CITY OF PORTLAND
BUILDING CODE CERTFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: PAUL B. BECKER, P.E.

RE: Certificate of Design

DATE: 7/13/07

These plans and / or specifications covering construction work on:

SUPERSTRUCTURE FRAMING FOR BAYSIDE VILLAGE
120 MARGINAL WAY, PORTLAND, ME.

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the ***2003 International Building Code*** and local amendments.

(SEAL)

STATE OF MAINE
PAUL B. BECKER
NO. 6554
LICENSED PROFESSIONAL ENGINEER

Signature:

Title: PRESIDENT

Firm: BECKER STRUCTURAL ENGINEERS

Address: 75 YORK ST
PORTLAND, ME 04101

As per Maine State Law:

$50,000.00 or more in new construction, repair expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.

BECKER STRUCTURAL ENGINEERS

FROM DESIGNER: CWS ARCHITECTS

DATE: 6/15/07

Job Name: BAYSIDE VILLAGE

Address of Construction: 120 MARGINAL WAY PORTLAND, ME

2003 *International Building Code*

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

Building Code and Year 2003 IBC Use Group Classification(s) II (TABLE 1604.5) ALSO SEE ARCH CODE ANALYSIS

Type of Construction IA & VA (SEE ATTACHED CODE ANALYSIS)

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IBC YES

Is the Structure mixed use? YES if yes, separated or non separated (see Section 302.3) SEPARATED

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

STRUCTURAL DESIGN CALCULATIONS

Completed Submitted for all structural members *(106.1, 106.1.1)*

DESIGN LOADS ON CONSTRUCTION DOCUMENTS *(1603)*

Uniformly distributed floor live loads *(7603.11, 1607)*

Floor Area Use	Loads Shown
RESIDENTIAL	40 PSF
CORRIDORS	100 PSF
PUBLIC SPACES	100 PSF
STAIRS	100 PSF
RETAIL	100 PSF

PER 1607.9 Live load reduction *(1603.1.1, 1607.9, 1607.10)*

SEE SNOW Roof live loads *(1603.1.2, 1607.11)*

Roof snow loads *(7603.7.3,1608)*

60 PSF Ground snow load, P_g (1608.2)

46 PSF If P_g > 10 psf, flat-roof snow load, P_f *(1608.3)*

1.0 If P_g > 10 psf, snow exposure factor, C_e *(Table 1608.3.1)*

1.0 If P_g > 10 psf, snow load importance factor, I_s *(Table 1604.5)*

1.1 Roof thermal factor, C_t *(Table 1608.3.2)*

N/A Sloped roof snowload, P_s *(1608.4)*

D Seismic design category *(1616.3)*

Wind loads *(1603.1.4, 1609)*

SPECIAL CONCENTRIC BRACED FRAMES Basic seismic-force-resisting system *(Table 1617.6.2)*

Analytical Design option utilized (1609.1.1, 1609.6)

R=6 Response modification coefficient, R, and deflection amplification factor, C_d *(Table 1617.6.2)*

100 Basic wind speed *(1809.3)*

C_d=5

II / I_w=1.0 Building category and wind importance factor, I_w (Table 1604.5, 1609.5)

ELFP Analysis procedure *(1616.6, 1617.5)*

C Wind exposure category *(1609.4)*

960 K Design base shear (1617.4, *1617.5.1)*

±0.18 Internal pressure coefficient *(ASCE 7)*

ASCE 7-02 Component and cladding pressures *(1609.1.1, 1609.6.2.2)*

Flood loads *(1603.1.6, 1612)*

N/A Flood hazard area (1612.3)

17.8 PSF MAX Main force wind pressures (7603.1.1, *1609.6.2.1)*

12.0 FT Elevation of structure

Other loads

Earthquake design data *(1603.1.5, 1614 - 1623)*

IBC 2003 Concentrated loads (1607.4)

ELFP Design option utilized *(1614.1)*

N/A Partition loads (1607.5)

II Seismic use group ("Category") *(Table 1604.5, 1616.2)*

N/A Impact loads *(1607.8)*

0.522

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

AS APPLICABLE Misc. loads *(Table 1607.6, 1607.8.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)*

E Site class *(1615.1.5)*