

ATA Engineering Inc.

H2-130 Terence Matthews Cres.
Kanata, ON, K2M 0J1

Tel: 613-271-0899
Email: eng@ATAengineering.ca

August 17, 2021

DCR/Phoenix Group of Companies
18-A Bentley Avenue, Nepean, ON K2E 6T8

Our Ref: 17-051

Attn: Mr. Sandy Pollock

RE: Certification Letter for Lot 294 – 36 Dun Skipper Drive, Pathways.

This will confirm that we have reviewed the following Phoenix Homes model for compliance with structural requirements of Parts 4 and/or 9 of the 2012 Ontario Building Code Regulation 332/12.

In the attached table we have listed drawings that form the basis for our review.

Please note that pre-engineered elements (incl. floor joist and roof trusses) have been reviewed for compliance however, final layout (incl. spacing/blocking and strapping) is subject to the review and certification by the manufacturer.

In addition, we have reviewed the LVL beams and cantilever joists for the structural loading and any point loads.

Beams have been reviewed for simple span criteria. If continuity is required to satisfy deflection criteria then the beams are so noted to be continuous on the plans.

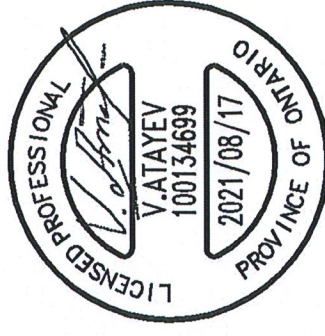
The design of foundations has been revised for stable soils with an allowable bearing pressure of 100 kPa SLS or greater. Soil bearing capacity on the subject site shall be confirmed. Structural design of foundation elements has been based upon ultimate limit states criteria. For the design of interior pads and columns the increased effects of continuity of beams and engineered floor joist have been considered.

Should you have any further questions, please do not hesitate to contact me.

Best Regards,

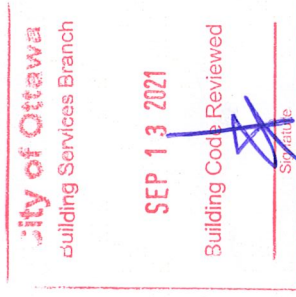
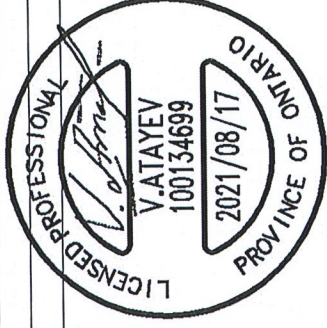


Vepa Atayev, P.Eng



SITE COPY

ATA Ref: 17-051 Phoenix Homes					
Date: August 17, 2021					
Model: Madison - 2020					
Elevation: B					
	Dwg. No.	Revision	Date		
	1 of 8	No. 2 Issued for Engineering	12-Aug-21		
	2 of 8	No. 2 Issued for Engineering	12-Aug-21		
	3 of 8	No. 2 Issued for Engineering	12-Aug-21		
	4 of 8	No. 2 Issued for Engineering	12-Aug-21		
	5 of 8	No. 2 Issued for Engineering	12-Aug-21		
	6 of 8	No. 2 Issued for Engineering	12-Aug-21		
	7 of 8	No. 2 Issued for Engineering	12-Aug-21		
	8 of 8	No. 2 Issued for Engineering	12-Aug-21		
Roof Truss					
Grandor Lumber Inc.					
Floor Joist					
Grandor Lumber Inc. - 1 st Floor	1 of 2		8/10/2021		
Grandor Lumber Inc. - 2 nd Floor	2 of 2		8/10/2021		



Energy Efficiency Design Summary: Prescriptive Method

(Building Code Part 9, Residential)

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

City of Ottawa

Application No:	For use by Principal/Authority	Building Services Branch
	Model/Certification Number	

SEP 13 2021

A. Project Information	
Building number, street name	36 Dun Skipper Drive
Municipality	Goulbourn
Postal code	4M-1618
Reg. Plan number / other description	
Building Number Reviewed	294
Signature	

B. Prescriptive Compliance [indicate the building code compliance package being employed in this house design]

SB-12 Prescriptive (input design package): Package: A1 Table: 3.1.1.2.A(IP)

C. Project Design Conditions

Climatic Zone (SB-1):	Heating Equipment Efficiency	Space Heating Fuel Source
☒ Zone 1 (< 5000 degree days)	☒ ≥ 92% AFUE	☒ Gas ☐ Propane ☐ Solid Fuel
☐ Zone 2 (≥ 5000 degree days)	☐ ≥ 84% < 92% AFUE	☐ Oil ☐ Electric ☐ Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area	Other Building Characteristics	
Area of walls = _____ m ² or 3405 _____ ft ²	☐ Log/Post&Beam ☐ ICF Above Grade ☐ ICF Basement	
	☐ Slab-on-ground ☐ Walkout Basement	
	☐ Air Conditioning ☐ Combo Unit	
	☐ Air Sourced Heat Pump (ASHP)	
Area of W, S & G = _____ m ² or 273 _____ ft ²	Utilize window averaging: ☐ Yes ☒ No	☐ Ground Sourced Heat Pump (GSHP)

D. Building Specifications [provide values and ratings of the energy efficiency components proposed]

Energy Efficiency Substitutions	
☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5) & (6))	
☐ Combined space heating and domestic water heating systems (3.1.1.2.(7) / 3.1.1.3.(7))	
☐ Airtightness substitution(s)	Permitted Substitution: _____
Airtightness test required (Refer to Design Guide Attached)	Permitted Substitution: _____
☐ Table 3.1.1.4.B Required: _____	Permitted Substitution: _____
☐ Table 3.1.1.4.C Required: _____	Permitted Substitution: _____

City of Ottawa
AUG 22 2021
BCSB
255 Centre

Building Component	Minimum RSI / R values or Maximum U-Value ⁽¹⁾	Building Component	Efficiency Ratings
Thermal Insulation	Nominal Effective	Windows & Doors	Provide U-Value ⁽¹⁾ or ER rating
Ceiling with Attic Space	R60	Windows/Sliding Glass Doors	25
Ceiling without Attic Space	R31	Skylights/Glazed Roofs	0.49
Exposed Floor	R31	Mechanicals	
Walls Above Grade	R22	Heating Equip.(AFUE)	96%
Basement Walls		HRV Efficiency (SRE% at 0°C)	75%
Slab (all >600mm below grade)	--	DHW Heater (EF)	0.8
Slab (edge only ≤600mm below grade)	R10	DWHR (cSA B55.1 (min. 42% efficiency))	# Showers _____
Slab (all ≤600mm below grade, or heated)	R10	Combined Heating System	NO

(1) U value to be provided in either W/(m²•K) or Btu/(h•ft²•F) but not both.

E. Designer(s) [name(s) & BCIN(s), if applicable, of person(s) providing information herein to substantiate that design meets the building code]

Qualified Designer Declaration of designer to have reviewed and take responsibility for the design work.

Name	BCIN	Signature
Catherine Buck	46674	

SITE COPY

Mechanical Design Report

Low rise residential



Location of Installation	Address		House Builder PHOENIX
	Application Number		House Model (if applicable) 43-10 MADISON 4BED
Installing Contractor	Name HARDING MECHANICAL		City of Ottawa Building Services Branch
	Address 2210 CAVANMORE RD		SEP 13 2021
	City OTTAWA	Postal Code KOA 1L0	Building Code Reviewed
	Telephone Number 613-831-2257	Fax Number 613-831-9011	Signature
SYSTEM DESIGN PARAMETERS			
Combustion Appliances 9.32.3.1.(1)		Heating System	
a) ☒ Direct vent (sealed combustion) only		☒ Forced Air	
b) ☐ Positive venting induced draft (except fireplaces)		☐ Non-Forced Air (Other -)	
c) ☐ Natural draft, B-vent or induced draft fireplace		☐ Electric Space Heat	
d) ☐ Solid Fuel (including fireplaces)		☐ Radiant Floor Heat (attach pipe details)	
e) ☐ No Combustion Appliances		☐ Geothermal (attach loop, pipe & well details)	
		☐ High Velocity Residential (attach duct details)	
House Type 9.32.3.1.(2)		Ventilation System	
☒ I Type a) or b) appliances only, no solid fuel		☐ CAN/CSA-F326	
☐ II Type I except with solid fuel (including fireplace)		☐ HRV - Exhaust Ducts / Forced Air System	
☐ III Any Type c) appliance = Part 6 Design		☒ HRV - Simplified Connection to Forced Air System	
☐ IV Electric space heat		☐ HRV - Full Ducting / Not Coupled to Forced Air System	
☐ Other: No forced air = Option 4		☐ Part 6 Design (Other -)	
EQUIPMENT DESIGN REQUIREMENTS			
Total Ventilation Capacity 9.32.3.3.(1)		TOTAL	
Master Bedroom	1 x 10 L/s = 10 L/s		
Unfinished Basement	1 x 10 L/s = 10		
Other Habitable Rooms	12 x 5 L/s = 60	80	T.V.C.
Principal Ventilation Capacity 9.32.3.4.(1)			
Master Bedroom	1 x 15 L/s = 15		
Other Bedrooms	3 x 7.5 L/s = 22.5	- 37.5	P.V.C.
Required Supplemental Ventilation Capacity (T.V.C. less P.V.C.) =		42.5	
Furnace size: GMEC960603BNA 60,000 BTU'S KJ			
Air conditioner size: GSX16030 2.5 TON KJ (If provided / applicable)			
Heating / Cooling Equipment sized according to heat loss/gain calculations of CAN/CSA F280: Yes			
Geothermal Equipment designed according to CAN/CSA-C448.2: No			
Hydronic Equipment designed according to CAN/CSA-B214: No			
Duct (and pipe) schematic attached including sizes, runs and material used: Yes			
VENTILATION EQUIPMENT			
Heat Recovery Ventilator			
Model: CLEAN COMFORT VH30100RNC HRV			
80	L/s High 40	L/s Low	

Exhaust Fans

	Location	Model	L/s	Sones	Principal or Supplemental
1	PDRM	DX90	45	2.5	PRINCIPAL
2	ENSUITE	EC50	25/25	3.	SUPPLEMENTAL
3	BATH1	EC50	25/25/25	3.	SUPPLEMENTAL
4					

EQUIPMENT EFFICIENCIES (Please also refer to Energy Efficiency Design Summary)

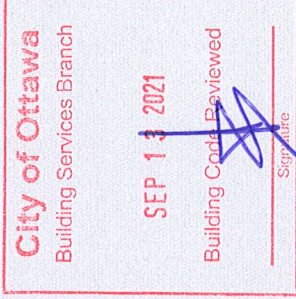
Heating system:

Cooling system (if applicable):

Water heater:

HRV: 75 % sensible efficiency at 0 degrees:

% sensible efficiency at -25 degrees:

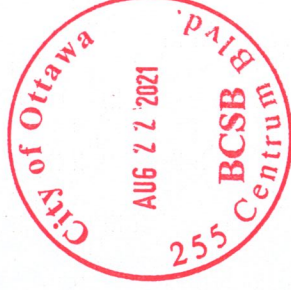


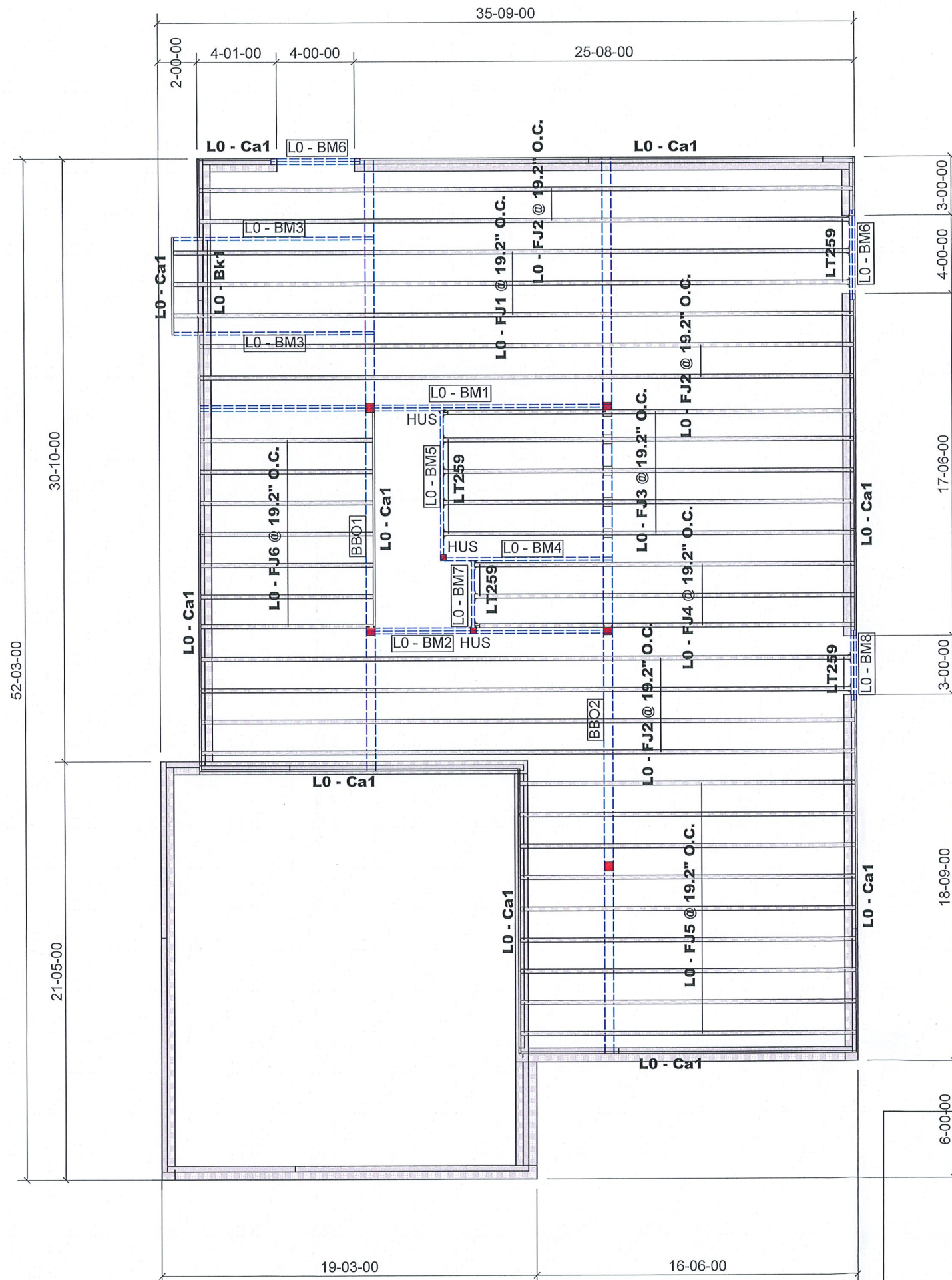
DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the 2012 Ontario Building Code.

Name: LINDA MCPARLAN Company Name: HARDING MECHANICAL

Signature: *Linda McParlan* Date: NOV 5/2020 BCIN 24379 HRAI # 6080





GLUED AND NAILED

LEVEL AND FLOOR CONTAINER NOTES	
Current Date:	8/10/2021
File Name:	PW-294 Madison 4Bed B.mmdl
Level Name:	1st Floor
Building Code - Design Methodology:	NBCC 2015
Floor Container:	FC1
Floor Area Loading is:	40 Live Load & 15 Dead Load
Maximum Allowed Deflection	L/480 Live Load & L/240 Total Load

Products				
PlotID	Length	Product	Plies	Net Qty
L0 - FJ1 @ 19.2" O.C.	36-00-00	9 1/2" NI-20	1	3
L0 - FJ2 @ 19.2" O.C.	34-00-00	9 1/2" NI-20	1	8
L0 - FJ3 @ 19.2" O.C.	22-00-00	9 1/2" NI-20	1	5
L0 - FJ4 @ 19.2" O.C.	20-00-00	9 1/2" NI-20	1	3
L0 - FJ5 @ 19.2" O.C.	18-00-00	9 1/2" NI-20	1	9
L0 - FJ6 @ 19.2" O.C.	9-00-00	9 1/2" NI-20	1	7
L0 - BM1	22-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L0 - BM2	13-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L0 - BM3	11-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	2
L0 - BM4	9-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L0 - BM5	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L0 - BM6	5-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	4
L0 - BM7	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L0 - BM8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L0 - Ca1	12-00-00	1 1/8" x 9 1/2" APA Rim Board	1	14
L0 - Bk1	5-00-00	9 1/2" NI-20	1	1

Accessories				
PlotID	Length	Product	Plies	Net Qty
3/4" Plywood or OSB (23/32" APA Rated Sheathing 48/24 Exposure 1)			1	42

Connector Summary				
Qty	Manuf	Product	Skew	Supported Mil
13	SIMPSON	LT259	-	9 1/2" NI-20
3	SIMPSON	HUS18110	-	1 3/4" x 9 1/2" WF



THIS DESIGN COMPLIES WITH:

- PART 4 OR 9 OF OBC 2012 Reg. 332/12 (2019 Amendment)
- NORDIC LAM CCMC: 13216-R
- NORDIC JOISTS CCMC: 13032-R
- WEST FRASER CCMC: 12904

(REFER TO INDIVIDUAL FLOOR DRAWINGS FOR SPECIFIC LOADS & SPACING)

FLOOR NOTES:

- FLOOR JOIST SYSTEMS ABOVE THE GARAGE HAS BEEN DESIGNED WITHOUT A DIRECTLY APPLIED CEILING. USE APPLICABLE BLOCKING OR STRAPPING WHERE REQUIRED AS INDICATED ON THE FRAMING PLAN.
- BLOCKING MATERIAL WILL BE SUPPLIED AND INDICATED AS "BLOCKING". NO LONGER ONLY 12' LENGTHS.

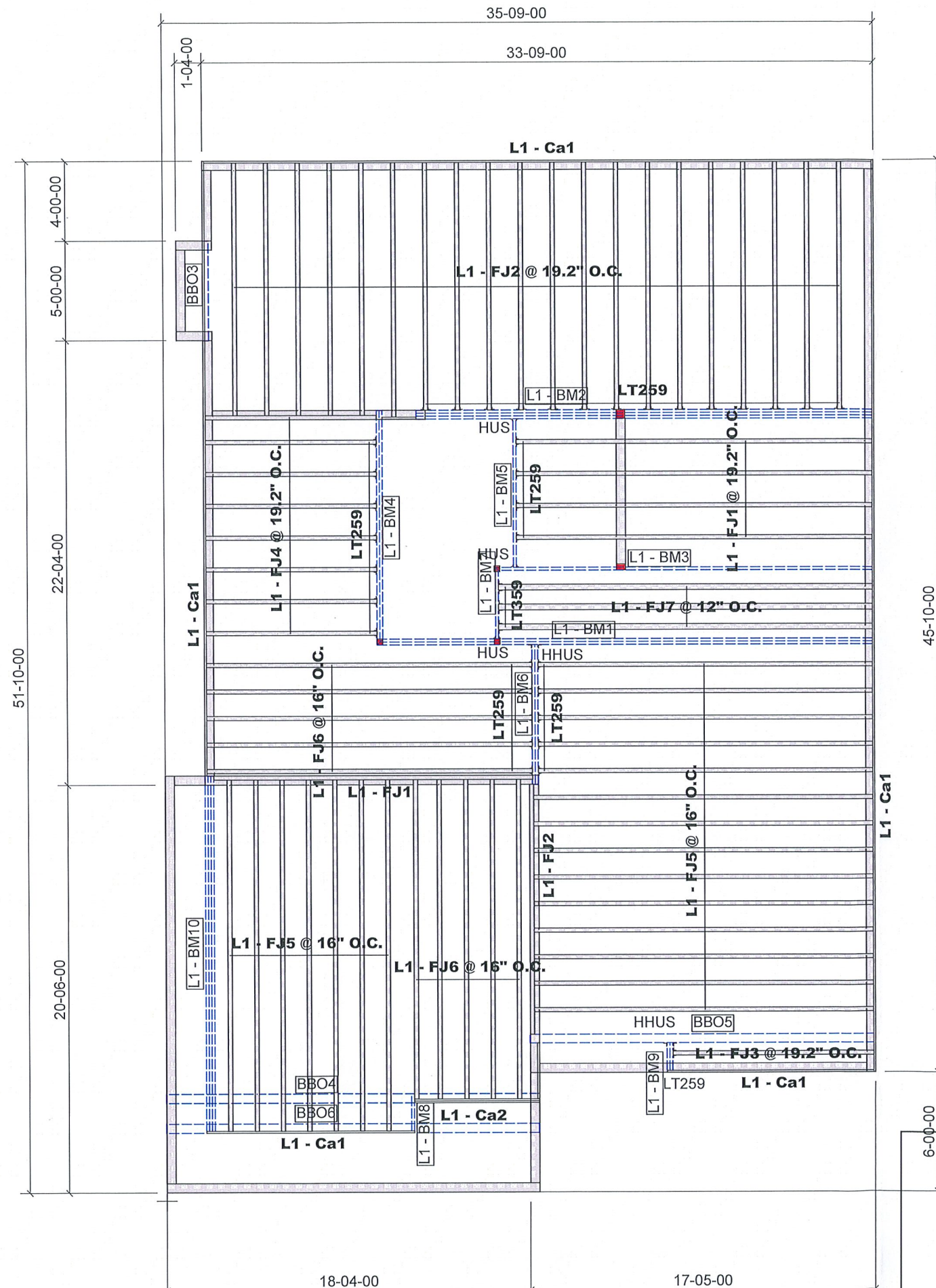


GRANDOR LUMBER INC
ALPA LUMBER GROUP

JOB:
PHOENIX HOMES
PATHWAYS PW-294
MADISON 4-BED B
1ST FLOOR 1 OF 2

DATE: 8/10/2021

SITE COPY



GLUED AND NAILED

LEVEL AND FLOOR CONTAINER NOTES	
Current Date:	8/10/2021
File Name:	PW-294 Madison 4Bed B.mmdl
Level Name:	2nd Floor
Building Code - Design Methodology:	NBCC 2015
Floor Container:	FC2
Floor Area Loading is:	40 Live Load & 15 Dead Load
Maximum Allowed Deflection	L/480 Live Load & L/240 Total Load

Products				
PlotID	Length	Product	Plies	Net Qty
L1 - FJ1 @ 19.2" O.C.	18-00-00	9 1/2" NI-20	1	4
L1 - FJ1	17-00-00	9 1/2" NI-20	1	1
L1 - FJ2	13-00-00	9 1/2" NI-20	1	1
L1 - FJ2 @ 19.2" O.C.	13-00-00	9 1/2" NI-20	1	20
L1 - FJ3 @ 19.2" O.C.	11-00-00	9 1/2" NI-20	1	1
L1 - FJ4 @ 19.2" O.C.	9-00-00	9 1/2" NI-20	1	8
L1 - FJ5 @ 16" O.C.	18-00-00	9 1/2" NI-40x	1	21
L1 - FJ6 @ 16" O.C.	17-00-00	9 1/2" NI-40x	1	10
L1 - FJ7 @ 12" O.C.	19-00-00	9 1/2" NI-80	1	3
L1 - BM1	25-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L1 - BM2	23-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
L1 - BM3	19-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L1 - BM4	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L1 - BM5	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L1 - BM6	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L1 - BM7	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L1 - BM8	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
L1 - BM9	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
L1 - BM10	18-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3
L1 - Ca1	12-00-00	1 1/8" x 9 1/2" APA Rim Board	1	12
L1 - Ca2	12-00-00	1 1/8" x 9 1/2" APA Rim Board	2	2

Accessories				
PlotID	Length	Product	Plies	Net Qty
3/4" Plywood or OSB (23/32" APA Rated Sheathing 48/24 Exposure 1)			1	50

Connector Summary				
Qty	Manuf	Product	Skew	Supported Mtl
36	SIMPSON	LT259	-	9 1/2" NI-20/40x
3	SIMPSON	LT359	-	9 1/2" NI-80
3	SIMPSON	HUS18110	-	1 3/4" x 9 1/2" WestFraser LVL
2	SIMPSON	HHUS410	-	2- 1 3/4" x 9 1/2" WestFraser LVL

THIS DESIGN COMPLIES WITH:

- PART 4 OR 9 OF OBC 2012 Reg. 332/12 (2019 Amendment)
- NORDIC LAM CCMC: 13216-R
- NORDIC JOISTS CCMC: 13032-R
- WEST FRASER CCMC: 12904

(REFER TO INDIVIDUAL FLOOR DRAWINGS FOR SPECIFIC LOADS & SPACING)

FLOOR NOTES:

- FLOOR JOIST SYSTEMS ABOVE THE GARAGE HAS BEEN DESIGNED WITHOUT A DIRECTLY APPLIED CEILING. USE APPLICABLE BLOCKING OR STRAPPING WHERE REQUIRED AS INDICATED ON THE FRAMING PLAN.
- BLOCKING MATERIAL WILL BE SUPPLIED AND INDICATED AS "BLOCKING". NO LONGER ONLY 12' LENGTHS.



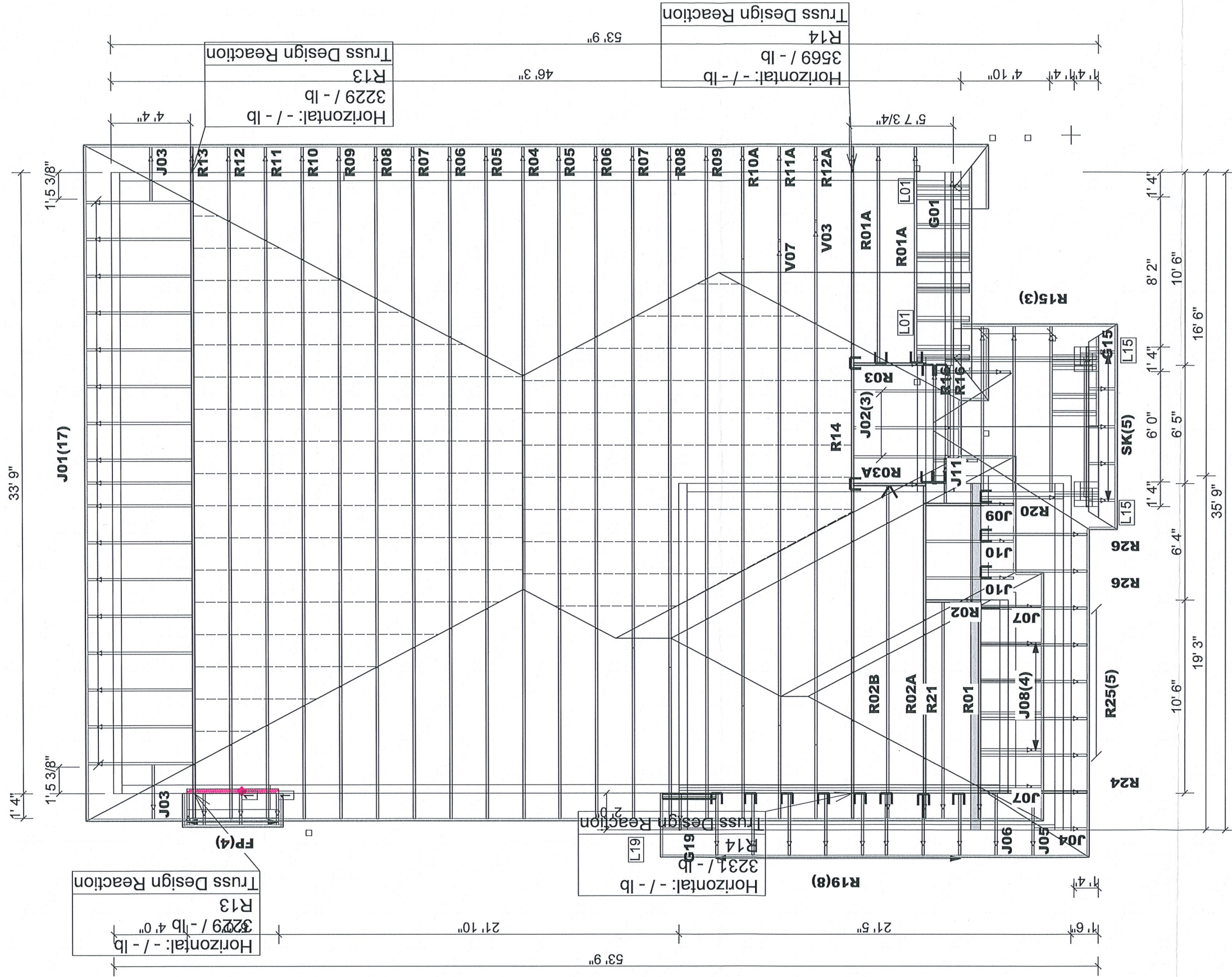
GRANDOR LUMBER INC
ALPHA LUMBER GROUP

JOB:
PHOENIX HOMES
PATHWAYS PW-294
MADISON 4-BED B
2ND FLOOR 2 OF 2

SITE COPY

DATE: 8/10/2021





Hatch Legend

DROP TOP CHORD

LEGEND

LUS24 (28)

LJS26DS (2)

City of Ottawa
Building Services Branch

SEP 13 2021
Building Code Reviewed

Signature

City of Ottawa
2555 Centrum Blvd.
BCSB
AUG 27 2021

SITE COPY

TYPICAL OTTAWA DESIGN LOADS

Member	Load Type	PT 9	PT 4	PT 4
Top Chord	Snow	37.1	50	50
	Dead	5	5-10	5-10
	Live	0	10	10
Bot Chord	Dead	7	7	7
	Live	0	0	0

TYPICAL SPACING = 24.0 IN C/C

THIS DESIGN COMPLIES WITH:

- PART 4 OR 9 OF OBC 2012 Reg. 332/12 (2019 Amendment)
- CSA 086-09
- CCMC ACCEPTANCE 11996-L, 0319-L, 13270-L
- TPIC 2014

(REFER TO INDIVIDUAL TRUSS DRAWINGS FOR SPECIFIC LOADS & SPACING)

HURRICANE AND SEISMIC TIES:

- ANY TIES SPECIFIED ON THIS LAYOUT FOR UPLIFT OR SEISMIC CONNECTIONS MUST BE REVIEWED AND APPROVED BY THE BUILDING DESIGNER/ENGINEER, AS STATED IN THE TPIC 2014. THE TRANSFER OF THESE LOADS TO THE ENTIRE STRUCTURE BELOW HAS NOT BEEN ANALYZED.