



# Certificate of Design Application

From Designer: Brewster Buttfield, Prospect Design; Joe Hemes, Hemisphere Design LLC  
 Date: March 13, 2013  
 Job Name: Diamond Street Warehouse Renovation  
 Address of Construction: 1-11 Diamond Street

## 2009 International Building Code

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

Building Code & Year IBC 2009, NFPA 2009 Use Group Classification (s) S,M,B

Type of Construction Type 3, Ordinary

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) Separated

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

### Structural Design Calculations Existing Structure

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

### Wind loads (1603.1.4, 1609)

Design option utilized (1609.1.1, 1609.6)  
 Basic wind speed (1809.3)  
 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,  $S_D$  &  $S_{DI}$  (1615.1)  
 Site class (1615.1.5)

Live load reduction  
 Roof live loads (1603.1.2, 1607.11)  
 Roof snow loads (1603.7.3, 1608)  
 Ground snow load,  $P_g$  (1608.2)  
 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,  $R_f$  and  
 deflection amplification factor  $C_{dI}$  (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)