



Certificate of Design Application

From Designer: Lavallee Brensinger Architects

Date: June 11, 2015

Job Name: The Park Danforth Renovations & Additions

Address of Construction: 777 Stevens Avenue, Portland, Maine 04103

2009 International Building Code

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

Building Code & Year 2009 IBC Use Group Classification (s) 1,694,312

Type of Construction Construction Type IB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC Yes

Is the Structure mixed use? Yes If yes, separated or non separated or non separated (section 302.3) Non Separated

Supervisory alarm System? Yes Geotechnical/Soils report required? (See Section 1802.2) Yes

Structural Design Calculations

Completed 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
Offices	50 psf + 15 Partition
Private rooms/corridors, balconies	40 psf
Public rooms/corridors, stairs	100 psf
Rooftop garden	200 psf

Wind loads (1603.1.4, 1609)

Mthd 2 Design option utilized (1609.1.1, 1609.6)

100 MPH Basic wind speed (1809.3)

1.0 Building category and wind importance Factor, I_w table 1604.5, 1609.5

B Wind exposure category (1609.4)

+/- 0.18 Internal pressure coefficient (ASCE 7)

Per ASCE 7-05 Component and cladding pressures (1609.1.1, 1609.6.2.2)

Per ASCE 7-05 Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Equiv. Lat Force Design option utilized (1614.1)

II Seismic use group ("Category")

0.254, 0.088 Spectral response coefficients, SDs & SDI (1615.1)

C Site class (1615.1.5)

Per IBC 1607.9 Live load reduction

20 psf Roof live loads (1603.1.2, 1607.11)

46 psf + drift Roof snow loads (1603.7.3, 1608)

60 psf Ground snow load, P_g (1608.2)

46 psf + drift If $P_g > 10$ psf, flat-roof snow load P_f

1.0 If $P_g > 10$ psf, snow exposure factor, C_e

1.0 If $P_g > 10$ psf, snow load importance factor, I_s

1.1 Roof thermal factor, C_t (1608.4)

1.0 Sloped roof snowload, P_B (1608.4)

B Seismic design category (1616.3)

R=3 Basic seismic force resisting system (1617.6.2)

3 Response modification coefficient, R_f and deflection amplification factor C_d (1617.6.2)

Equiv. Lat Force Analysis procedure (1616.6, 1617.5)

Per ASCE 7-05 Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)

N/A Elevation of structure

Other loads

Included Concentrated loads (1607.4)

Included Partition loads (1607.5)

N/A Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)