CWS ARCHITECTS
ARCHITECTURE | INTERIOR DESIGN

~~June 21, 2017~~
Revised 11-13-17

CODE COMPLIANCE REPORT

Northern Utilities, Inc. Training/Certification Room Fit-up
376 Riverside Industrial Parkway
Portland, Maine

1.0 Codes Review

Description of Building's Function and Program:

The project will consist of the creation of a new Training / Certification Room within the South East corner of the distribution Warehouse. The space will be utilized for personnel training, testing and certification.

1.0.A Occupant Classification(s):

Current Building Use: Non - Separated, Mixed Use

- The front and rear portions of the building are considered B - Business Use
- The central portion of the building was considered S-2 Low Hazard Storage

Proposed Fit-up Criteria:

The Training/Certification Room is being considered an accessory use space within the S-2 portion of the building. It's individual use is as follows;

IBC 2009:
Use and Occupancy Classification:
Assembly Group A-2

NFPA 101 - 2012:
Chapter 12: Assembly Occupancy

1.0.B Specific Occupancy Areas / Incidental Use Areas relative to the Scope of this Project:

There are no incidental use areas within the scope of the project.

1.0.C Building Height and Area Limitations:

IBC 2009 – Chapter 5, Section 503

The proposed building is a two story building of approximately 65,370 total square feet.
The height and building area will not be modified by this project.

1.0.D Type of Construction:

NFPA 220: Type II (000)
IBC 2009: Chapter 6 - Type II (B)

1.0.E Accessory Use Area Calculation:

IBC 2009: 508.2.1 - 10% Allowable

Area of S-2 portion of the building:	26,000 SF.
Allowable Area of Accessories Use:	2,600SF
Area of existing Accessory Use Spaces:	0 SF
Area of proposed Training/Certification Room:	1,328 SF

* The Area of space is less than 10%.

1.0.F Required Fire Resistance Ratings of applicable Structure Elements:

IBC 2009 – Chapter 6: Table 601

Building Element

Structural Frame – Incl. columns, girders, trusses	0 hrs
Bearing walls	
Exterior	0 hrs
Interior	0 hrs
Nonbearing walls and Partitions	
Exterior (Ref. Table 602: > 35')	0 hrs
Nonbearing Walls and Partitions	
Interior	0 hrs
Floor Construction – Incl. supporting beams and joists	0 hrs
Roof Construction – Incl. supporting beams and joists	0 hrs

1.0.G Means of Egress:

NFPA 101 – Chapter 7: Table 7.3.1.2
IBC 2009 – Chapter 10: Table 1004.1.1

Occupant Load NFPA:
Assembly A Occupancy: 15 Net s.f. / per occupant

Occupant Load IBC:
Assembly A-2 Group: 15 Net s.f. / per occupant

Calculations:

The following is an evaluation of the two Training Room Configurations that will be used within the new space. In the Net calculation, Option No. 1 proves to yield the greatest number of occupants as such the O.L. has been established as 54.

Option #1 – Hands-On Training:

This configuration will be utilized on a day to day basis. There will be 8 steel work bench tables placed in the roof with stools for seating. A small desk and chair will be provided for the trainer.

Training Room:

Room Area: 890 S.F.

Tables –	8 @ 12.7 S.F.	=101.6 S.F.
Trainer's Desk	1 @ 10 S.F.	=10 S.F.
Trainer's Chair	1 @ 4 S.F.	= 4 S.F.
Total -		= 115.6 S.F.

890 S.F. – 115.6 S.F. = 774.4 S.F. Net/ 15 S.F. Net Per Occupant = 51.6 People

Check-In Area:

Room Area: 143 S.F./ 100 Gross = 1.4 People

Server Room:

Room Area: 80 S.F./ 300 Gross = .27 People

Storage Room:

Room Area: 215 S.F./ 300 Gross = .72 People

Total = 53.99 People

Actual maximum number of a occupants = 18 People

Option #2 – Certification / Training:

This configuration will be utilized once per year when Unitil administers a computer based gas installation certification exam. The space will be set up with classroom type work surfaces with a CPU and chair at each station. A proctors table and chair will be provided.

Training Room:

Room Area: 890 S.F.

Tables –	16 @ 10 S.F.	=160 S.F.
Chairs –	16 @ 4 S.F.	=64 S.F.
Proctor Desk –	1 @ 10 S.F.	=10 S.F.
Proctor Chair –	1 @ 4 S.F.	= 4 S.F.

Total -	= 238 S.F.
890 S.F. – 238 S.F. = 652 S.F. Net/ 15 S.F. Net Per Occupant	= 43.4 People
- Check-In Area:	
Room Area: 143 S.F./ 100 Gross	= 1.4 People
- Server Room:	
Room Area: 80 S.F./ 300 Gross	= .27 People
- Storage Room:	
Room Area: 215 S.F./ 300 Gross	= .72 People
Total	= 46.39 People
Actual maximum number of a occupants	= 18 People

Minimum Number of Exits:

IBC 2009 – Chapter 10, Section 1007.1 and Section 1021

Two separate means of egress are required.

Capacity of Egress Components:

Element	**Minimum Allowable**
Exit Access Corridors:	
Width	44 inches clear
Doors:	
Width	32 inches clear

All proposed doors will be 36" wide doors providing a clear opening width exceeding 32".

Egress Arrangement:

IBC 2009 - Chapter 10: Assembly A-2

Dead-end corridor (Section 1018.4)	20' with a sprinkler system
Exit Access Travel Distance (Table 1016.1)	250' with a sprinkler system*
Common path of egress travel (Section 1014.3)	75' with a sprinkler system

NFPA 101 – Chapter 12: Assembly Occupancy

Dead-end corridor (NFPA Chapter 12, Section 12.2.5.1.3)	50' ft
Common Path of Travel (NFPA Chapter 12, Section 12.2.5.1.2)	20'/75' ft
Travel Distance to an Exit (NFPA Chapter 12, Section 12.2.6.2)	250' ft

* Due to classifying this building as a non-separated use, the most restrictive requirements from each Use Group are to be followed.

Unitil - Portland POC Renovations - 400 Riverside Industrial Parkway **6/21/2017**

Non-Separated Use / Mixed Use: Most Restrictive Codes Review

	Business Use		Storage Use - S-2 / Low Hazard		The training/certification room will be considered an accessory use within the S-2 occupancy Assembly A-3 Use - Assembly	
Related Code Compliancy Item	**IBC 2009**	**NFPA 101 - 2012**	**IBC 2009**	**NFPA 101 - 2012**	**IBC 2009**	**NFPA 101 - 2012**
Means of Egress Elements						
Common Path of Travel	100' w/ sprinkler	100' w/ sprinkler	100' w/ sprinkler	No Limit	75' w/ sprinkler	20' - any number occs - 75' for remaining serving more than 50 occs.
Dead End Corridors	50' w/ sprinkler	50' w/ sprinkler	50' w/ sprinkler	No Limit	20' w/ sprinkler	20'
Exit Access Travel Distance	300' w/ sprinkler	300' w/ sprinkler	400' w/ sprinkler	No Limit	250' w/ sprinkler	250' w/ sprinkler
Minimum Door Width Capacity Calculation Factor	.2" per occupant	.2" per occupant	.2" per occupant	.2" per occupant	.2" per occupant	.2" per occupant
Minimum Stair Width Capacity Calculation Factor	.3" per Occupant	.3" per Occupant	.3" per Occupant	.3" per Occupant	.3" per Occupant	.3" per Occupant
Reference Drawings for actual calculations						
Minimum Exit Access Corridor Width	44" min. clear	44" min. clear	44" min. clear	44" min. clear	44" min. clear	44" min. clear
Minimum Egress Door Clear Width	32" min. clear	32" min. clear	32" min. clear	32" min. clear	32" min. clear	32" min. clear
Occupant Load						
Calculation Factor	1 per 100sf gross	1 per 100sf gross	1 per 500sf gross	1 per 500sf gross	15 Net	15 Net
Reference Drawings for actual calculations						
Interior Finishes - Wall Ceilings						
Exit Enclosures and Passageways	Class B	Class B	Class C	Class C	Class B	Class A
Corridors	Class C	Class C	Class C	Class C	Class C	Class B
Rooms and Enclosed Spaces	Class C	Class C	Class C	Class C	Class C	
Assembly Areas O.L. 300 or fewer						Class C
Interior Finishes - Floors						
Vertical Exits / Exit Corridors	Class II	Class II	Class II	Class II	Class II	Class II

NOTES:

1. The building is fully sprinkled. The existing system will be reconfigured as required to provide proper coverage to the newly created spaces.
2. The building is equipped with an addressable fire alarm system. New components will be provided as required to provide proper coverage to new and existing spaces.

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CITY OF PORTLAND, MAINE — RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 12/01/17

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PROJECT
UNITIL GAS
OPERATIONS TRAINING
AND TESTING ROOM
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04101

DRAWING
CODE SUMMARY
CWS PROJECT NUMBER: 17027

REVISIONS
11-13-17 — ISSUED FOR CLARIFICATION

DRAWING NUMBER
LS1.01

SCALE: N.T.S.
DATE: 08/14/2017

ISSUED FOR CONSTRUCTION

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