



# Certificate of Design Application

From Designer: Bruce W. MacLeod, PE  
 Date: 11/09/2016  
 Job Name: Moran's Market and Apartments  
 Address of Construction: 1576 Forest Avenue

## 2009 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year MUBEC 2009 Use Group Classification (s) M & R-2  
 Type of Construction Wood frame, Type V  
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IBC yes  
 Is the Structure mixed use? yes If yes, separated or non separated or non separated (section 302.3) separated  
 Supervisory alarm System? yes Geotechnical/Soils report required? (See Section 1802.2) no

### Structural Design Calculations

\_\_\_\_\_ Submitted for all structural members (106.1 – 106.11)

### Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)  

Floor Area Use	Loads Shown
<u>residential</u>	<u>40psf LL</u>
_____	_____
_____	_____
_____	_____
_____	_____

### Wind loads (1603.1.4, 1609)

\_\_\_\_\_ Design option utilized (1609.1.1, 1609.6)  
95 mph Basic wind speed (1809.3)  
I=1.0 Building category and wind importance Factor,  $I_w$  (table 1604.5, 1609.5)  
 \_\_\_\_\_ Wind exposure category (1609.4)  
 \_\_\_\_\_ Internal pressure coefficient (ASCE 7)  
 \_\_\_\_\_ Component and cladding pressures (1609.1.1, 1609.6.2.2)  
 \_\_\_\_\_ Main force wind pressures (7603.1.1, 1609.6.2.1)

### Earth design data (1603.1.5, 1614-1623)

\_\_\_\_\_ Design option utilized (1614.1)  
 \_\_\_\_\_ Seismic use group ("Category")  
 \_\_\_\_\_ Spectral response coefficients, SDs & SDI (1615.1)  
 \_\_\_\_\_ Site class (1615.1.5)

\_\_\_\_\_ Live load reduction  
 \_\_\_\_\_ Roof *live* loads (1603.1.2, 1607.11)  
42 psf Roof snow loads (1603.7.3, 1608)  
60 psf Ground snow load,  $P_g$  (1608.2)  
42 psf If  $P_g > 10$  psf, flat-roof snow load  $P_f$   
 \_\_\_\_\_ If  $P_g > 10$  psf, snow exposure factor,  $C_e$   
 \_\_\_\_\_ If  $P_g > 10$  psf, snow load importance factor,  $I_s$   
 \_\_\_\_\_ Roof thermal factor,  $C_t$  (1608.4)  
 \_\_\_\_\_ Sloped roof snowload,  $P_s$  (1608.4)  
 \_\_\_\_\_ Seismic design category (1616.3)  
 \_\_\_\_\_ Basic seismic force resisting system (1617.6.2)  
 \_\_\_\_\_ Response modification coefficient,  $R$  and deflection amplification factor,  $C_d$  (1617.6.2)  
 \_\_\_\_\_ Analysis procedure (1616.6, 1617.5)  
 \_\_\_\_\_ Design base shear (1617.4, 1617.5.1)

### Flood loads (1803.1.6, 1612)

\_\_\_\_\_ Flood Hazard area (1612.3)  
 \_\_\_\_\_ Elevation of structure

### Other loads

\_\_\_\_\_ Concentrated loads (1607.4)  
 \_\_\_\_\_ Partition loads (1607.5)  
 \_\_\_\_\_ Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)