CITY OF PORTLAND PUBLIC FACILITIES OPERATIONS CENTER
212 Canco Road, Portland

2009 - NFPA CODE / 2009 – IBC SUMMARY
06.23.14

Background Information:

•Existing Building Description: Multi-tenant building primarily consisting of first floor warehouse and industrial type uses and a second floor office space. The City of Portland will be occupying a portion of the first floor space as well as the second floor office space. The office space is existing and self contained with its own exiting.
The Office space is NOT part of this project scope.

This project involves the renovation of a portion of the first floor space to create bathrooms, break room, utility room, vehicle garage area, workshops, and storage space for building trades, the PDF and PPD.

•Existing Building Area Totals:
First Floor: 61,611 S.F.
Second Floor: 18,231 S.F.

•Tenant Areas Occupied By City of Portland
First Floor: 33,691 S.F.
Second Floor: 9,206 S.F.

• Work Area:
First Floor: 33,691 S.F.
Second Floor: 0 S.F.

•Construction Type: IBC: Type IIIB NFPA: Type III (200)

•Occupancy Classification: Mixed Use non-separated. Uses include:

IBC:	NFPA:
F1 - Moderate Hazard Factory	I - General Industrial
S2 - Low Hazard Storage	S - Ordinary Hazard
B - Business Use -Office	B - Business Use – Office

Proposed new Toilet Rooms, Locker Rooms, and Break Room are, in aggregate, less than 10% of the total work area and are therefore considered to be accessory to the main use classification.

•Sprinkler, Fire Alarm & Emergency Lighting: Building is equipped with an approved automatic, supervised sprinkler system per NFPA 13 and fire alarm system per NFPA 72 and the City of Portland Standard for Signaling Systems for the Protection of Life and Property, 2010 edition. Emergency Lighting system per NPA 101 and UL 924.

•Occupancy Loads: (NFPA Table 7.3.1.2)

As the work area is a large open space with no clear definition of storage versus industrial use, I have assumed 2/3 of space used for vehicle storage and 1/3 used for industrial use for the purpose of calculating the occupant load.

(I) Gen. Industrial Use: 11,230 s.f. @100 s.f./pers. = 112 People

(S) Ordinary Storage: 22,461 s.f. @ 500 s.f./pers. = 45 People

(B) Business Use: Existing Office Space not part of this project.

TOTAL OCCUPANCY LOAD = 157 People.

Applicable Primary Requirements:

1. **General Egress Components**

Egress Capacity Factors (NFPA):
Stairs .3"/person for stairways; .2"/person for level components
Egress Capacity Factors:*and ramps (Table 7.3.3.1) Minimum clear width of new stairs is 44" for occupant load <2,000 (Table 7.3.3.1)*

Requirement Met. Work area has no stairs.

Requirement Met. All doors are 36" width yielding a 34" clear opening. 34"/.2" = 170 people. Four ground level exit doors are provided = (4) 36" wide doors: 34"/.2" = 170 people x 4 = 680 people.

Travel Distance Limits (NFPA):
Travel distance limits were compared for Ordinary Hazard Storage and General Industrial with the more restrictive distance listed below:

Common Path Limit: 100' for sprinklered bldg. (section 40.2.5 /42.2.5)

Dead-end Corridor: 50' for sprinklered bldg. (section 40.2.5 /42.2.5)

Travel Distance: 250' for sprinklered bldg. (Section 40.2.6 / 42.2.6

Requirements Met – See Life Safety Plan

Remoteness of Exits (NFPA):
(7.5.1.3.2) Where two exits or exit access doors are required, they shall be located at a distance from one another not less than one half the length of the maximum overall diagonal dimension of the building or area served, measured in a straight line between the nearest edge of the exit doors or exit access doors…..
(7.5.1.3.3) In buildings protected throughout by an approved supervised sprinkler system… the minimum distance is reduced to 1/3 the maximum overall diagonal dimension.

Requirement Met – See Life Safety Plan

2. **Occupancy Separation/Ratings/Fire Protection Features:**

Occupancy Separation: *Not Applicable.*

Mixed Use and Occupancy: (IBC)
(508.1)- Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of 508.2, 508.3 or 508.4 or a combination of these.

The work area for this project includes large open warehouse type spaces that will be used for vehicle storage and workshop activities. Because the two uses are intermingled and not in defined areas, it is proposed to consider these spaces as unseparated mixed uses. In addition, as mentioned above, the project includes construction of new toilet rooms, locker rooms, and a break room which are proposed to be treated as accessory uses as their aggregate area is less than 10% of the overall area of the primary Use.

508.2.1 Aggregate accessory occupancies shall not exceed 10% of the building area of the story.
Requirement Met.

508.2.4 Separation of Occupancies. No separation is required between accessory occupancies and the main occupancy.
Requirement Met.

508.3.3 Separation. No separation is required between nonseparated occupancies.

508.3.1 Occupancy Classification. Non-separated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the building or portion thereof in which the nonseparated occupancies are located.

Portable Fire Extinguishers: *(40.3.5/42.3.5) Extinguishment Requirements: none*

Requirement Met. Portable Fire Extinguishers are provided in accordance with NFPA 10. PFEs are located within the maximum allowed 75' distance for any location in the building.

3. **IEBC Requirements:**

Alteration Classification: *(404.1) Alteration - Level 2: Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.*

Requirement Met. Renovation meets the description for Level 2 Alteration. The extent of renovation proposed is less than 50% of the total first floor area so it is not required to meet Level 3 Alteration requirements.

(404.2) Application: Level 2 alterations shall comply with the provisions of Chapter 6 for Level 1 alterations as well as the provisions of Chapter 7.

(701.3) All new construction elements, components, Systems, and spaces shall comply with the requirements of the International Building Code.

Requirements Met. All new work will be constructed to meet IBC requirements for new construction. The building is sprinkled and the work areas will be equipped with a new fire alarm and detection system. There are no existing exit stairs or vertical openings in the work areas so enclosure /protection requirements don't apply. There are no new structural components proposed and the existing structure will not be modified.

Reviewed for Code Compliance
Inspection Services
Portland, Maine
Date: 09/18/14

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Portland, Maine

REVISIONS

PERMIT DRAWINGS
August 18, 2014

Code Summary

Scale: As Noted

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