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Inspections Division
Date: 01/22/14

July 31, 2013

Capt. Chris Pirone
City of Portland Fire Department
Fire Prevention Bureau
380 Congress Street
Portland, ME 04101

Job: 31 Exchange Street
NFPA 101 Code Summaries (Chap. 31 & 39)

Capt. Pirone,

Please find below a more specific & in depth code summary of Chapters 31 & 39 of the NFPA 101 Life Safety Code. We will outline specific sections that pertain to this particular project that should clarify any questions you may have.

Chapter 31 – Existing Apartment Buildings

31.1 - General Requirements:

Per section 31.1.1.1, this project would fall into the 'Option 4' category which is a building protected throughout by an approved automatic sprinkler system.

31.1.2 – Multiple Occupancies:

Section 31.1.2.2.1 allows dwelling units of an apartment building to have their sole means of egress pass through a nonresidential occupancy in the same building provided that (per criteria 1 & 2) the dwelling unit complies with Chapter 31 & the dwelling units sole means of egress does not pass through a high hazard contents area (which a business occupancy is not). Our project meets the requirements of this section.

Section 31.1.2.3 allows multiple dwelling units to be located above a nonresidential occupancy provided we meet <u>one</u> of the three conditions. We would meet condition 2 & 3 which requires an approved supervised automatic sprinkler system per Section 9.7 (condition 2) and an automatic fire detection system per Section 9.6 (condition 3).

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31.2 – Means of Egress Requirements:

Section 31.2.1.1 requires means of egress to meet Chapter 7, a new egress stair enclosure of 1 Hour fire resistance rating is proposed.

Section 31.2.1.2 requires means of escape to meet Section 24.2 for one & two family dwellings. One enclosed egress stair to grade with a one hour fire rating will be proved, egress windows from sleeping units (though not required due to the presence of a supervised automatic sprinkler system) and a fire escape stair. Please note, the fire escape stair requires structural remediation which will be part of a separate permit. This fire escape stair services two buildings with different owners and coordination is required between owners for remediation. A permit will be submitted for this work ASAP.

31.2.3 – Number of Exits:

Section 31.2.4.1 requires no less than two separate & remote exits. Given the existing conditions of this building and space configuration, we cannot meet all of the required conditions to allow a single exit; therefore two exits are required. One exit shall be the newly enclosed egress stair with one hour fire rated construction and one existing fire escape stair (structural remediation required, separate permit). Given existing conditions, complete remoteness cannot be met.

31.2.6 – Travel Distance to Exits:

Section 31.2.6.1 requires buildings using option 4, no less than 125 ft travel distance from within a dwelling unit to a corridor. This project has dwelling unit entry doors at the exit enclosure at the 3rd floor of 31 Exchange Street and a corridor at the 2nd & 3rd floors at 46 Market Street. A 65 ft max travel distance within the 3rd floor units of 31 Exchange Street, 85 ft max travel distance within the 3rd floor dwelling unit of 46 Market Street & 95 ft max travel distance at the 2nd floor dwelling units of 46 Market Street.

Section 31.2.6.2 requires buildings using option 4, no less than 200 ft travel distance from a dwelling unit entry door to an exit. This project has dwelling unit entry doors at the 3rd floor of 31 Exchange Street at the exit enclosure, 0 ft travel distance. A 22 ft max travel distance from the entry doors to the exit of the 3rd floor units at 46 Market Street & 51 ft max travel distance from the entry doors to the exit at the 2nd floor dwelling units of 46 Market Street.

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31.3.1 – Protection of Vertical Openings:

Vertical openings shall be protected per Section 8.6 (1 hour fire rating); this project does not meet any of the exceptions to allow for unprotected vertical openings.

31.3.4 – Detection, Alarm and Communications Systems:

The existing project proposes to upgrade the entire life safety system at 31 Exchange Street & 46 Market Street. The new fire alarm system must allow for joint operation/ communication between both buildings as per the fire department requirements & NFPA 72.

31.3.6 – Corridors:

The existing project corridors are to remain. Existing wall construction meets the ½ hour required fire rating and the existing historic doors will resist the passage of smoke & be self closing/ latching.

Chapter 39 – Existing Business Occupancies

39.2 – Means of Egress Requirements:

Per section 39.2.1.1, all means of egress shall meet Chapter 7 & and Chapter 39.

39.2.4 – Number of Exits:

Not less than two separate exits are required on every story and are to be accessible from every part of every story.

39.2.6 – Travel Distance to Exits:

Travel distance to an exit is required to be less than 300 ft in a sprinklered building, 46 ft max is provided.

39.3.1 – Protection of Vertical Openings:

Vertical openings shall be protected per Section 8.6 (1 hour fire rating); this project does not meet any of the exceptions to allow for unprotected vertical openings.

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39.3.4 – Detection, Alarm and Communications Systems:

The existing project proposes to upgrade the entire life safety system at 31 Exchange Street & 46 Market Street. The new fire alarm system must allow for joint operation/ communication between both buildings as per the fire department requirements & NFPA 72.

39.3.6 – Corridors:

The existing project corridors are to remain. The existing historic doors will resist the passage of smoke & be self closing/ latching as required per Chapter 31.

If you have any additional questions, comments or concerns please do not hesitate to contact our office for further clarification.

Sincerely,

Matt Provencal, Assoc. AIA
Architectural Designer
Mark Mueller Architects

Cc: Jeanie Bourke, Code Enforcement
Andrew Juris, Owner Representative

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