



STRUCTURAL DESIGN INFORMATION FORM

Planning and Development Services
Building Approvals

1. Description

Permit Application Number

Location

Owner's Name

Proposed

Building Area

m²

Building Height

m

Storey(s)Basement(s)

Structural System

2. Design Standards

Engineer's
Initials

Ontario Regulation 332/12, as amended including O.R. 191/14, 2012 Ontario Building Code, Division B, Part 4 (OBC)

Structural Commentaries on the National Building Code of Canada 2015 (NBC)

1.

CSA-086-09

"Engineering Design in Wood"

2.

CAN/CSA A371-04

"Masonry Construction for Buildings"

3.

CSA S304.1-04

"Design of Masonry Structures"

4.

CAN/CSA-A23.3-04

"Design of Concrete Structures"

5.

CSA A23.1-09

"Concrete Materials & Methods of Concrete Construction"

6.

CSA S413-07

"Parking Structures"

7.

CAN/CSA-S136-07

"Cold Formed Steel Structural Members"

8.

CAN/CSA-Z91-02

"Health and Safety Code for Suspended Equipment Operations"

9.

CSA S367-09

"Air-, Cable-, and Frame-Membrane Supported Structures"

10.

CSA-S16-09

"Limit States Design of Steel Structures"

11.

CAN/CSA-S157-05/S157.1-05

"Strength Design in Aluminum / Commentary on CSA S157-05,

12.

CGSB CAN/CGSB-12.20-M89

"Structural Design of Glass for Buildings"

13.

Canadian Foundation Engineering Manual 4th Edition/2006

3. Loads and Effects

a) Importance Category (Table 4.1.2.1.B.)

b) Dead Loads

Ground floor

Other floors

Roof

Mezzanine

Partitions

Parking garages

Self-weight

kPa

kPa

kPa

kPa

kPa

kPa

Superimposed

kPa

kPa

kPa

kPa

kPa

kPa

Standard dead load factor

Overturning/uplift dead load factor

c) Live Loads Due To Use And Occupancy

Ground floor

Other floors

Mezzanine

Concentrated loads

Exit stairs

Public corridors

kPa

kPa

kPa

kN

kPa

kPa

Balconies

Mechanical areas

Parking garages

Crane capacity

Load on guards

Fire/Garbage truck

kPa

kPa

kPa

kN

H=V= kN

kN

d) Loads Due To Snow, Ice And Rain

Importance factor (I_s)

Roof specified snow load

Unbalanced Snow Load

1/50 Ground snow load (S_s)

1/50 Ground rain load (S_r)

Drift load

kPa

kPa

kPa

kPa

kPa

kPa

calculated for height difference of

m

Snow distributions and snow loading factors applied as per OBC and NBC Fig. G -

Are the roof drains designed to retain rain water for:

(i) storm water management?

(ii) controlled flow within 24 hr period

Yes

No

Yes

No

e) Loads Due to Wind

Importance factor (I_w)

1/50 Hourly wind pressure for structural components (q)kPa

Wind load applied as per OBC and NBC Fig. I-

Factored horizontal force at base indirection

V=kN

Factored horizontal force at base indirection

V=kN

f) Full and Partial Loadings

Applied as per OBC and NBC(Eng. Initials)

g) Loads Due To Earthquakes

S_a(0.2) = S_a (0.5) = S_a (1.0) = S_a (2.0) =

Site Class: F_a= F_v=

(Table 4.1.8.4.A)

(Table 4.1.8.4.B)

(Table 4.1.8.5.C)

I_e= I_eF_aS_a (0.2) =

(Table 4.1.8.5.)

Type of irregularities:

Method of analysis:

☐ Static

☐ Dynamic

☐ Software Used

For Equivalent Static Force Procedure:

B = T_a = M_v = J =

Type of SFRS (1st dir.): as per Standard No. Clause

(Table 4.1.8.9.)

R_d= R_o=

Type of SFRS (2nd dir.): as per Standard No. Clause

(Table 4.1.8.9.)

R_d= R_o=

Important Note: SFRS shall be clearly shown on the floor plans and sections.

1 st Direction	Base shear V or V _d	=	Weight of the building as per 4.1.8.2.(1) W= kN
	Moment at base M	=	
	Max. Interstorey deflection	=	
2 st Direction	Base shear V or V _d	=	
	Moment at base M	=	
	Max. Interstorey deflection	=	

h) Elements of Structures, Non-Structural Components and Equipment

Applied as per Article 4.1.8.18(Eng. Initials)

Typical details of connections of non-structural elements shall be shown on the permit plans.(Eng. Initials)

i) Other Effects

Applied as per Articles 4.1.5.10. through 4.1.6.4. of OBC(Eng. Initials)

j) Limit States Design (working stress design not permitted)

Safety Check for Strength and Stability as per OBC, 4.1.3.2.

Fatigue, Serviceability, Deflection and Vibration as per OBC 4.1.3.3. through 4.1.3.6.(Eng. Initials)

k) Fire Resistive Designs

Load restricted factors as per Certifications Laboratories(Eng. Initials)

4. Foundation System (Limited States Design)

(OBC, Div. B - 4.1.3., 4.2.)(Eng. Initials)

Description

Factored bearing resistance (ULS) kPa

Bearing pressure for settlement (SLS) kPa

Retaining structures: p = k (y_h + q) = (x +) =

Soil investigation report by dated

5. Roof/Floor Type

Lightweight Roof Types of Lightweight Roof

Lightweight Floor Types of Lightweight Floor



Professional Seal

Signature

Name

Title

Organization

Address

Email

Phone No.

Date