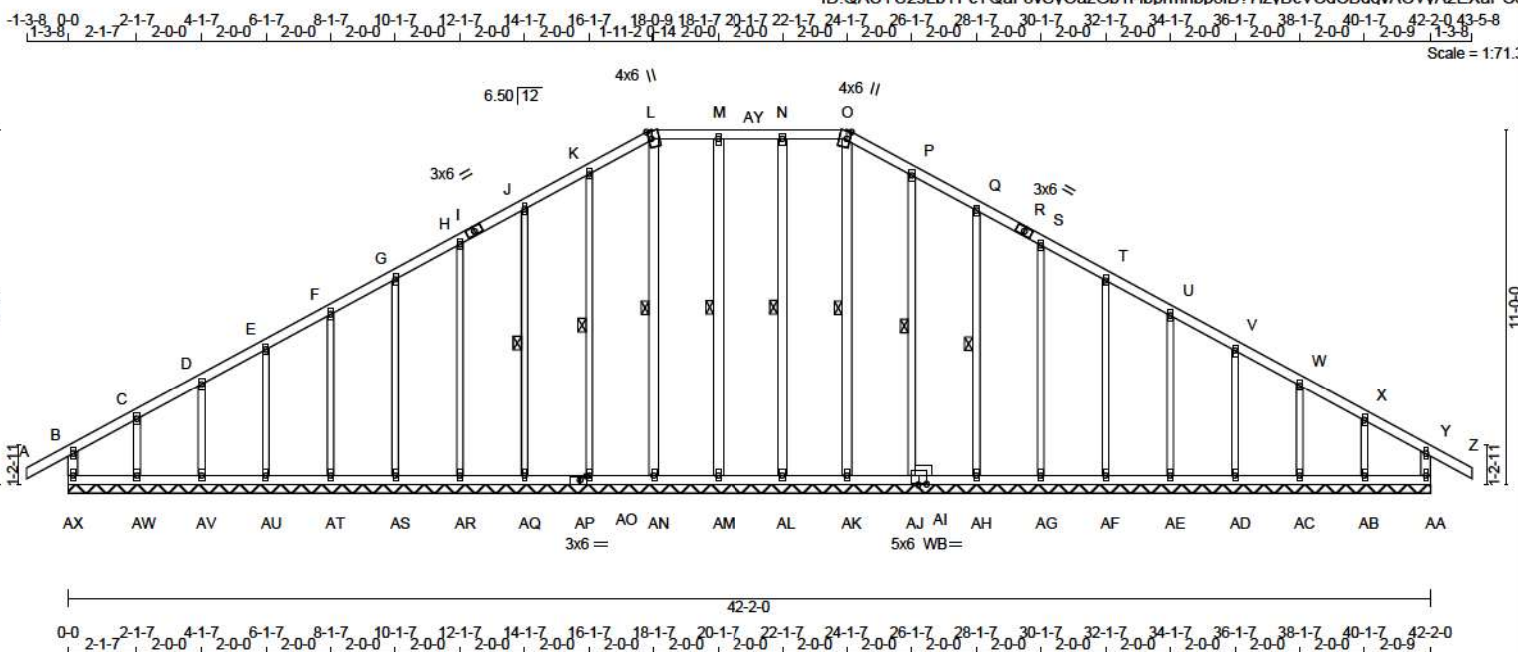
READ ALL NOTES ON THIS PAGE AND ON
ENGINEERING NOTE PAGE ENP-1. THIS
NOTE PAGE IS AN INTEGRAL PART OF
THIS DRAWING AS IT CONTAINS
SPECIFICATIONS AND CRITERIA USED IN
THE DESIGN OF THIS COMPONENT.



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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			





LUMBER				DESCR.	
N. L. G. A. RULES	CHORDS	SIZE	LUMBER		
AX - B	2x4	DRY	No.2	SPF	
A - I	2x4	DRY	No.2	SPF	
I - L	2x4	DRY	No.2	SPF	
L - O	2x4	DRY	No.2	SPF	
O - R	2x4	DRY	No.2	SPF	
R - Z	2x4	DRY	No.2	SPF	
AA - Y	2x4	DRY	No.2	SPF	
AX - AP	2x4	DRY	No.2	SPF	
AP - AI	2x4	DRY	No.2	SPF	
AI - AA	2x4	DRY	No.2	SPF	
ALL WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
AK - O	2x4	DRY	No.2	SPF	
AL - N	2x4	DRY	No.2	SPF	
AM - M	2x4	DRY	No.2	SPF	
AN - L	2x4	DRY	No.2	SPF	
ALL GABLE WEBS	2x3	DRY	No.2	SPF	
EXCEPT					
ST2	2x4	DRY	No.2	SPF	
ST3	2x4	DRY	No.2	SPF	
ST4	2x4	DRY	No.2	SPF	
ST5	2x4	DRY	No.2	SPF	

DRY: SEASONED LUMBER.

GABLE STUDS SPACED AT 2'-0" OC.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMV+p	MT20	2.0	4.0		
C, D, E, F, G, H, J, K, M, N, P, Q, S, T, U, V, W, X					
C TMW+w	MT20	2.0	4.0		
I TS-t	MT20	3.0	6.0		
L TTW+m	MT20	4.0	6.0	Edge 1.25	
O TTW+m	MT20	4.0	6.0	Edge 1.25	
R TS-t	MT20	3.0	6.0		
Y TMV+p	MT20	2.0	4.0		
AA BMV1+p	MT20	2.0	4.0		
AB, AC, AD, AE, AF, AG, AH, AK, AL, AM, AN, AO, AQ, AR, AS, AT, AU, AV, AW					
AB BMW1+w	MT20	2.0	4.0		

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

BEARINGS

THIS TRUSS DESIGNED FOR CONTINUOUS BEARINGS.

THIS TRUSS REQUIRES RIGID SHEATHING ON EXPOSED FACE.

PROVIDE ANCHORAGE AT ALL BEARING JOINTS FOR 150 LBS FACTORED UPLIFT.

PROVIDE FOR 222 LBS FACTORED HORIZONTAL REACTION AT JOINT AX

HORIZONTAL REACTIONS

1ST CASE	MAX	MIN	COMPONENT REACTIONS						
COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL			
AX	—	0 / 0	0 / 0	0 / 0	158 / -158	0 / 0	0 / 0		

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

BRACING

FOR SECTION L-O, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT.

FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 8.25 FT.

MAX. UNBRACED BOTTOM CHORD LENGTH = 8.25 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 O-AK, N-AL, M-AM, L-AN, K-AO, J-AQ, P-AJ, Q-AH.
DBS = 20'-0", CBF = 53 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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED VERT. LOAD (LBS)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED VERT. LOAD (LBS)	MAX. FACTORED VERT. LOAD (LBS)
FR-TO		FROM TO		FR-TO			
AX-B	-506 / 54	0.0	0.0 0.14 (13)	7.81	AK-O	-420 / 0	0.26 (3)
A-B	0 / 63	-165.5	-165.5 0.26 (2)	10.00	AL-N	-377 / 30	0.23 (3)
B-C	-157 / 98	-165.5	-165.5 0.10 (2)	6.25	AM-M	-381 / 33	0.24 (2)
C-D	-127 / 107	-165.5	-165.5 0.09 (2)	6.25	AN-L	-420 / 0	0.26 (2)
D-E	-97 / 119	-165.5	-165.5 0.09 (2)	6.25	AO-K	-377 / 79	0.25 (2)
E-F	-98 / 148	-165.5	-165.5 0.09 (2)	6.25	AQ-J	-360 / 90	0.20 (2)
F-G	-55 / 178	-165.5	-165.5 0.09 (2)	6.25	AR-H	-386 / 86	0.44 (2)
G-H	-50 / 206	-165.5	-165.5 0.09 (2)	6.25	AS-G	-387 / 86	0.29 (2)
H-I	-45 / 239	-165.5	-165.5 0.09 (2)	6.25	AT-F	-386 / 86	0.19 (2)
I-J	-45 / 239	-165.5	-165.5 0.09 (2)	6.25	AU-E	-385 / 86	0.12 (2)
J-K	-43 / 271	-165.5	-165.5 0.09 (2)	6.25	AV-D	-384 / 85	0.08 (2)
K-L	-35 / 297	-165.5	-165.5 0.10 (2)	6.25	AW-C	-384 / 85	0.06 (2)
L-M	-31 / 278	-178.0	-178.0 0.10 (2)	2.00	AJ-P	-387 / 80	0.26 (3)
M-AY	-31 / 278	-178.0	-178.0 0.08 (1)	2.00	AH-Q	-388 / 90	0.20 (3)
AY-N	-31 / 278	-178.0	-178.0 0.08 (1)	2.00	AG-S	-387 / 86	0.43 (3)
N-O	-31 / 278	-178.0	-178.0 0.10 (3)	2.00	AF-T	-386 / 86	0.29 (3)
O-P	-32 / 287	-165.5	-165.5 0.10 (3)	6.25	AE-U	-386 / 86	0.18 (3)
P-Q	-30 / 241	-165.5	-165.5 0.09 (3)	6.25	AD-V	-385 / 86	0.12 (3)
Q-R	-27 / 190	-165.5	-165.5 0.09 (3)	6.25	AC-W	-385 / 86	0.08 (3)
R-S	-27 / 190	-165.5	-165.5 0.09 (3)	6.25	AB-X	-377 / 84	0.06 (3)
S-T	-27 / 155	-165.5	-165.5 0.09 (3)	6.25			
T-U	-33 / 125	-165.5	-165.5 0.09 (3)	6.25			
U-V	-39 / 95	-165.5	-165.5 0.09 (3)	6.25			
V-W	-48 / 65	-165.5	-165.5 0.09 (3)	6.25			
W-X	-58 / 35	-165.5	-165.5 0.09 (3)	6.25			
X-Y	-98 / 25	-165.5	-165.5 0.09 (3)	6.25			
Y-Z	0 / 63	-165.5	-165.5 0.26 (3)	10.00			
AA-Y	-489 / 28	0.0	0.0 0.11 (14)	7.81			

AX-AW	-35 / 158	-39.2	-39.2 0.07 (13)	6.25
AW-AV	-34 / 159	-39.2	-39.2 0.03 (17)	6.25
AV-AU	-33 / 160	-39.2	-39.2 0.03 (17)	6.25
AU-AT	-32 / 161	-39.2	-39.2 0.03 (17)	6.25
AT-AS	-31 / 162	-39.2	-39.2 0.03 (17)	6.25
AS-AR	-31 / 162	-39.2	-39.2 0.03 (17)	6.25
AR-AQ	-30 / 162	-39.2	-39.2 0.03 (17)	6.25
AQ-AP	-30 / 163	-39.2	-39.2 0.03 (17)	6.25
AP-AO	-30 / 163	-39.2	-39.2 0.03 (17)	6.25
AO-AN	-30 / 163	-39.2	-39.2 0.03 (17)	6.25
AN-AM	-30 / 162	-39.2	-39.2 0.03 (17)	6.25
AM-AL	-30 / 162	-39.2	-39.2 0.03 (17)	6.25

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	= 46.9	PSF
	DL	= 10.0	PSF
BOT CH.	LL	= 10.5	PSF
	DL	= 7.3	PSF
TOTAL	LD	= 74.8	PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 5.0 P.S.F.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCG 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018, ABC 2019
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

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

(80 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)
TIMES IMPORTANCE FACTOR = 1.00
SPECIFIED ROOF LIVE LOAD

CSI: TC=0.26/1.00 (Y-Z:3), BC=0.07/1.00 (AA-AB:14),
WB=0.44/1.00 (H-AR:2), SS=0.18/1.00 (Y-Z: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 = 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= 0.68 (AJ) (INPUT = 0.90)
JSI METAL = 0.30 (B) (INPUT = 1.00)



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

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

CONTINUED ON PAGE 2



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



PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
AJ						
AJ	BBW1-I	MT20	5.0	6.0	0.25	3.00
AP	BS-t	MT20	3.0	6.0	1.50	2.50
AX	BMV1+p	MT20	2.0	4.0		

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

LOADING


TOTAL LOAD CASES: (18)

CHORDS						WEBS					
MAX. FACTORED			FACTORED			MAX. FACTORED			FACTORED		
MEMB.	FORCE	VERT. LOAD	LC1	MAX	MAX.	MEMB.	FORCE	MAX	MEMB.	FORCE	MAX
	(LBS)	(PLF)	CSI	(LC)	UNBRAC		(LBS)	CSI	(LC)		
FR-TO	FROM TO		LENGTH		FR-TO	FROM TO		LENGTH		FR-TO	
AL-AK	-30 / 162	-39.2	-39.2	0.03 (17)	6.25						
AK-AJ	-30 / 162	-39.2	-39.2	0.03 (17)	6.25						
AJ-AI	-30 / 162	-39.2	-39.2	0.03 (17)	6.25						
AI-AH	-30 / 162	-39.2	-39.2	0.03 (17)	6.25						
AH-AG	-30 / 161	-39.2	-39.2	0.03 (17)	6.25						
AG-AF	-30 / 160	-39.2	-39.2	0.03 (17)	6.25						
AF-AE	-30 / 159	-39.2	-39.2	0.03 (17)	6.25						
AE-AD	-30 / 158	-39.2	-39.2	0.03 (17)	6.25						
AD-AC	-30 / 157	-39.2	-39.2	0.03 (14)	6.25						
AC-AB	-30 / 155	-39.2	-39.2	0.03 (17)	6.25						
AB-AA	-30 / 152	-39.2	-39.2	0.07 (14)	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 (7.9) PSF AT (25-4-0) 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 (ROUGH TERRAIN) AT MINIMUM (1,000) MILES DISTANCE FROM 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 5.0 PSF RESPECTIVELY.

READ ALL NOTES ON THIS PAGE AND ON
ENGINEERING NOTE PAGE ENP-1. THIS
NOTE PAGE IS AN INTEGRAL PART OF
THIS DRAWING AS IT CONTAINS
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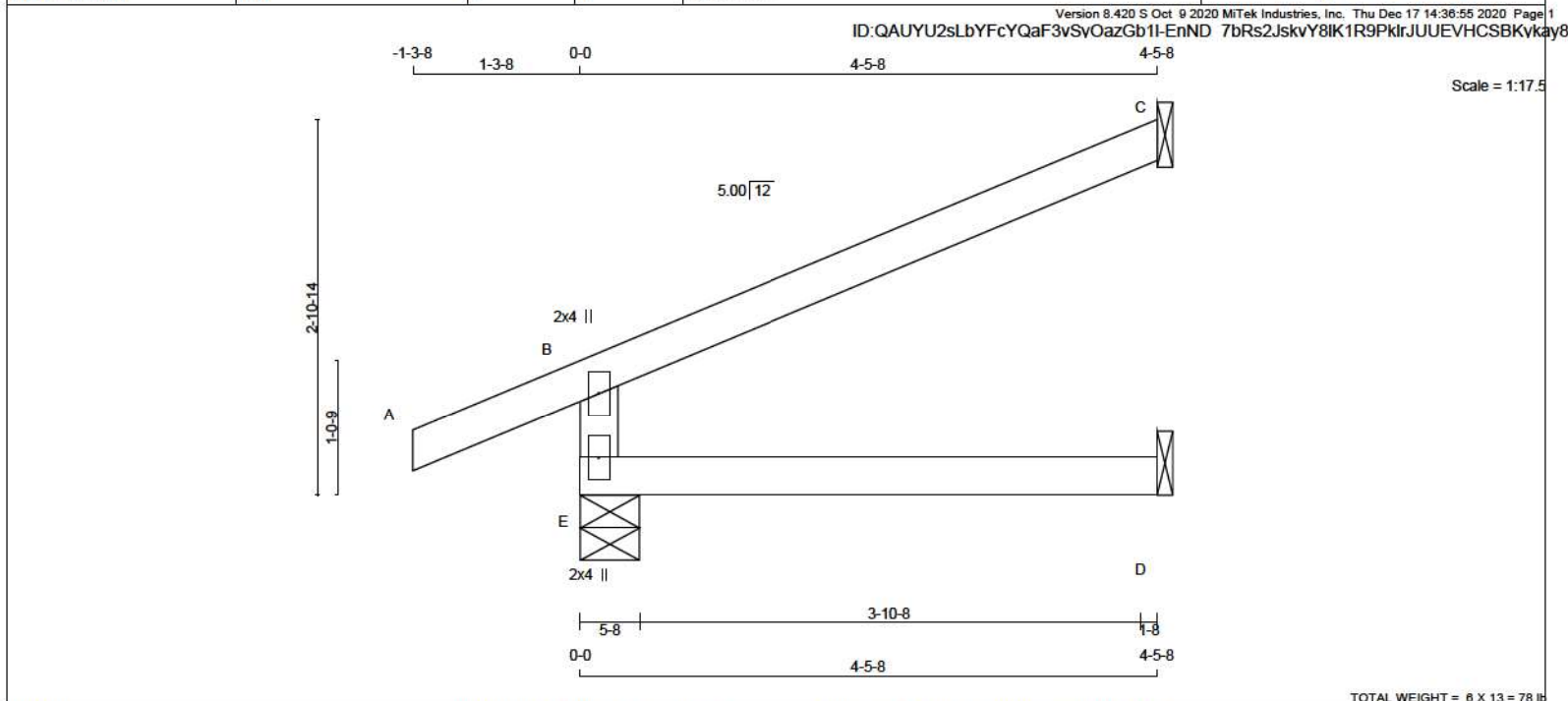
East Gwillimbury

Building Standards Branch BCIN #16487

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Standards Branch. All work must comply with
Zoning By-Law 2018-043, as amended, and the
Ontario Building Code, as amended. These
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times. The building permit must be clearly
posted on site at all times.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			





LUMBER										DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER										DESIGN CRITERIA										[M]									
N. L. G. A. RULES																																							
CHORDS SIZE LUMBER										DESCR.																													
E - B 2x4 DRY No.2										SPF																													
A - C 2x4 DRY No.2										SPF																													
E - D 2x4 DRY No.2										SPF																													
DRY: SEASONED LUMBER.																																							
										SEE MITEK STANDARD DETAIL B97791H FOR CONNECTION TO JOINT(S) C , D																													
PLATES (table is in inches)										UNFACTORED REACTIONS																													
JT TYPE PLATES W LEN Y X										1ST LCASE MAX MIN COMPONENT REACTIONS																													
B TMV+p MT20 2.0 4.0										JT COMBINED SNOW LIVE PERM LIVE WIND DEAD SOIL																													
E BMV1+p MT20 2.0 4.0										E 446 288 / 0 55 / 0 0 / 0 0 / 0 104 / 0 0 / 0																													
										C 143 116 / 0 0 / 0 0 / 0 0 / 0 27 / 0 0 / 0																													
										D 66 0 / 0 39 / 0 0 / 0 0 / 0 27 / 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: (4)																													
										CHORDS										WEBS																			
										MAX. FACTORED FACTORED										MAX. FACTORED																			
										MEMB. FORCE VERT. LOAD LC1 MAX MAX. MEMB. FORCE MAX										MEMB. FORCE MAX																			
										(LBS) (PLF) CSI (LC) UNBRAC LENGTH										(LBS) CSI (LC)																			
										FR-TO FROM TO										FR-TO																			
										E-B -514 / 0 0.0 0.0 0.13 (3) 7.81																													
										A-B 0 / 32 -124.4 -124.4 0.16 (1) 10.00																													
										B-C -27 / 0 -124.4 -124.4 0.42 (1) 6.25																													
										E-D 0 / 0 -39.2 -39.2 0.13 (3) 10.00																													

Dec 16, 2020

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Discipline	Reviewer	BCIN	Date
Building Code	H. Author	43236	2021-02-08
Sewage System			
Zoning			





MI

JSI METAL= 0.04 (B) (INPUT = 1.00)



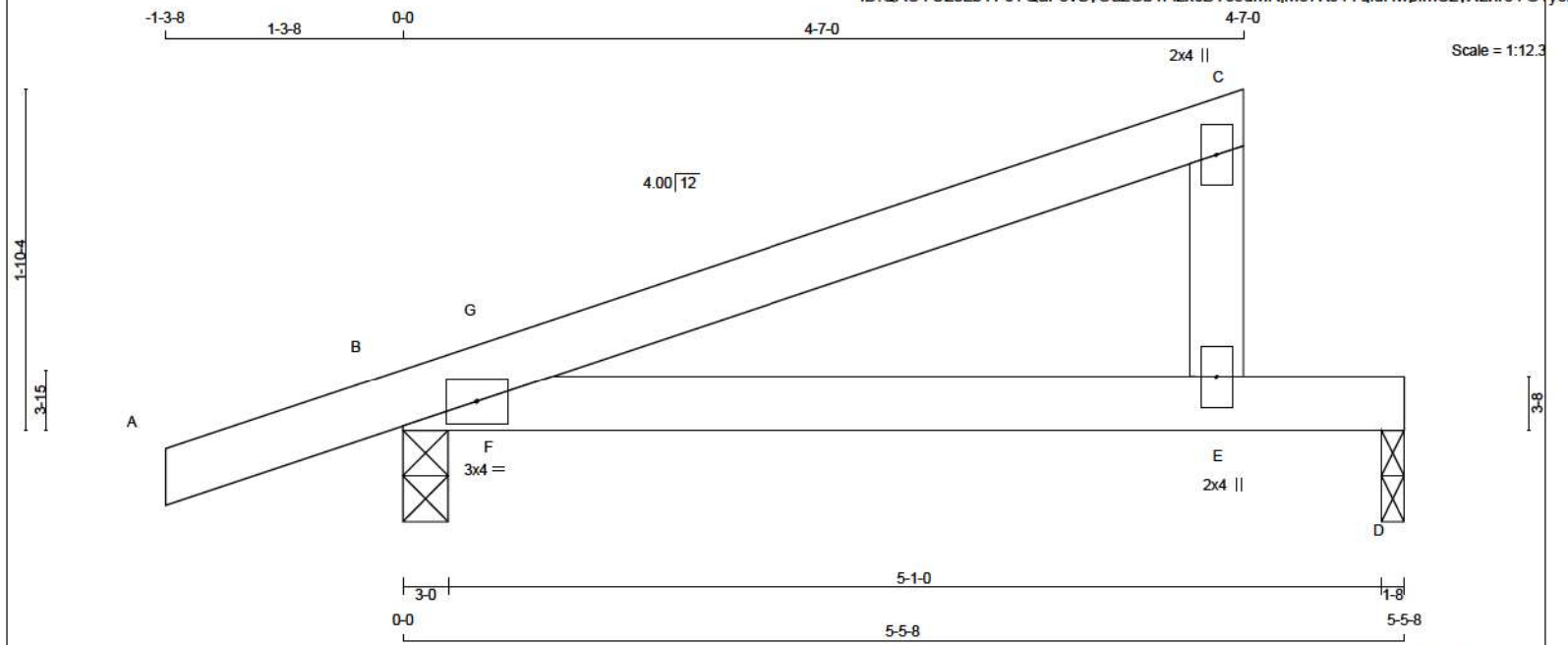


Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-4
Sewage System			
Zoning			





TOTAL WEIGHT = 3 X 15 = 44 lb

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

DRY: SEASONED LUMBER.

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

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

BEARINGS		FACTORED	MAXIMUM FACTORED	INPUT	REQ'D
JT	VERT	GROSS REACTION	GROSS REACTION	BRG	BRG
B	604	0	604	0	3-0
D	347	0	347	0	1-8

UNFACTORED REACTIONS		1ST CASE	MAX	MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND
B	439	278 / 0	57 / 0	0 / 0	104 / 0
D	282	134 / 0	57 / 0	0 / 0	71 / 0

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

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS		WEBS	
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED FORCE (LBS)
FR-TO		FROM TO	LENGTH
A-B	0 / 25	-124.4 -124.4	10.00
B-G	-66 / 0	-124.4 -124.4	8.25
G-C	0 / 9	-124.4 -124.4	10.00
E-C	-272 / 0	0.0 0.0	7.81
B-F	0 / 0	-39.2 -39.2	10.00
F-E	0 / 0	-39.2 -39.2	10.00
E-D	0 / 0	-39.2 -39.2	10.00

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/608 (0.11")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/360 (0.19")

CSI: TC=0.41/1.00 (C-G-1), BC=0.42/1.00 (E-F-1),
WB=0.00/1.00 (F-G-1), SSI=0.27/1.00 (D-E-1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.31 (B) (INPUT = 0.90)
JSI METAL= 0.08 (C) (INPUT = 1.00)

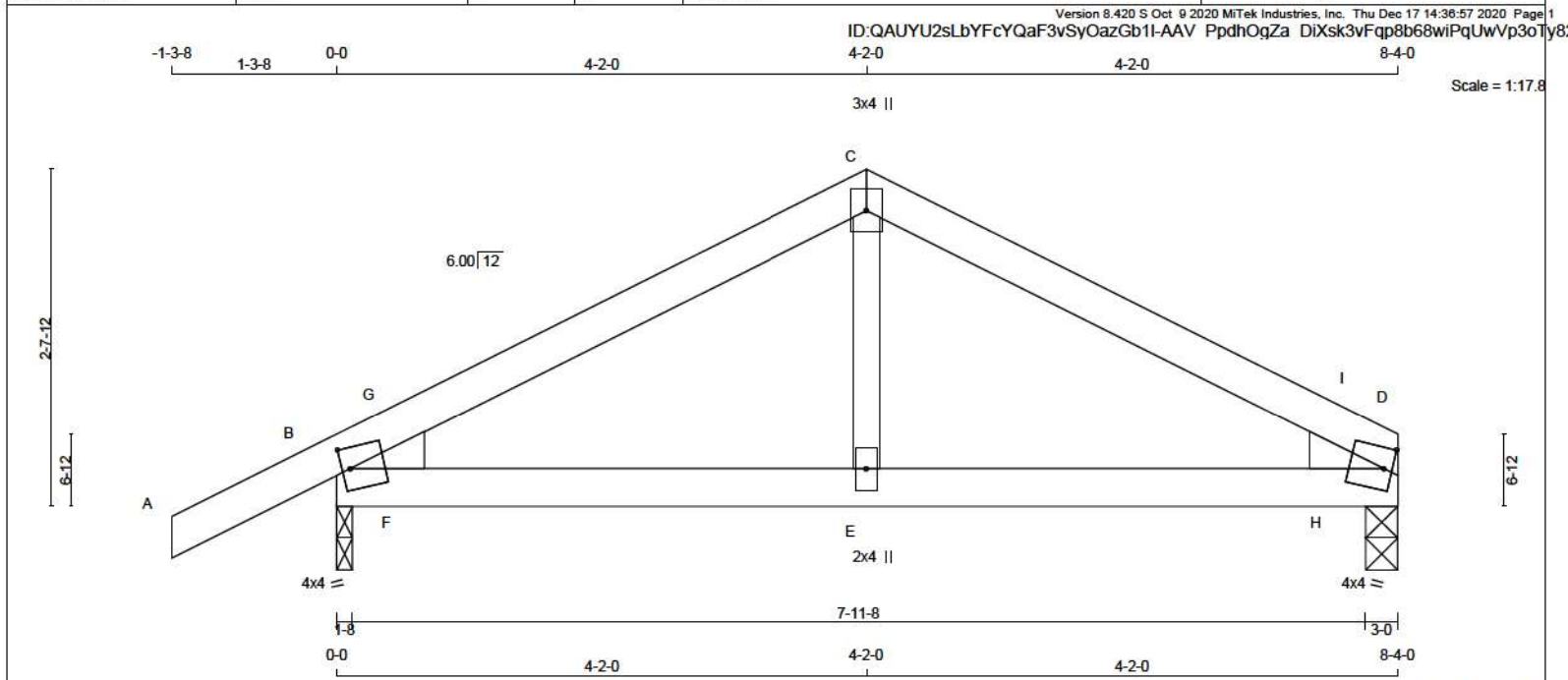


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Discipline	Reviewer	BCIN	Date
Building Code	H. Author	43236	2021-02-08
Sewage System			
Zoning			



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LUMBER

N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x4	DRY No.2	SPF
C - D	2x4	DRY No.2	SPF
B - D	2x4	DRY No.2	SPF
ALL WEBS	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT	TYPE	PLATES	W	LEN	Y	X
B	TMBH1-m	MT20	4.0	4.0	2.00	0.75
C	TTW+p	MT20	3.0	4.0		
D	TMBH1-m	MT20	4.0	4.0	2.00	0.75
E	BMW+w	MT20	2.0	4.0		

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQRD BRG	HEEL WEDGE
JT	VERT	HORZ	DOWN	HORZ	UPLIFT
B	851	0	851	0	0
D	682	0	682	0	0

UNFACTORED REACTIONS

1ST CASE	MAX	MIN	COMPONENT REACTIONS
JT	COMBINED	SNOW	LIVE
B	621	385 / 0	88 / 0
D	505	290 / 0	88 / 0

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

BRACING

TOP CHORD TO BE SHEATHED OR MAX. PURLIN SPACING = 6.25 FT.

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX (LC)	MAX. UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. CS (LC)
FR-TO		FROM	TO		FR-TO		
A-B	0 / 25	-124.4	-124.4	0.16 (1)	10.00	E-C	0 / 272
B-G	-797 / 0	-124.4	-124.4	0.10 (1)	8.25	F-G	-143 / 98
G-C	-746 / 0	-124.4	-124.4	0.21 (1)	8.25	H-I	-143 / 98
C-I	-746 / 0	-124.4	-124.4	0.21 (1)	8.25		
I-D	-797 / 0	-124.4	-124.4	0.10 (1)	8.25		
B-F	0 / 857	-39.2	-39.2	0.22 (1)	10.00		
F-E	0 / 857	-39.2	-39.2	0.26 (1)	10.00		
E-H	0 / 857	-39.2	-39.2	0.26 (1)	10.00		
H-D	0 / 857	-39.2	-39.2	0.22 (1)	10.00		

DESIGN CRITERIA

SPECIFIED LOADS:

TOP	CH.	LL	PSF
		34.8	PSF
		8.0	PSF
BOT	CH.	LL	PSF
		10.5	PSF
		7.3	PSF
		60.6	PSF

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.28")

CALCULATED VERT. DEFL.(LL) = L/999 (0.01")

ALLOWABLE DEFL.(TL)= L/360 (0.28")

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

CSI: TC=0.21/1.00 (C-I-1), BC=0.26/1.00 (E-F-1), WB=0.06/1.00 (C-E-2), SSI=0.18/1.00 (C-G-1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

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

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

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

JSI METAL = 0.32 (D) (INPUT = 1.00)



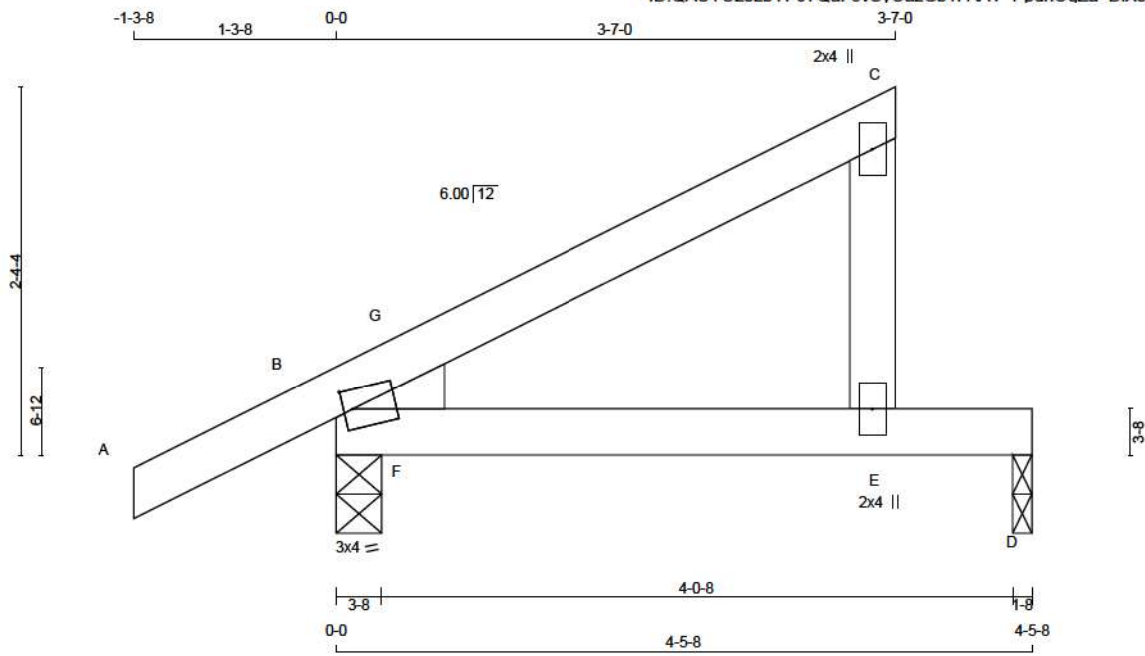
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Discipline	Reviewer	BCIN	Date
Building Code	H. Author	43236	2021-02-08
Sewage System			
Zoning			





TOTAL WEIGHT = 9 X 14 = 127 lb

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

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B	TMBH1-m	MT20	3.0	4.0	1.50 0.75
C	TMV+p	MT20	2.0	4.0	
E	BMV+p	MT20	2.0	4.0	

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

BEARINGS

	FACTORED GROSS REACTION	MAXIMUM FACTORED GROSS REACTION	INPUT BRG	REQD BRG	HEEL
JT	VERT	HORZ	DOWN	HORZ	UPLIFT IN-SX
B	523	0	523	0	0
D	267	0	267	0	0

UNFACTORED REACTIONS

1ST LCASE	MAX	MIN	COMPONENT REACTIONS						
JT	COMBINED	SNOW	LIVE	PERM. LIVE	WIND	DEAD	SOIL		
B	379	244 / 0	47 / 0	0 / 0	0 / 0	89 / 0	0 / 0		
D	203	100 / 0	47 / 0	0 / 0	0 / 0	56 / 0	0 / 0		

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

BRACING

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

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

LOADING

TOTAL LOAD CASES: (4)

CHORDS					WEBS				
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	LC1 MAX (LC)	UNBRACED LENGTH	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED FORCE (LC)		
FR-TO		FROM	TO		FR-TO				
A-B	0 / 25	-124.4	-124.4	0.16 (1)	10.00	F-G	-63 / 111	0.00 (1)	
B-G	-105 / 0	-124.4	-124.4	0.11 (2)	8.25				
G-C	0 / 11	-124.4	-124.4	0.25 (1)	10.00				
E-C	-214 / 0	0.0	0.0	0.03 (1)	7.81				
B-F	0 / 0	-39.2	-39.2	0.12 (1)	10.00				
F-E	0 / 0	-39.2	-39.2	0.30 (1)	10.00				
E-D	0 / 0	-39.2	-39.2	0.30 (1)	10.00				

DESIGN CRITERIA

SPECIFIED LOADS:

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

SPACING = 24.0 IN. C/C

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

THIS DESIGN COMPLIES WITH:

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

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

ALLOWABLE DEFL.(LL)= L/360 (0.19")
CALCULATED VERT. DEFL.(LL) = L/999 (0.05")
ALLOWABLE DEFL.(TL)= L/360 (0.19")
CALCULATED VERT. DEFL.(TL) = L/618 (0.09")

CSI: TC=0.25/1.00 (C-G-1), BC=0.30/1.00 (E-F-1),
WB=0.00/1.00 (F-G-1), SSI=0.21/1.00 (D-E-1)

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

COMPANION LIVE LOAD FACTOR = 1.00

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

NAIL VALUES

PLATE	GRIP(DRY)	SHEAR (PSI)	SECTION (PLI)
	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= 0.64 (B) (INPUT = 0.90)
JSI METAL= 0.09 (C) (INPUT = 1.00)



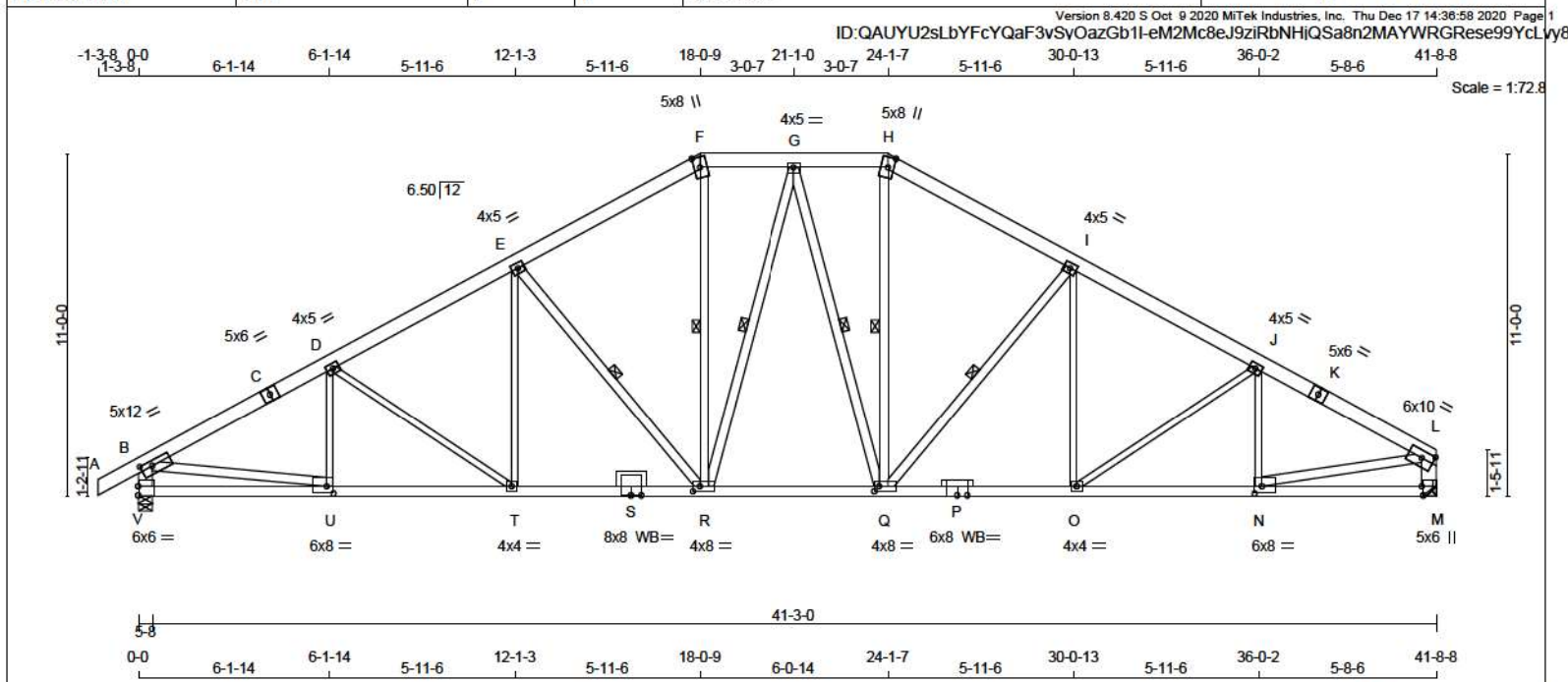
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			





LUMBER			
N. L. G. A. RULES			
CHORDS	SIZE	LUMBER	DESCR.
A - C	2x6	DRY No.2	SPF
C - F	2x6	DRY No.2	SPF
F - H	2x6	DRY No.2	SPF
H - K	2x6	DRY No.2	SPF
K - L	2x6	DRY No.2	SPF
V - B	2x6	DRY No.2	SPF
M - L	2x6	DRY No.2	SPF
V - S	2x4	DRY 2100F 1.8E	SPF
S - P	2x4	DRY 2100F 1.8E	SPF
P - M	2x4	DRY 2100F 1.8E	SPF
ALL WEBS EXCEPT	2x4	DRY No.2	SPF
U - D	2x3	DRY No.2	SPF
D - T	2x3	DRY No.2	SPF
T - E	2x3	DRY No.2	SPF
O - I	2x3	DRY No.2	SPF
O - J	2x3	DRY No.2	SPF
N - J	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table in inches)					
JT	TYPE	PLATES	W	LEN	Y X
B	TMVW-t	MT20	5.0	12.0	2.00 4.50
C	TS-t	MT20	5.0	6.0	
D, E, G, I, J					
D	TMVW-t	MT20	4.0	5.0	
F	TTW+m	MT20	5.0	8.0	4.00 2.25
H	TTW+m	MT20	5.0	8.0	4.00 2.25
K	TS-t	MT20	5.0	6.0	
L	TMVW-t	MT20	6.0	10.0	2.75 4.50
M	BMV1+t	MT20	5.0	6.0	Edge 0.50
N	BMVW-t	MT20	6.0	8.0	2.75 2.75
O	BMVW-t	MT20	4.0	4.0	
P	BS-t	MT20	6.0	8.0	
Q	BMVW-t	MT20	4.0	8.0	2.00 1.75
R	BMVW-t	MT20	4.0	8.0	2.00 2.75
S	BS-t	MT20	8.0	8.0	
T	BMVW-t	MT20	4.0	4.0	
U	BMVW-t	MT20	6.0	8.0	2.75 2.75
V	BMV1-t	MT20	6.0	6.0	3.50

DIMENSIONS, SUPPORTS AND LOADINGS SPECIFIED BY FABRICATOR TO BE VERIFIED BY BUILDING DESIGNER							
BEARINGS							
	FACTORED GROSS REACTION		MAXIMUM FACTORED GROSS REACTION		INPUT BRG	REQ'D BRG	
	VERT	HORZ	DOWN	HORZ	UPLIFT	IN-SX	IN-SX
JT	4539	0	4539	222	-371	5-8	5-8
V	4308	0	4308	0	-337	MECHANICAL	

A SUITABLE HANGER/MECHANICAL CONNECTION IS REQUIRED AT JOINT M. MINIMUM BEARING LENGTH AT JOINT M = 5'-0".

PROVIDE ANCHORAGE AT BEARING JOINT V FOR 371 LBS. FACTORED UPLIFT
PROVIDE ANCHORAGE AT BEARING JOINT M FOR 337 LBS. FACTORED UPLIFT

PROVIDE FOR 222 LBS FACTORED HORIZONTAL REACTION AT JOINT

UNFACTORED REACTIONS							
JT	1ST LCASE		MAX MIN COMPONENT REACTIONS				
	COMBINED	SNOW	LIVE	PERM LIVE	WIND	DEAD	SOIL
M	3302	2085 / 0	438 / 0	0 / 0	143 / -562	780 / 0	0 / 0
V	3144	1953 / 0	438 / 0	0 / 0	138 / -528	752 / 0	0 / 0

HORIZONTAL REACTIONS							
V	—	0/0	0/0	0/0	159/-147	0/0	0/0

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

BRACING
FOR SECTION F-H, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT.
FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 2.95 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 E-R, F-R, G-R, G-Q, H-Q, I-Q. DBS = 20-0-0 . CBF = 223 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)

10. TOTAL LOAD CASES: (10)

CHORDS				WEBS			
MAX. FACTORED		FACTORED		MAX. FACTORED		MAX. FACTORED	
MEMB.	FORCE (LBS)	VERT. LOAD (LBS)	LC1 MAX (FLF)	LC1 MAX (CSI (LC))	MEMB. UNBRAC LEFTHFR-TO	FORCE (LBS)	MAX CSI (LC)
A-B	0 / 65	-165.5	-165.5	0.14 (2)	10.00	U-D -563 / 109	0.15 (7)
B-C	-4322 / 498	-165.5	-165.5	0.71 (2)	2.95	D -823 / 174	0.83 (2)
C-D	-4322 / 498	-165.5	-165.5	0.71 (2)	2.95	T-E -48 / 705	0.16 (2)
D-E	-5822 / 498	-165.5	-165.5	0.65 (2)	3.13	E-R -1765 / 297	0.81 (2)
E-F	-4801 / 444	-165.5	-165.5	0.57 (2)	3.50	R-F -146 / 1583	0.25 (1)
F-G	-4200 / 447	-178.0	-178.0	0.26 (1)	2.00	R-G -919 / 645	0.60 (3)
G-H	-4174 / 441	-178.0	-178.0	0.26 (1)	2.00	Q-G -960 / 572	0.64 (2)
H-I	-4772 / 438	-165.5	-165.5	0.57 (3)	3.00	Q-H -147 / 1571	0.25 (1)
I-J	-5688 / 482	-165.5	-165.5	0.66 (3)	3.17	Q-I -1600 / 285	0.75 (3)
J-K	-5620 / 464	-165.5	-165.5	0.58 (3)	3.17	Q-I -30 / 550	0.12 (3)
K-L	-5620 / 464	-165.5	-165.5	0.58 (3)	3.17	Q-J -547 / 155	0.55 (3)
V-B	-4435 / 393	0.0	0.0	0.22 (1)	5.13	N-J -783 / 124	~ ~ ~
M-L	-4213 / 356	0.0	0.0	0.28 (1)	5.25	B-U -351 / 5640	
						N-L -348 / 5327	
V-U	-213 / 202	-39.2	-39.2	0.18 (17)	6.25		
U-T	-514 / 5591	-39.2	-39.2	0.51 (1)	6.25		
T-S	-372 / 5124	-39.2	-39.2	0.49 (1)	6.25		
S-R	-372 / 5124	-39.2	-39.2	0.49 (1)	6.25		
R-Q	-164 / 4255	-39.2	-39.2	0.42 (1)	6.25		
Q-P	-211 / 5011	-39.2	-39.2	0.48 (1)	6.25		
P-O	-211 / 5011	-39.2	-39.2	0.48 (1)	6.25		
Q-N	-330 / 5236	-39.2	-39.2	0.48 (1)	6.25		
N-M	-6 / 13	-39.2	-39.2	0.16 (17)	10.00		



East Gwillimbury
 Building Standards Branch BCN #16487

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

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

DESIGN CRITERIA

SPECIFIED LOADS:

TOP CH.	LL	= 46.9	PSF
	DL	= 10.0	PSF
BOT CH.	LL	= 10.5	PSF
	DL	= 7.3	PSF
TOTAL LOAD = 74.8 PSF			

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 8.00/12 AND -8.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND AN ADDITIONAL DEAD LOAD OF 5.0 P S F

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
- PART 4 OF BCBC 2018 , ABC 2019
- PART 4 OF OBC 2012 (2019 AMENDMENT)
- CSA 086-14
- TPIC 2014

DESIGN ASSUMPTIONS
- SLOPE REDUCTION FACTOR NOT USED

(80 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD)
TIMES IMPORTANCE FACTOR EQUALS 46.9 P.S.F.
SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL)= L/360 (1.39")
CALCULATED VERT. DEFL.(LL)= L/ 999 (0.23")
ALLOWABLE DEFL.(TL)= L/180 (2.78")
CALCULATED VERT. DEFL.(TL)= L/ 999 (0.33")

CSI: TC=0.71/1.00 (B-D:2), BC=0.51/1.00 (T-U:1),
WB=0.91/1.00 (B-U:1), SSI=0.37/1.00 (B-D: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 = 1.00

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

PLATE	GRIP(DRY)		SHEAR		SECTION	
	(PSI)	(PLI)	(PSI)	(PLI)	(PSI)	(PLI)
MT20	850	371	1747	788	1987	1873

PLATE PLACEMENT TOL. = 0.250 inches

PLATE ROTATION TOL. = 5.0 Deg.

JSI GRIP= 0.90 (S) (INPUT = 0.90)
JSI METAL= 0.98 (P) (INPUT = 1.00)

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

CONTINUED ON PAGE 2



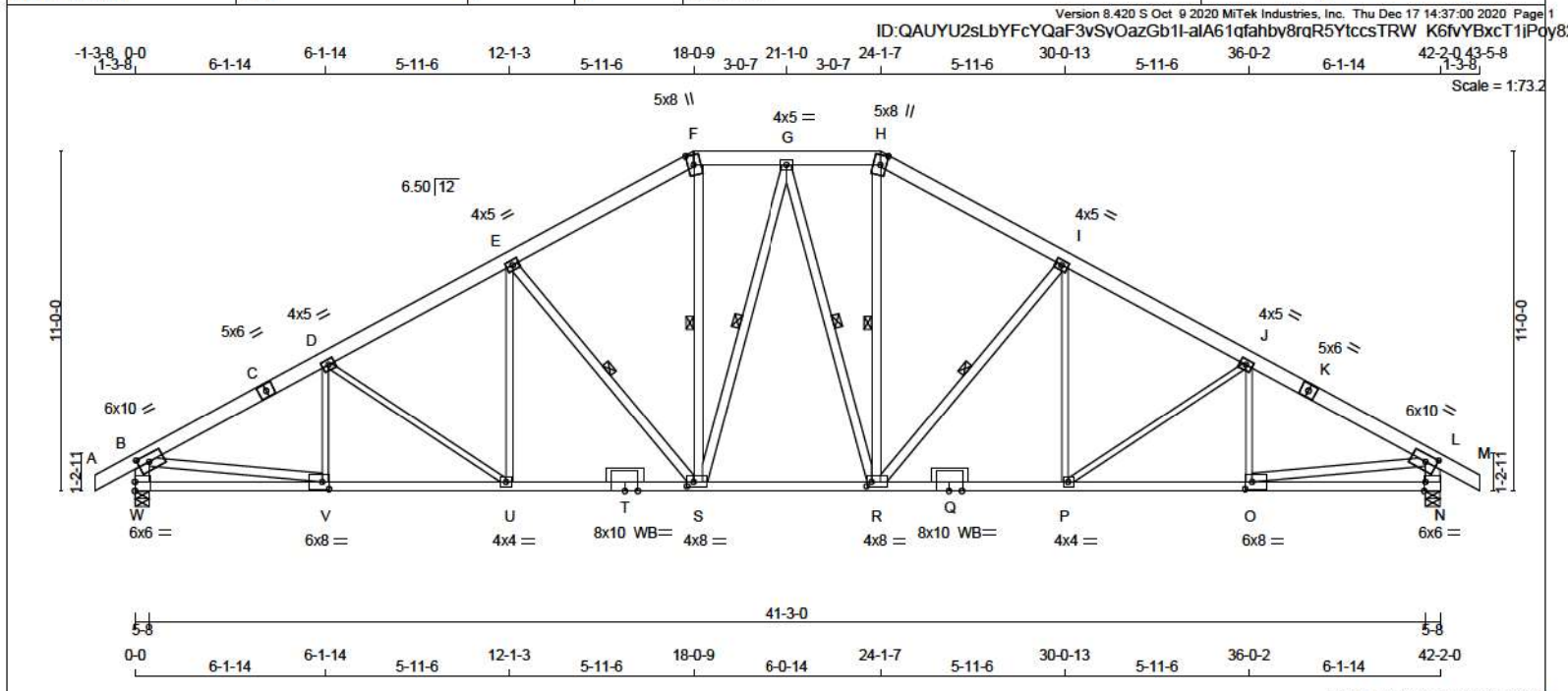
**READ ALL NOTES ON THIS PAGE AND ON
ENGINEERING NOTE PAGE ENP-1. THIS
NOTE PAGE IS AN INTEGRAL PART OF
THIS DRAWING AS IT CONTAINS
SPECIFICATIONS AND CRITERIA USED IN
THE DESIGN OF THIS COMPONENT.**

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-08
Sewage System			
Zoning			

CONTINUED ON PAGE 2





LUMBER
 N. L. G. A. RULES

CHORDS	SIZE	LUMBER	DESCR.
A - C	2x6	DRY No.2	SPF
C - F	2x6	DRY No.2	SPF
F - H	2x6	DRY No.2	SPF
H - K	2x6	DRY No.2	SPF
K - M	2x6	DRY No.2	SPF
M - B	2x6	DRY No.2	SPF
N - L	2x6	DRY No.2	SPF
W - T	2x4	DRY 2100F 1.8E	SPF
T - Q	2x4	DRY 2100F 1.8E	SPF
Q - N	2x4	DRY 2100F 1.8E	SPF
ALL WEBS	2x4	DRY No.2	SPF
EXCEPT			
V - D	2x3	DRY No.2	SPF
D - U	2x3	DRY No.2	SPF
U - E	2x3	DRY No.2	SPF
P - I	2x3	DRY No.2	SPF
P - J	2x3	DRY No.2	SPF
O - J	2x3	DRY No.2	SPF

DRY: SEASONED LUMBER.

PLATES (table is in inches)

JT TYPE	PLATES	W	LEN	Y	X
B TMVW-t	MT20	6.0	10.0	2.75	4.25
C TS-t	MT20	5.0	6.0		
D, E, G, I, J					
D TMVW-t	MT20	4.0	5.0		
H TTW+m	MT20	5.0	8.0	4.00	2.25
H TTW+m	MT20	5.0	8.0	4.00	2.25
K TS-t	MT20	5.0	6.0		
L TMVW-t	MT20	6.0	10.0	2.75	4.25
N BMV1-t	MT20	6.0	8.0	Edge 0.50	
O BMVW-t	MT20	6.0	8.0	2.75	2.75
P BMVW-t	MT20	4.0	4.0		
Q BS-t	MT20	8.0	10.0		
R BMVW-t	MT20	4.0	8.0	1.75	2.00
S BMVW-t	MT20	4.0	8.0	1.75	2.50
T BS-t	MT20	8.0	10.0		
U BMVW-t	MT20	4.0	4.0		
V BMVW-t	MT20	6.0	8.0	2.75	2.75
W BMV1-t	MT20	6.0	6.0	3.50	



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

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	4587	0	4587	-219
W	4587	0	4587	-374
N	4587	0	4587	-374

PROVIDE ANCHORAGE AT BEARING JOINT W FOR 374 LBS. FACTORED UPLIFT
 PROVIDE ANCHORAGE AT BEARING JOINT N FOR 374 LBS. FACTORED UPLIFT

PROVIDE FOR 210 LBS. FACTORED HORIZONTAL REACTION AT JOINT W

UNFACTORED REACTIONS

1ST LCASE	MAX	MIN	COMPONENT REACTIONS
JT COMBINED	2106	0	443
W	2106	0	443
N	2106	0	443

HORIZONTAL REACTIONS

	W					
W	0	0	0	0	156	-156
	0	0	0	0	0	0

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

BRACING
 FOR SECTION F-H, MAX. UNBRACED TOP CHORD LENGTH = 2.00 FT.
 FOR OTHER SECTIONS, MAX. UNBRACED TOP CHORD LENGTH = 2.92 FT.
 MAX. UNBRACED BOTTOM CHORD LENGTH = 8.25 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 E-S, F-S, G-S, G-R, H-R, I-R. DBS = 20-0-0. CBF = 223 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				WEBS			
MEMB.	MAX. FACTORED FORCE (LBS)	FACTORED VERT. LOAD (PLF)	MAX. FACTORED LC1 MAX. (CS) (LC)	MEMB.	MAX. FACTORED FORCE (LBS)	MAX. FACTORED LC1 MAX. (CS) (LC)	
FR-TO		FROM TO		FR-TO			
A-B	0 / 85	-165.5 -165.5 0.14 (2)	10.00	V-D	-572 / 110	0.15 (7)	
B-C	-8401 / 503	-165.5 -165.5 0.71 (2)	2.92	D-U	-818 / 173	0.82 (2)	
C-D	-8401 / 503	-165.5 -165.5 0.71 (2)	2.92	U-E	-47 / 702	0.16 (2)	
D-E	-5910 / 503	-165.5 -165.5 0.65 (2)	3.11	E-S	-1783 / 297	0.81 (2)	
E-F	-4892 / 449	-165.5 -165.5 0.57 (2)	3.47	S-F	-150 / 1625	0.26 (1)	
F-G	-4281 / 451	-178.0 -178.0 0.26 (1)	2.00	G-S	-963 / 620	0.63 (3)	
G-H	-4281 / 451	-178.0 -178.0 0.26 (1)	2.00	H-R	-963 / 620	0.63 (2)	
H-I	-4892 / 449	-165.5 -165.5 0.57 (3)	3.47	R-H	-149 / 1625	0.26 (1)	
I-J	-5910 / 503	-165.5 -165.5 0.65 (3)	3.11	R-I	-1783 / 297	0.81 (3)	
J-K	-8401 / 503	-165.5 -165.5 0.71 (3)	2.92	P-I	-47 / 702	0.16 (3)	
K-L	-8401 / 503	-165.5 -165.5 0.71 (3)	2.92	P-J	-818 / 174	0.82 (3)	
L-M	0 / 85	-165.5 -165.5 0.14 (3)	10.00	O-J	-571 / 110	0.15 (8)	
W-B	-4482 / 395	0.0 0.0 0.29 (1)	5.10	B-V	-354 / 5710	0.92 (1)	
N-L	-4482 / 395	0.0 0.0 0.29 (1)	5.10	O-L	-355 / 5710	0.92 (1)	
W-V	-209 / 214	-39.2 -39.2 0.18 (17)	6.25				
V-U	-506 / 5661	-39.2 -39.2 0.52 (1)	6.25				
U-T	-364 / 5202	-39.2 -39.2 0.49 (1)	6.25				
T-S	-364 / 5202	-39.2 -39.2 0.49 (1)	6.25				
S-R	-157 / 4348	-39.2 -39.2 0.43 (1)	6.25				
R-Q	-200 / 5202	-39.2 -39.2 0.49 (1)	6.25				
Q-P	-200 / 5202	-39.2 -39.2 0.49 (1)	6.25				
P-O	-342 / 5661	-39.2 -39.2 0.52 (1)	6.25				
O-N	-5 / 10	-39.2 -39.2 0.18 (17)	10.00				



Team of

East Gwillimbury

Building Standards Branch BCN #16487

These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Department.

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

WIND LOAD APPLIED IS DERIVED FROM REFERENCE VELOCITY PRESSURE. REFERENCE HEIGHT ABOVE GRADE AND USING EXTERNAL PEAK COEFF. (WIND FORCE RESISTING SYSTEM). INTERNAL WIND PRESSURE IS BASED ON BUILDING MAY BE LOCATED ON (ROUGH TERRAIN) AT MINIMUM (1,000) FT. TERRAIN, AND TRUSS IS DESIGNED TO BE LOCATED AT LEAST (0-0) FT. UPLIFT IS BASED ON TOP AND BOTTOM CHORD DEAD LOADS OF 5.0 PSF

DESIGN CRITERIA

SPECIFIED LOADS:
 TOP CH. LL = 46.9 PSF
 DL = 10.0 PSF
 BOT CH. LL = 10.5 PSF
 DL = 7.3 PSF
 TOTAL LOAD = 74.8 PSF

SPACING = 24.0 IN. C/C

LOADING IN FLAT SECTION BASED ON PIGGYBACK TRUSS WITH SLOPES OF 6.00/12 AND -6.00/12 AND RESPECTIVE HEEL HEIGHTS OF 0-0 AND 0-0 AND ADDITIONAL DEAD LOAD OF 5.0 P.S.F.

THIS TRUSS IS DESIGNED FOR COMMERCIAL OR INDUSTRIAL BUILDING REQUIREMENTS OF PART 4, NBCC 2015

THIS DESIGN COMPLIES WITH:
 - PART 4 OF BCBC 2018, ABC 2019
 - PART 4 OF OBC 2012 (2019 AMENDMENT)
 - CSA 086-14
 - TPIC 2014

DESIGN ASSUMPTIONS
 - SLOPE REDUCTION FACTOR NOT USED

(80 % OF 48.1 P.S.F. G.S.L. PLUS 8.4 P.S.F. RAIN LOAD) TIMES IMPORTANCE FACTOR EQUALS 46.9 P.S.F. SPECIFIED ROOF LIVE LOAD

ALLOWABLE DEFL.(LL) = L/360 (1.41")
 CALCULATED VERT. DEFL.(LL) = L/999 (0.24")
 ALLOWABLE DEFL.(TL) = L/180 (2.81")
 CALCULATED VERT. DEFL.(TL) = L/999 (0.35")

CSI: TC=0.71/1.00 (J-L-3), BC=0.52/1.00 (O-P-1), WB=0.92/1.00 (L-O-1), SSI=0.37/1.00 (J-L-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 = 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= 0.88 (B) (INPUT = 0.90)
 JSI METAL= 0.97 (V) (INPUT = 1.00)



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Zoning			

CONTINUED ON PAGE 2



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

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

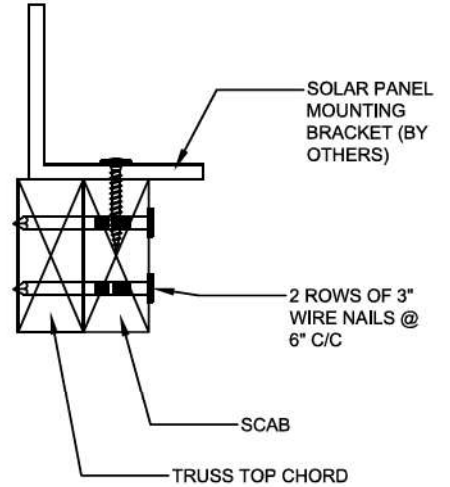
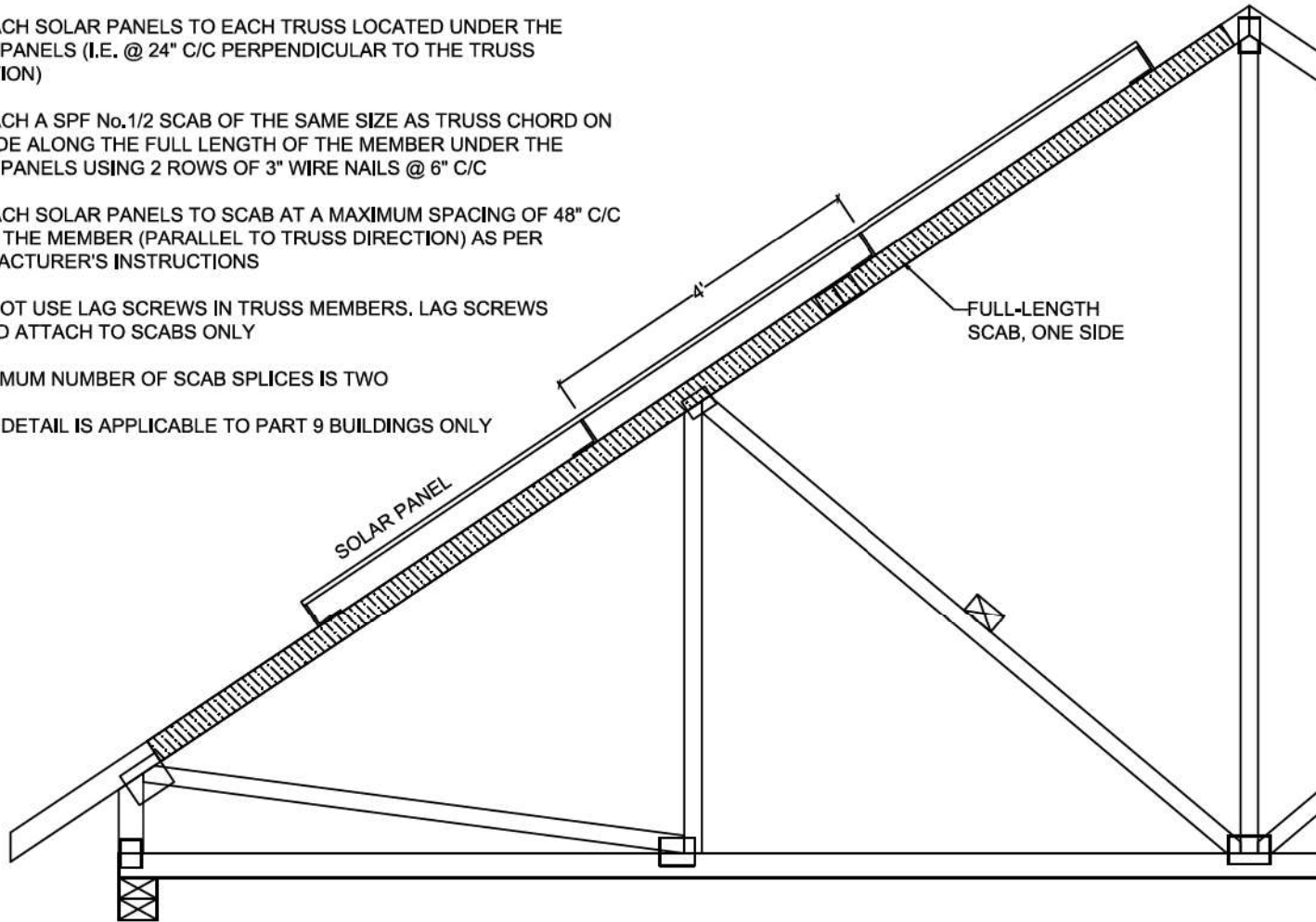
3) ATTACH A SPF No.1/2 SCAB OF THE SAME SIZE AS TRUSS CHORD ON ONE SIDE ALONG THE FULL LENGTH OF THE MEMBER UNDER THE SOLAR PANELS USING 2 ROWS OF 3" WIRE NAILS @ 6" C/C

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

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

6) MAXIMUM NUMBER OF SCAB SPLICES IS TWO

7) THIS DETAIL IS APPLICABLE TO PART 9 BUILDINGS ONLY



NE1220-106
GREENPARK - TRINAR
HALL - GLENWAY 2A ELE 1

Detail for Installation of Solar Panels - Scab Method



Piggyback truss

2x4 purlins

For part 9
trusses no
H3 ties
required.

Main truss

For drag trusses:

Piggyback trusses attached directly on top of the flat or sloped roof trusses using LTP4 plates on alternating sides with spacing as per truss drawing.

2x4 blocking between top chords of main roof trusses must be placed @ 24" C/C and attached to the intersecting top chord member using (2) 3-1/4" common wire nails at each end

Piggyback
truss

2x4 blocking

Main truss

For standard trusses:

Piggyback trusses framed on top of 2x4 purlins placed @ 24" C/C. Each 2x4 purlin must be fixed to the top edge of the top chord of each main truss using (2) 3-1/4" common wire nails and (1) H3 tie at each end. Each piggyback toe-nailed to each purlin using (2) 3-1/4" common wire nails and attached to every second purlin with one H3 tie.

NE1220-106
GREENPARK - TRINAR
HALL - GLENWAY 2A ELE 1

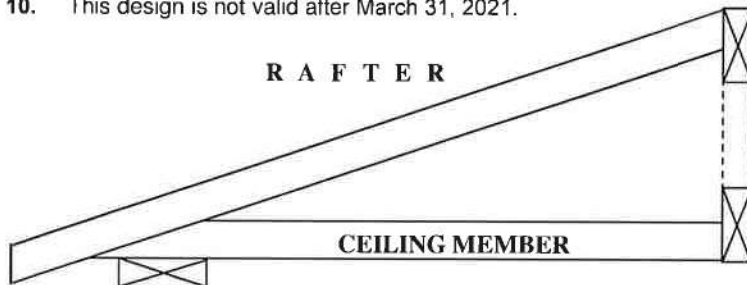
BEARING ANCHORAGE BY TOE-NAILS FOR LATERAL CAPACITY

B97791H1

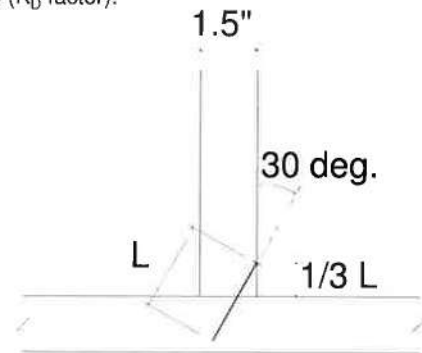
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL LATERAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	132	147
	3.25	0.144	132	147
	3.50	0.160	159	177
COMMON SPIRAL	3.00	0.122	97	108
	3.25	0.122	97	108
	3.50	0.152	145	162

NOTES:

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



G
I
R
D
E
R



TOE-NAIL INSTALLATION

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

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

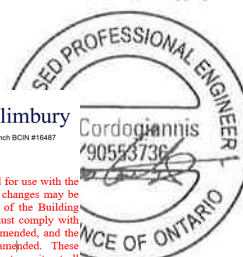


Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Sewage System			
Zoning			

PEO
Certificate No. 10889485



December

NE1220-106
GREENPARK - TRINAR
HALL - GLENWAY 2A ELE 1

BEARING ANCHORAGE BY TOE-NAILS FOR WIND LOADING

B97791H2

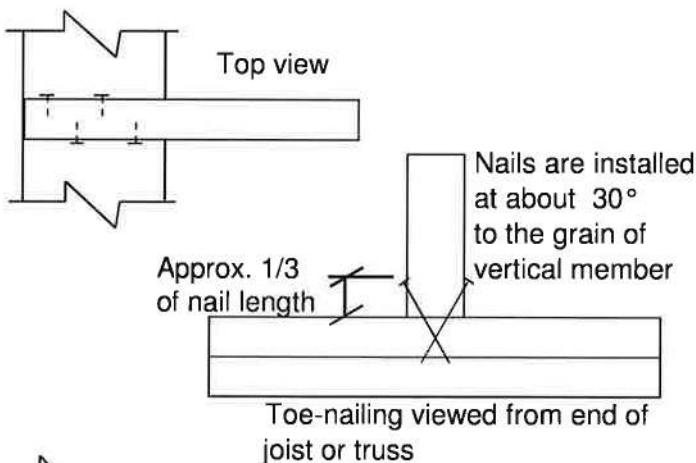
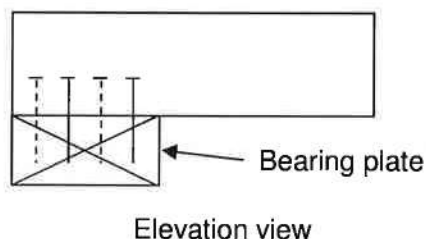
NAIL TYPE	LENGTH (IN)	DIAMETER (IN)	NAIL WITHDRAWAL CAPACITY (LB)	
			S-P-F	D. FIR
COMMON WIRE	3.00	0.144	30	42
	3.25	0.144	32	45
	3.50	0.160	38	52
COMMON SPIRAL	3.00	0.122	26	36
	3.25	0.122	28	40
	3.50	0.152	36	50

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

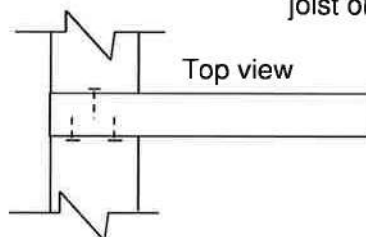
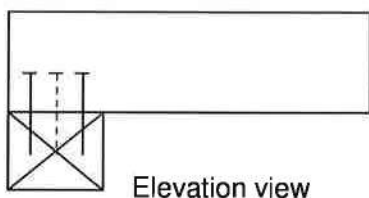
NOTES:

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

Toe-nailing on 2x6 Bearing Plate



Toe-nailing on 2x4 Bearing Plate



MiTek

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



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