

#### CITY OF PORTLAND BUILDING CODE CERTFICATE 389 Congress St., Room 315 Portland, Maine 04 101

TO:

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

FROM:

James A. Loft, AIA

RE:

Certificate of Design

DATE:

8/25/06

These plans and / or specifications covering construction work on:

New office building known as Custom House Square at 300 Fore Street,

Portland.

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

As per Maine State Law:

JAMES A

\$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.

Signature

Title: Principal, Architecture

Firm: Pro Con, Inc.

1359 Hooksett Rd Address: Hooksett, NH 03106



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

#### ACCESSIBILITY CERTIFICATE

Designer:	James A. Loft
Address of P	roject: 300 Fore Street
Nature of Pro	oject: New five (5) story office building
	known as Custom House Square.

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.

JAMES A.

LOEX
NO. 2441

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NO. 2441

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NO. 2441

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NO. 2441

Signature:

Title: Principal, Architecture

Firm: Pro Con, Inc.

Address: 1359 Hooksett Rd

Hooksett, NH 03106

Phone: \_\_\_603-623-8811



#### CITY OF PORTLAND BUILDING CODE CERTFICATE 389 Congress St., Room 315 Portland, Maine 04 101

TO: Inspector of Buildings City of Portland, Maine

Department of Planning & Urban Development Division of Housing & Community Service

FROM: Matthew J. Labrecque, P.E.

RE: <u>Certificate of Design</u>

DATE: 8/25/06

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\$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.

Signature:(

Title: Structural Engineer

Firm: Pro Con, Inc.

1359 Hooksett Rd Address: <u>Hooksett, NH 03106</u>

LABRECQUE, PB. TO WINTAM PRO CON INC. 120 FROM DESIGNER: 8-25-06 DATE: DOCUMENTS CUSTOM HOUSE SQUARE Job Name: O FORE PONTLAND, MF. 300 ST Address of Construction: Žį... S 2 2003 International Building Code FELL 70 Construction project was designed according to the building code criteria listed below: Building Code and Year 18C Zoo3 Use Group Classification(s) B, A-Z, 立の フつ 0 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC 5/4 Is the Structure mixed use? 4 65 if yes, separated or non separated (see Section 302.3) را FEL Supervisory alarm system? YES Geotechnical/Soils report required?( See Section 1802.2) **A** STRUCTURAL DESWIN CALCULATIONS Live load reduction (1603.1.1, 1607.9, 1607.10) Submitted for all structural members (106.1, 106.1.1) Roof live loads (1603.1.2, 1607.11) \* DESIGN LOADS ON CONSTRUCTION DOCUMENTS Roof snow loads (7603, 7, 3,1608) Ground snow load, Pa (1608.2) Uniformly distributed floor live loads (7603.11, 1607) If Pp > 10 psf, flat-roof snow load, Pr (1608.3) Floor Area Use Loads Shown if Pa > 10 psf, snow exposure factor, Ca A-2/M 100 psf (Table 1608.3.1) If  $P_g > 10$  psf, snow load importance factor, is (Table 1604.5) MITEMP: (LOADS IN PSF 1.0 ı Roof thermal factor, Ct (Table 1608.3.2) 35 PSF 00 Sloped roof snowload, Ps (1608.4) 1 Selsmic design category (1616.3) DROWARY STEEL MONEUT FRAMES Basic seismic-force-resisting system Wind loads (1603.1.4, 1609) (Table 1617.6.2) ANALYTICAL Design option utilized (1609.1. 1, 1609.6) Response modification coefficient, Fi, 100 Mph Basic wind speed (1809.3) and deflection amplification factor, Cd EQUIVALENT (Table 1817.6.2) Building category and wind importance CATEMAL FALLE Analysis procedure (1616.6, 1617.5) factor, /w (Table 1604.5, 1609.5) Wind exposure category (1609.4) Design base shear (1617.4, 1617.5.1) Internal pressure coefficient (ASCE 7) Flood loads (1603.1.6, 1612) Component and cladding pressures ZONE C Floodhazard area (16123) (1609.1.1, 1809.6.2.2) 11.75 Elevation of structure Main force wind pressures (7603.1.1, 1609.6.2.1) Other loads Earthquake design data (1603.1.5, 1614-1623) N/A Concentrated loads (1607.4) SITE GROWD MOTION 10 PSF Design option utilized (1614.1) Partition loads (1607.5)

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Seismic use group ("Category") (Table 1604.5; 1616.2)

SD1 (1615.1)

Site class (1615.1.5)

Spectral response coefficients, Sps &

Impact loads (1607.8)

1611, 2404)

Misc. loads (Table 1607.6, 1607.6:1,

1607.7, 1607.12,1607.13, 1610,

1704.7 1704.8 Pile Foundations 1704.9 Pier Foundations 1704.10 Wall Panels and veneers 1704.11 Sprayed Fire-Resistant Materials tement of special inspections shall be prepared by the registered design ssional in responsible charge in accordance with Section 106.1. This statement include a detailed account of the inspections to be performed for each of the cable sections referenced above. All work shall comply with the IBC 2003 Building Code Floor loads: Live loads: All floors = 100 psf Roof loads: Dead Load = 20 psf Top chord live load = "see Roof snow load" Roof snow load: Ground snow load, Pg = 50 psf Flat roof snow load, Pf = 35 psf Snow exposure factor, Ce = 1.0Snow load importance factor, Is = 1.0Thermal factor, Ct = 1.0 Wind load: Basic wind speed = 100 mph Wind importance factor, Iw = 1.0 Wind exposure: C Internal pressure coefficients: +.18, -.18 Components and cladding wind pressures (psf)\*: 50 ft^2 100 ft^2 10 ft^2 20 ft^2 Zone 1 12, -29 11,-28 10, -27 9, -27 roof: Zone 2 12, -49 11, -44 10, -37 9, -32 Zone 3 12, -74 11, -61 10, -44 9, -32 25, -27 walls: Zone 4 29, -32 28. -30 26, -29 Zone 5 29, -39 25, -30 28, -3626, -33 ovhng: Zone 2 -42 -41 -40 -40 Zone 3 -69 -54 -35 -20 \* All zones are per figure 1609.6.2.2 of code. Earthquake design data: Seismic Importance Factor, In = 1.0 Seismic use group: I Mapped spectral response accelerations:  $S_8 = .375$  $S_1 = 10$ Site class: E Spectral response coefficients:  $S_{DS} = .525$  $S_{D1} = .233$ Seismic design category; D Basic seismic-force-resisting system: Ordinary Steel Moment Frames Design base shear = 196 k Seismic response coefficient, Cs = .15 Response modification factor, R = 3.5 Analysis procedure: Equivalent lateral force procedure

## OM HOUSE SOUARE PROJECT ARCHITECT: MW DRAWN BY:

ISSUE: 05/26/2006 - ISSUED FOR PRICING 07/11/2006 - ISSUED FOR PERMIT

# RUCTURAL GENERAL NOTES

PROJECT #:

AC

300506

#### Statement of Special Inspections

Project: CUSTOM HOUSE SQUARE	E	
Location: 300 FURE STREET POR	UTLAND, ME	
Owner: OLYMPIA EQUITY INUES		
Design Professional in Responsible Charge:		
This Statement of Special Inspections is submitted Special Inspection and Structural Testing requirement Inspection services applicable to this project as we the identity of other approved agencies to be restatement of Special Inspections encompass the formula Structural Architectural	ents of the Building Code ell as the name of the S tained for conducting th llowing disciplines:	. It includes a schedule of Special pecial Inspection Coordinator and ese inspections and tests. This
The Special Inspection Coordinator shall keep reco the Building Official and the Registered Desig discrepancies shall be brought to the immedial discrepancies are not corrected, the discrepancies the Registered Design Professional in Responsible the Contractor of his or her responsibilities.	gn Professional in Re te attention of the Cor shall be brought to the at	sponsible Charge. Discovered ntractor for correction. If such tention of the Building Official and
Interim reports shall be submitted to the Buildi Responsible Charge.	ng Official and the Re	gistered Design Professional in
A Final Report of Special Inspections documenting correction of any discrepancies noted in the inspect Use and Occupancy.	completion of all require ions shall be submitted p	d Special Inspections, testing and prior to issuance of a Certificate of
Job site safety and means and methods of construc	tion are solely the respor	sibility of the Contractor.
Interim Report Frequency:		or  per attached schedule.
Prepared by:		WHITE OF ASSIST
MATTHEW J. LABRECQUE, P. (type or print name)	<u>E.</u>	Matthew Laborecque *
mass	8/29/06	Design Professional Seal
Signature	Date	Design Professional Seal
Owner's Authorization:	Building Official's Ac	
Mm 1 /2 9/6/4		
Signature / Date	Signature	Date
TIS SINTON PMCASE Form 101 • Statement of	of Special Inspections •	©CASE 2004

Page of G

#### Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

Soils and Foundations
Cast-in-Place Concrete
Wood Construction
Precast Concrete
Exterior Insulation and Finish System
Masonry
Mechanical & Electrical Systems
Structural Steel
Cold-Formed Steel Framing
Special Cases

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Special Inspection Coordinator  MATTHEW J. LABREQUE	PRO CON INC.	1359 HOOKSETT RD HOOFSETT, NH 03106 603-623-8811
2. Inspector TIM BOYCE	S.W.COUE	286 PORTLAND RD, GRAY, ME 04039 207-657-2866
3. Inspector OTHERS TO BE DETERMINED		
4. Testing Agency		
5. Testing Agency		
6. Other		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

#### **Quality Assurance Plan**

#### Quality Assurance for Seismic Resistance

Seismic Design Category  $\bigcirc$  Quality Assurance Plan Required (Y/N)  $\land$   $\bigcirc$ 

Description of seismic force resisting system and designated seismic systems:

ORDINARY STEEL MOMENT FRAMES
PEFER TO DESIGN CRITERIA ON SHEET SOIL

#### Quality Assurance for Wind Requirements

Basic Wind Speed (3 second gust) しい MPH Wind Exposure Category C Quality Assurance Plan Required (Y/N) ソモS

Description of wind force resisting system and designated wind resisting components:

ORDINARY STEEL MOMENT FRAMES
REFER TO DESIGN CRITERIA ON SHEET SO,1

#### Statement of Responsibility

Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

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#### **Qualifications of Inspectors and Testing Technicians**

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

#### Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT Engineer-In-Training – a graduate engineer who has passed the Fundamentals of

#### Engineering examination

#### American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician - Grade 1&2
ACI-STT	Strength Testing Technician

#### American Welding Society (AWS) Certification

AWS-CWI	Certified	Welding Inspector	
AWS/AISC-SSI	Certified	Structural Steel Inspe	ector

#### American Society of Non-Destructive Testing (ASNT) Certification

ASNT Non-Destructive Testing Technician – Level II or III.

#### International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

#### National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

#### Exterior Design Institute (EDI) Certification

-EDI-	EIFS	 EIFS-	Third-	Party	Inspector

#### Other

#### **Soils and Foundations**

Item	Agency #	Scope
1. Shallow Foundations	(Qualif.)  PE/GE	Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.  Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill
2. Controlled Structural Fill	PE/GE	Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material.  Inspect placement, lift thickness and compaction of controlled fill.  Test density of each lift of fill by nuclear methods (ASTM D2922)  Verify extent and slope of fill placement.
3. Deep Foundations	PE/GE	Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria.  Inspect piles for damage from driving and plumbness.  Verify pile size, length and accessories.  Inspect installation of drilled pier foundations. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata.
4. Load Testing  4. Other:		N/A

Item	Agency # (Qualif.)	Scope
1. Mix Design	ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.
2. Material Certification	TBD	
3. Reinforcement Installation	ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters
4. Post-Tensioning Operations	ICC-PCSI-	Inspect placement, stressing, grouting and protection of post- tensioning tendons. Verify that tendons gre correctly positioned, supported, tied and wrapped Record tendon elongations.
5. Welding of Reinforcing	AWS-CWT	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.
6. Anchor Rods	TBD	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.
7. Concrete Placement	ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
Sampling and Testing of Concrete	ACI-CFTT ACI-STT	Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).
9. Curing and Protection	ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures.
10. Other:		

Masonry Required Inspection Level: ∑1 ☐ 2

Item	Agency # (Qualif.)	Scope
1. Material Certification	TBD	
2. Mixing of Mortar and Grout	ICC-SMSI	Inspect proportioning, mixing and retempering of mortar and grout.
3. Installation of Masonry	ICC-SMSI	Inspect size, layout, bonding and placement of masonry units.
4. Mortar Joints	ICC-SMSI	Inspect construction of mortar joints including tooling and filling of head joints.
5. Reinforcement Installation	ICC-SMSI AWS-CWI	Inspect placement, positioning and lapping of reinforcing steel.  Inspect welding of reinforcing steel.
6. Prestressed Masonry	.ICC-SMSI	Inspect placement, anchorage and stressing of prestressing bars.
7. Grouting Operations	ICC-SMSI	Inspect placement and consolidation of grout. Inspect masonry clean-outs for high-lift grouting.
7. Weather Protection	ICC-SMSI	Inspect cold weather protection and hot weather protection procedures. Verify that wall cavities are protected against precipitation.
9. Evaluation of Masonry Strength	ICC-SMSI	Test compressive strength of mortar and grout cube samples (ASTM C780). Test compressive strength of masonry prisms (ASTM C1314).
10. Anchors and Ties	ICC-SMSI	Inspect size, location, spacing and embedment of dowels, anchors and ties.
11. Other:		

Structural Steel Page 7 of 9

Item	Agency # (Qualif.)	Scope
Fabricator Certification/     Quality Control Procedures     Fabricator Exempt      Material Certification	AWS/AISC- SSI ICC-SWSI	Review shop fabrication and quality control procedures.  Review certified mill test reports and identification markings on
	AWS/AISC- SSI ICC-SWSI	wide-flange shapes, high-strength bolts, nuts and welding electrodes
3. Open Web Steel Joists		Inspect installation, field welding and bridging of joists.
4. Bolting	AWS/AISC- SSI ICC-SWSI	Inspect installation and tightening of high-strength bolts. Verify that splines have separated from tension control bolts. Verify proper tightening sequence. Continuous inspection of bolts in slipcritical connections.
5. Welding	AWS-CWI ASNT	Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. Verify size and length of fillet welds.  Ultrasonic testing of all full-penetration welds.
6. Shear Connectors	AWS/AISC- SSI ICC-SWSI	Inspect size, number, positioning and welding of shear connectors. Inspect suds for full 360 degree flash. Ring test all shear connectors with a 3 lb hammer. Bend test all questionable studs to 15 degrees.
7. Structural Details	PE/SE	Inspect steel frame for compliance with structural drawings, including bracing, member configuration and connection details.
8. Metal Deck	AWS-CWI	Inspect welding and side-lap fastening of metal roof and floor deck.
9. Other:		

#### **Cold-Formed Steel Framing**

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Item	Agency # (Qualif.)	Scope
1. Member Sizes	PCI	
2. Material Thickness	PCI	
3. Material Properties	PCI	
4. Mechanical Connections	PCI	
5. Welding	PCI	
6. Framing Details	PCI	
7. Trusses		
8. Permanent Truss Bracing		
9. Other:		

#### **Architectural Systems**

Item	Agency #	Scope
1. Wall Panels & Veneers  EXTERIOR  SURKEN WALL  SYSTEM	PG1	REVIEW INTEGRITY OF WATERPROFING BARRIER, INSTALLATION OF FURNING SYSTEM TO ASURE WATER DRAINGAGE FLASHINGS, PANEL INSTALLATION AND FASTENERS. VISUAL INSPECTION.
2. Suspended Ceilings		
3. Access Floors		
4 Other:		
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