

PHILIP R. SHERMAN, P.E.

FIRE PROTECTION ENGINEERING AND BUILDING CODE CONSULTING


P.O. Box 216
444 WILMOT CENTER ROAD
ELKINS, NH 03233-0216
PHONE: 603-526-6190
FAX: 603-526-4979
EMAIL: PSHERMAN@PR Sherman.COM

Date: July 31, 2008
Proj: 1311.01

Scott Simons Architects
75 York Street
Portland, ME 04101

Attention: Mr. Stephen Fraser

Re: Portland Public Library
5 Monument Square
Portland, Maine
Code Summary

| | |
|--|--------------------------|
|  Scott Simons Architects | |
| Job Name: | PPL |
| Job No: | 2008-0030 |
| Date Rec'd: | 07.31.08 |
| File: | |
| Cc: | IAN McDONALD @ ALLIED |
| | ETHAN RHILE @ BSE |
| Consultants: | |
| Other: | JOB FILE |

Dear Mr. Fraser:

This letter will set forth the applicable codes and major code issues to be dealt with during the design of the renovations and additions to the above building. This analysis is based on design development floor plans dated July 11, 2008, a site visit on July 18, 2008 and other miscellaneous information provided to date. This report addresses building, fire and accessibility codes, as identified below.

The project consists of the construction of a two additions to the existing building and partial phased renovations within the existing structure. Code references are in the endnotes.

Applicable Codes

The following codes are expected to apply to this project.

- 2003 International Building Code (IBC)
- 2003 International Mechanical Code
- 2008 National Electrical Code
- 1999 edition also adopted by City of Portland

From: Austin Smith <austin@simonsarchitects.com>
To: Chris Hanson <CSH@portlandmaine.gov>, Keith Gautreau
<kng@portlandmaine.gov>
Date: 4/13/2009 11:30:28 AM
Subject: Inspections questions of 04.07.09

Chris:

I've enclosed a memo with answers to your questions of 04.07.09.
Also enclosed are the statements of special inspections from our
office and Becker Structural Engineering.

Please let us know if you have other questions.

Thanks,
Austin

Austin Smith
AIA RLA LEED AP
Scott Simons Architects
207.772.4656

CC: Clint Gendreau <cgendreau@ledgewoodconstruction.com>, "Stephen J. Podgajny"
<podgajny@portland.lib.me.us>, Clare Hannan <Hannan@portland.lib.me.us>, Ethan Rhile
<ethan@beckerstructural.com>, Scott Simons <scott@simonsarchitects.com>

Chris:

I've enclosed a memo with answers to your questions of 04.07.09.
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Austin Smith
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APR 14 2010

Project: Portland Public Library
Date Prepared: 4/7/09

Structural Statement of Special Inspections (Continued)

Final Report of Special Inspections (SSIC/SI 1)

[To be completed by the Structural Special Inspections Coordinator (SSIC/SI 1). Note that all Agent's Final Reports must be received prior to issuance.]

Project:
Location:
Owner:
Owner's Address:

Architect of Record: _____
(name) (firm)
Structural Registered Design
Professional in Responsible Charge: _____
(name) (firm)

To the best of my information, knowledge and belief, the Special Inspections required for this project, and itemized in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

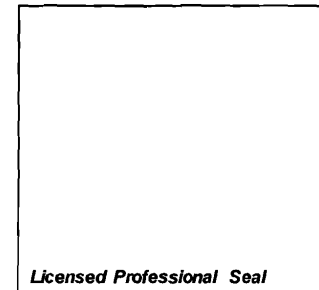
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Structural Special Inspection Coordinator

(Type or print name)

(Firm Name)

Signature Date



Project: Portland Public Library
Date Prepared: 4/7/09

Structural Statement of Special Inspections (Continued)
Special Inspector's/Agent's Final Report

Project:
Special Inspector or
Agent:

(name)

(firm)

Designation:

To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the *Statement of Special Inspections* submitted for permit, have been performed and all discovered discrepancies have been reported and resolved.

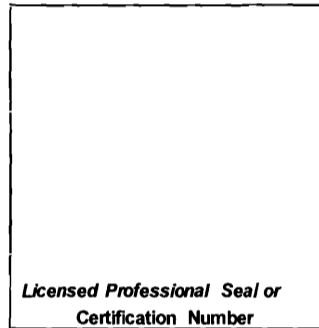
Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report.

Respectfully submitted,
Special Inspector or Agent:

(Type or print name)

Signature

Date



used to support phase II and system hydraulics. Installation is intended to minimize impairments during the future Phase II work.

Commencement of Phase II is dependent on additional funding. Project cost for Phase I is \$7.0 M with Phase II estimated to be \$4.0M. Library development office hopes that with the completion of Phase I, increased use and attention, additional funds will come quickly. No definite start date has been determined.

3. Are the fire shutters tied into the fire alarm system?

Yes. On Electrical Plan, EP-101. Shutter locations are designated with fire alarm symbol "S".

Within project specifications Overhead Ceiling Doors, Section 083323, 2.3.A:

"Automatic-Closing Device for Fire-Rated Doors: Equip each fire-rated door with automatic closing device that is in operative during normal door operations and that has a governor unit complying with NFPA 80 and easily tested and reset release mechanism designed to be activated by the following"

- 1. Building fire-detection and alarm systems"

4. Is the stage sprinkled underneath or is the floor construction fire rated?

No, cavity is not sprinkled. See structural section detail 1 / S1.1. Stage construction is odd form metal framing on concrete slab. Floor sheathing is of 3/4" "Fortarete" concrete and fiber sheathing. All construction is non-combustible.

4/13/09

Project: Portland Public Library

Date Prepared: 4/7/09

Structural Schedule of Special Inspections

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 to the Special Inspector for their records. *NOTE VERIFICATION THAT QUALIFIED INDIVIDUALS ARE AVAILABLE TO PERFORM STIPULATED TESTING AND/OR INSPECTION SHOULD BE PROVIDED PRIOR TO SUBMITTING STATEMENT. AGENT QUALIFICATIONS IN SCHEDULE ARE SUGGESTIONS ONLY; FINAL QUALIFICATIONS ARE SUBJECT TO THE DISCRETION OF THE REGISTERED DESIGN PROFESSIONAL PREPARING THE SCHEDULE.*

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge or Special Inspector of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification, license or experience as indicated below, such requirement shall be listed below and shall be clearly identified within the schedule under the Agent Qualification Designation.

| | |
|-------|---|
| 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 |

Experienced Testing Technician

| | |
|-----|---|
| ETT | Experienced Testing Technician – An Experienced Testing Technician with a minimum 5 years experience with the stipulated test or inspection |
|-----|---|

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 Inspector |

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 |

Other

Project: Portland Public Library
Date Prepared: 4/7/09

Structural Schedule of Special Inspections
MASONRY CONSTRUCTION – LEVEL 1 (NON-ESSENTIAL FACILITY)

| VERIFICATION AND INSPECTION IBC Section 1704.5 | Y/N | EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE | COMMENTS | AGENT | AGENT QUALIFICATION | TASK COMPLETED |
|---|-----|--|---|-------|------------------------|-------------------|
| 1. As masonry construction begins, the following shall be verified to ensure compliance: | N | | No masonry construction | | | |
| a. Proportions of site-prepared mortar. | N | N/A | ACI 530.1, 2.6A | | | |
| b. Construction of mortar joints. | N | N/A | ACI 530.1, 3.3B | | | |
| c. Location of reinforcement and connectors. | N | N/A | ACI 530.1, 3.4, 3.6A | | | |
| d. Prestressing technique. | N | N/A | ACI 530.1, 3.6B | | | |
| e. Grade and size of prestressing tendons and anchorages. | N | N/A | ACI 530.1, 2.4B, 2.4H | | | |
| 2. The inspection program shall verify: | | | | | | |
| a. Size and location of structural elements. | N | N/A | ACI 530.1, 3.3G | | | |
| b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction. | N | N/A | ACI 530, 1.2.2(e), 2.1.4, 3.1.6 | | | |
| c. Specified size, grade and type of reinforcement. | N | N/A | ACI 530, 1.12, ACI 530.1, 2.4, 3.4 | | | |
| d. Welding of reinforcing bars. | N | N/A | ACI 530, 2.1.10.6.2, 3.2.4 (b) | | | |
| e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F). | N | N/A | IBC 2104.3, 2104.4; ACI 530.1, 1.8C, 1.8D | | | |
| f. Application and measurement of prestressing force. | N | N/A | ACI 530.1, 3.6B | | | |
| 3. Prior to grouting, the following shall be verified to ensure compliance: | | | | | | |
| a. Grout space is clean. | N | N/A | ACI 530.1, 3.2D | | | |
| b. Placement of reinforcement and connectors and prestressing tendons and anchorages. | N | N/A | ACI 530, 1.12, ACI 530.1, 3.4 | | | |
| c. Proportions of site-prepared grout and prestressing grout for bonded tendons. | N | N/A | ACI 530.1, 2.6B | | | |
| d. Construction of mortar joints. | N | N/A | ACI 530.1, 3.3B | | | |
| 4. Grout placement shall be verified to ensure compliance with code and construction document provisions. | N | N/A | ACI 530.1, 3.5 | | | |
| a. Grouting of prestressing bonded tendons. | N | N/A | ACI 530.1, 3.6C | | | |
| 5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed. | N | N/A | IBC 2105.2.2, 2105.3; ACI 530.1, 1.4 | | | |
| 6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified. | N | N/A | ACI 530.1, 1.5 | | | |

Project: Portland Public Library
Date Prepared: 4/7/09

Structural Schedule of Special Inspections
MASONRY CONSTRUCTION – LEVEL 2 (ESSENTIAL FACILITY)

| VERIFICATION AND INSPECTION IBC Section 1704.5 | Y/N | EXTENT: CONTINUOUS, PERIODIC, SUBMITTAL, OR NONE | COMMENTS | AGENT | AGENT QUALIFICATION | TASK COMPLETED |
|---|-----|--|--|-------|------------------------|-------------------|
| 1. From the beginning of masonry construction, the following shall be verified to ensure compliance: | N | | No masonry construction | | | |
| a. Proportions of site-mixed mortar, grout and prestressing grout for bonded tendons. | N | N/A | ACI 530.1, 2.6A | | | |
| b. Placement of masonry units and construction of mortar joints. | N | N/A | ACI 530.1, 3.3B | | | |
| c. Placement of reinforcement, connectors and prestressing tendons and anchors. | N | N/A | ACI 530, 1.12; ACI 530.1, 3.4, 3.6A | | | |
| d. Grout space prior to grouting. | N | N/A | ACI 530.1, 3.2D | | | |
| e. Placement of grout. | N | N/A | ACI 530.1, 3.5 | | | |
| f. Placement of prestressing grout. | N | N/A | ACI 530.1, 3.6C | | | |
| 2. The inspection program shall verify: | | | | | | |
| a. Size and location of structural elements. | N | N/A | ACI 530.1, 3.3G | | | |
| b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction. | N | N/A | ACI 530, 1.2.2(e), 2.1.4, 3.1.6 | | | |
| c. Specified size, grade and type of reinforcement. | N | N/A | ACI 530, 1.12; ACI 530.1, 2.4, 3.4 | | | |
| d. Welding of reinforcement. | N | N/A | ACI 530, 2.1.10.6.2, 3.2.3.4(b); | | | |
| e. Protection of masonry during cold weather and (temperature below 40°F) or hot weather (temperature above 90°F). | N | N/A | IBC 2104.3, 2104.4; ACI 530.1.1.8C, 1.8D | | | |
| f. Application and measurement of prestressing force. | N | N/A | ACI 530.1, 3.6B | | | |
| 3. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed. | N | N/A | IBC 2105.2.2, 2105.3; ACI 530.1, 1.4 | | | |
| 4. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified. | N | N/A | ACI 530.1, 1.5 | | | |