



Certificate of Design Application

From Designer: Josef Chalat, Architect. Azimuth LLC

Date: 4-1-2015

Job Name: Kepware 3rd floor Phase 1 expansion

Address of Construction: 400 Congress Street, Portland Maine 04101

2009 International Building Code

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

Building Code & Year 2009 Use Group Classification (s) B

Type of Construction IIA (Assumed, verify against previous permits)

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

Is the Structure mixed use? Yes: See below If yes, separated or non separated or non separated (section 302.3) By previous permit

Supervisory alarm System? Yes, existing Geotechnical/Soils report required? (See Section 1802.2) No

Structural Design Calculations

not required 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
<u>existing unchanged</u>	

Wind loads (1603.1.4, 1609)

existing unchanged Design option utilized (1609.1.1, 1609.6)

Basic wind speed (1809.3)

Building category and wind importance Factor, 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)

existing unchanged Design option utilized (1614.1)

Seismic use group ("Category")

Spectral response coefficients, S_D & S_{D1} (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 , and
deflection amplification factor C_{d1} (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

Note: Existing building at 400 Congress street has a Mercantile Occupancy (US Post Office) on the first floor