Certificate of Design Application

From Designer: Structural Integrity Consulting Engineers - Aaron C. Jones, P.E. ME#10968

Date: 07/08/16

Job Name: 62 India

Address of Construction: 62 India Street, Portland, Maine

2009 International Building Code

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

Building Code & Year IBC 2009 Use Group Classification (s) R-2 condominium, S-2 parking

Type of Construction Wood construction with some structural steel

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC Yes, at S-2 (903.3.2 @ R-2)

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) Yes, attached

Structural Design Calculations

No 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
Residential	40 PSF
Corridor serving	40/100 PSF

Wind loads (1603.1.4, 1609)

ASCE 7-05 Design option utilized (1609.1.1, 1609.6)

100 Basic wind speed (1809.3)

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

C Wind exposure category (1609.4)

±0.18 Internal pressure coefficient (ASCE 7)

+28/-30 PSF Component and cladding pressures (1609.1.1, 1609.6.2.2)

16 PSF Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Eqv. Lat. F. Design option utilized (1614.1)

II Seismic use group ("Category")

0.324/0.123 Spectral response coefficients, SDs & SD1 (1615.1)

D(improved) Site class (1615.1.5)

IBC yes Live load reduction

n.a. Roof *live* loads (1603.1.2, 1607.11)

50 PSF Roof snow loads (1603.7.3, 1608)

60 PSF Ground snow load, P_g (1608.2)

46.2 PSF 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)

0 Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

A.13 / A.14 Basic seismic force resisting system (1617.6.2)

6.5 / 2 Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

ELFP Analysis procedure (1616.6, 1617.5)

234k Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

Flood Hazard area (1612.3)

Elevation of structure

Other loads

NA Concentrated loads (1607.4)

NA Partition loads (1607.5)

NA Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404