Certificate of Design Application

From Designer: CASCO BAY ENGINEERING + WHIPPLE CALLENDER ARCHITECTS

Date: JUNE 4, 2014

Job Name: 290 CONGRESS PLAZA - CANOPY RENOVATIONS

Address of Construction: 290 CONGRESS ST

2009 International Building Code

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

Building Code & Year BUILT 1969 ORIGINAL STRUCTURE Use Group Classification (s) EXISTING RETAIL

Type of Construction TYPE II B

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IBC N/A

Is the Structure mixed use? No If yes, separated or non separated or non separated (section 302.3) _____

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

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
N/A	

Wind loads (1603.1.4, 1609)

ASCE 7 chpt. 6 Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

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

B Wind exposure category (1609.4)

+/- 0.55 Internal pressure coefficient (ASCE 7)

16 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)

RETAINING WALL STR. Design option utilized (1614.1)

B Seismic use group ("Category")

0.33, 0.13 Spectral response coefficients, SDs & SD1 (1615.1)

D Site class (1615.1.5)

N/A Live load reduction

N/A Roof *live* loads (1603.1.2, 1607.11)

35 psf Roof snow loads (1603.7.3, 1608)

50 psf Ground snow load, P_g (1608.2)

35 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

1.0 Roof thermal factor, C_t (1608.4)

N/A Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

ORDINARY MASONRY SHEAR WALLS Basic seismic force resisting system (1617.6.2)

1.5 Response modification coefficient, R_I and

1.25 deflection amplification factor C_d (1617.6.2)

EQUIVALENT LATERAL FORCE Analysis procedure (1616.6, 1617.5)

2K Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

NO Flood Hazard area (1612.3)

60' Elevation of structure

Other loads

N/A Concentrated loads (1607.4)

N/A Partition loads (1607.5)

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