



Certificate of Design Application

From Designer:

MICHAEL F HAYS - GRANT HAYS ASSOC.

Date:

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Job Name:

RENOVATION & EXPANSION - NORTHEAST AIR

Address of Construction:

1011 WESTBROOK STREET

2009 International Building Code

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

Building Code & Year 2009 IRC Use Group Classification (s) B/S-1

Type of Construction II B

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 (E)

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

Structural Design Calculations

NOT PROVIDED 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>LOBBIES</u>	<u>100 PSF / 2000#</u>
<u>1ST FLR CORRIDORS</u>	<u>100 PSF / 2000#</u>
<u>OFFICES</u>	<u>50 PSF / 2000# / 15 PSF PARTITIONS</u>
<u>CORRIDORS ABOVE 1ST FLOOR</u>	<u>80 PSF</u>

Wind loads (1603.1.4, 1609)

NA Design option utilized (1609.1.1, 1609.6)

100 MPH Basic wind speed (1809.3)

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

L Wind exposure category (1609.4)

+/- 0.18 Internal pressure coefficient (ASCE 7)

22 PSF / EZ: 25 PSF Component and cladding pressures (1609.1.1, 1609.6.2.2)

13 PSF / EZ: 17 PSF Surface wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

EQUIVALENT LATERAL FORCE Design option utilized (1614.1)

B Seismic use group ("Category")

S0S: 0.26 / SDI: 0.13 Spectral response coefficients, SDs & SDI (1615.1)

D Site class (1615.1.5)

YES Live load reduction

20 PSF Roof live loads (1603.1.2, 1607.11)

46.2 PSF Roof snow loads (1603.7.3, 1608)

60 PSF Ground snow load, P_g (1608.2)

46.2 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

1.1 Roof thermal factor, C_t (1608.4)

N/A Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

ORDINARY STEEL MOMENT RESISTING FRAMES Basic seismic force resisting system (1617.6.2)

3.5 Response modification coefficient, R , and

EQUIVALENT LATERAL FORCE deflection amplification factor C_d (1617.6.2) Analysis procedure (1616.6, 1617.5)

16.2 KIP Design base shear (1617.4, 1617.5.1)

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)