Certificate of Design Application

From Designer: Becker Structural Engineers, Inc.

Date: November 9, 2015

Job Name: Casco Bay Parking Garage Stair/Elevator Tower Restoration

Address of Construction: 54 Commercial St. Portland ME 04101

2009 International Building Code

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

Building Code & Year 2009 IEBC Use Group Classification (s) Estimate $450,000 (Base Bid)

Type of Construction Type IIB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC We are not altering the existing system

Is the Structure mixed use? Yes If yes, separated or non separated or non separated (section 302.3) Fire Boat Quarters not scheduled to be altered

Supervisory alarm System? Unknown Geotechnical/Soils report required? (See Section 1802.2) NA Restoration of existing structure

Structural Design Calculations

If requested 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
NA	NA

Wind loads (1603.1.4, 1609)

Method 1 Simplified Design option utilized (1609.1.1, 1609.6)

100 Basic wind speed (1809.3)

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

C Wind exposure category (1609.4)

+/-.018 Internal pressure coefficient (ASCE 7)

+28.6psf & -38.4psf Component and cladding pressures (1609.1.1, 1609.6.2.2)

NA Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

NA Design option utilized (1614.1)

NA Seismic use group ("Category")

NA Spectral response coefficients, S_{DS} & S_{D1} (1615.1)

NA Site class (1615.1.5)

NA Live load reduction

NA Roof *live* loads (1603.1.2, 1607.11)

NA Roof snow loads (1603.7.3, 1608)

NA Ground snow load, P_g (1608.2)

NA If P_g > 10 psf, flat-roof snow load I_f

NA If P_g > 10 psf, snow exposure factor, C_e

NA If P_g > 10 psf, snow load importance factor, I_s

NA Roof thermal factor, C_t (1608.4)

NA Sloped roof snowload, P_s (1608.4)

NA Seismic design category (1616.3)

NA Basic seismic force resisting system (1617.6.2)

NA Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

NA Analysis procedure (1616.6, 1617.5)

NA Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

NA Flood Hazard area (1612.3)

NA 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