Certificate of Design and Manufacturing Conformance with NBC, 2015

This certificate is to affirm that all components of the steel building system described below, to be supplied by the named manufacturer certified in accordance with CSA A660, have been or will be designed and fabricated in accordance with the following Standards to carry the loads and load combinations specified.

1. DESCRIPTION

Manufacturer's Name and Address: Robertson Building Systems, Hamilton, ON
Manufacturer's Certificate No. under CSA A660: ROBBUO
Customer Order Number: 19-B-68083
Building Type and Size: 60'0" x 120'0" x 14'0"
Intended Use and Occupancy: 3B-COMMERCIAL - WAREHOUSING AND STORAGE
Importance Category (NBC, Sentence 4.1.2.1(3)):_____
Site Location: 1800 8TH STREET EAST,OWEN SOUND,Ontario,N4K 6M9
Applicable Building Code: 2015 National Building Code Of Canada
Builder: TORO STEEL BUILDINGS LTD dba TORO STEEL , 1405 DENISON ST MARKHAM, ON L3R-5V2
Owner: JOY MIDDLETON, 1800 8TH STREET EAST OWEN SOUND, ON N4K 6M9

Engineer's Initials*

2. DESIGN STANDARDS

National Building Code of Canada, 2015 Part 4: Structural Design ___SXH___
CAN/CSA-S16-14, Limit States Design of Steel Structures
CAN/CSA-S136-12, North American Specification for the Design of Cold-Formed Steel Structural Members

Other (Specify) 2015 NATIONAL BUILDING CODE OF CANADA

3. MANUFACTURING STANDARDS ___SXH___

(a) Fabrication has been, or will be, in accordance with CAN/CSA-S16 and CAN/CSA-S136, as applicable.
(b) Welding has been or will be performed in accordance with CSA W59 and CAN/CSA-S136, as applicable.
(c) The Manufacturer has been certified in accordance with CSA W47.1, for Division 1 or 2 and/or CSA-W55.3 if applicable.
(d) Welders have been qualified in accordance with CSA W47.1.

4. PURLIN STABILITY ___SXH___

Purlin braces are provided in accordance with CAN/CSA-S136, Clause D3 and Appendix B, Clause D3.2.3. In particular, for a standing seam roof supported on movable clips, braces providing lateral support to both top and bottom purlin flange have been or will be provided. The number of rows is determined by the analysis but in no case is less than 1 for spans up to 7m inclusive or less than 2 for spans greater than 7m.

5. LOADS ___SXH___

(a) Snow and Rain Load

1-in-50 years ground snow load, Ss,	2.92	(kPa)	61.03	(psf)
1-in-50 years associated rain load, Sr,	0.40	(kPa)	8.40	(psf)
Wind exposure factor, Cw,	1.00			
Importance factor, Is,	1.00			
Roof snow load, S,	2.74	(kPa)	57.22	(psf)

Drift loads considered (NBC, sub-section 4.1.6.2.8) refer to drawing of specified building.

Specified rain load (NBC, Article 4.1.6.4) _____(mm)

(b) Full and Partial Snow Load ___SXH___

(i) Applied on any one and any two adjacent spans of continuous purlins

(ii) Applied on any one and any two adjacent spans of modular rigid frames with continuous roof beams

(iii) Applied as described for the building geometry in NBC, Part 4

(c) Wind Load ___SXH___

1-in-50 years reference velocity pressure 0.48 (kPa) 10.02 (psf)

Importance factor, Iw 1.00

(d) Wind Load Application ___SXH___

(i) Applied as per NBC, Part 4, Section 4.1.7

(ii) Pressure coefficients as per NBC 2015 Part 4 Figures 4.1.7.6-A through 4.1.7.6-H

(iii) Building internal pressure Category 2 per NBC 2015 Table 4.1.7.7

(e) Crane Loads (where applicable) ___SXH___

Type _____ (top running)(under-running)(jib)

Capacity _____ (metric tons) _____ (tons)

Wheel base _____ (m) _____ (ft)

Maximum static vertical wheel load _____ (kN) _____ (kips)

Vertical impact factor _____ %

Lateral Factor _____ %,

lateral wheel load _____(kN) _____ (kips)

Longitudinal factor _____%

max long.load/side _____(kN) _____ (kips)

(f) Mezzanine Live Load ___SXH___

(g) Seismic Load: ___SXH___

Applied as per NBC, Part 4, Section 4.1.8 ___SXH___

Sa(0.2)= .083 Sa(0.5)= .064 Sa(1.0)= .041 Sa(2.0)= .021

Sa(5.0)= N/A Sa(10.0)= N/A

Fa= 1.24 Fv= 1.55 Ie= 1.00 Site Class= D Pga= .048

(h) Other Live Loads (specify) ___SXH___

(i) Dead Loads ___SXH___

Dead load of building components in incorporated in the design

Collateral load (mechanical, electrical etc.) 4.00 psf 0.19 kPa

Ceiling 0.00 psf 0.00 kPa Sprinklers _____psf _____kPa

Mezzanine _____(kPa)_____(psf)

Other dead load (specify) 0.00 (kPa) 0.00 (psf)

(j) Load Combinations ___SXH___

Applied in accordance with NBC, Part 4, Section 4.1

6. GENERAL REVIEW DURING CONSTRUCTION ___SXH___

The manufacturer does not provide general review during construction for regulatory purposes.

*Initial each true statement. Mark N/A if statement does not apply

7. CERTIFICATION BY ENGINEER

I, Shadman Hosseinzadeh, a Professional Engineer registered or licensed to practice in the Province or Territory of Ontario, hereby certify that I have reviewed the design and manufacturing process for the steel building system described. I certify that the foregoing statements, initialed by me, are true.

Name Shadman Hosseinzadeh, P.E. Signature _____

Title Design Engineer

Affiliation Robertson Building Systems Date 7/11/2024

Professional Seal

This document has been digitally signed.