



# Certificate of Design Application

From Designer: Heliotropic Technologies

Date: 3/7/2016

Job Name: Allagash Brewing Co - Solar Project

Address of Construction: 50-50 Industrial Way, Portland

## 2009 International Building Code

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

Building Code & Year 2015 Use Group Classification (s) \_\_\_\_\_

Type of Construction Industrial Use - Brewery

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

Is the Structure mixed use? \_\_\_\_\_ If yes, separated or non separated or non separated (section 302.3) \_\_\_\_\_

Supervisory alarm System? \_\_\_\_\_ Geotechnical/Soils report required? (See Section 1802.2) \_\_\_\_\_

### 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

### 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)
- 42 psf Roof snow loads (1603.7.3, 1608)
- \_\_\_\_\_ Ground snow load,  $P_g$  (1608.2)
- 42 psf 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,  $R_d$  and deflection amplification factor,  $C_d$  (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

- 8.1 psf 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)