HELEN WATTS ENGINEERING, PLLC
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Inspections Division
Date: 04/30/14

April 7, 2014

Tanner Herget
Bonfire LLC
37 Wharf Street
Portland, ME 04101

RE: 37-39 Wharf Street, Portland, ME; HCW Project No. 14-007
Life Safety Code Requirements

Dear Tanner:

Helen Watts Engineering PLLC provided a site visit on February 17, 2014 and met with your representative to discuss removing the bearing wall to join the spaces at 37 and 39 Wharf Street into one bar/lounge space. We provided a stamped sketch of the required structural work. A Life Safety Plan is also required. See the attached sketch and the discussion below.

The Occupancy Type is Existing Assembly. Per Section 13.1.1.7 the building is not required to be modified if the new use will have a lower occupancy. The space will have a larger area for the bathrooms and the stair to the basement will be separated with a two-hour fire rated wall, so there is less net space at a 15 square foot per person occupancy.

The building will have a two-hour fire-rated drywall ceiling added between the 37-39 Wharf Street use and the Fore Street mercantile use above per Table 6.1.14.4.1(a). The adjacent building to the south is separated by a 3-wythe brick masonry wall, the north wall (adjacent to an alleyway closed to vehicle traffic) is also a 3-wythe masonry wall. These provide a 2-hour fire rating. These modifications will increase the life safety of the bar use of this space, and will also improve the life safety by improving the separation from the remainder of the building, which is not a part of this project.

The door to the basement stairwell is 1.5-hour rated and the stairwell will be 2-hour fire rated per Table 6.1.14.4.1(a). The fire egress from the floor above (the Life is Good store, one floor opening on Fore Street) is above the basement stairs and is also a 2-hour fire rated enclosure, including the 1.5 hour door. These will not be modified.

The uses above Life Is Good do not have any egress through the 37-39 Wharf Street space. The total building area is 9000 SF. The Life Is Good store is 1800 sf @ 30 persons per square foot occupancy. The basement is a storage space serving the bar/lounge which discharges to the bar/lounge space and is used only by employees and maintenance staff.

Per the 2009 IBC the allowable Occupancy per Table 1004.1.1, for Assembly without fixed seats and with tables and chairs, is 15 SF net and also Table 7.3.1.2. See the attached sketch. The occupancy is 80 persons not including bathrooms, and 88 persons if the bathrooms are included. The occupant load will be posted per 13.7.9.3. The mercantile occupancy is 60.

Per the 2009 IBC the construction type is VA (sprinklered, any materials). Per the Life Safety Code the construction type is V (111) sprinklered. The building and this space meet the requirements of Table 13.1.6. Per 10.2.8.1and 13.3.3.3 the interior finishes are permitted to

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be Class C for walls and ceiling and Type III for the floor. The ceiling finish is fire-rated drywall. The walls are either triple-wythe brick masonry or 5/8" taped drywall. The floors will be the existing wood flooring. These finishes exceed the requirements. Per 13.7.5.3.6.3, any acoustical and decorative elements will be less than 10% of the wall surface area.

The two sections of the space have obvious and direct exit doors at the ground level. The two sections of the space will have enhanced passage from one to the other so both doors will be fully useful for egress, more so than in the previous configuration where each double door served half of the space with a 48" door through the center wall providing the second means of egress should one set of double doors be blocked. The center bearing wall is being replaced with columns below the columns in the building above to fully combine the spaces. The doors are double doors with each leaf 29.5" in width and 6 feet 9 inches high and no mullion.

The exit doors currently swing into the space (against the direction of egress) and are part of the historic fabric of the street. The doors will be turned around so the existing doors will swing out, and panic hardware will be installed. The doors will swing out into a fenced area set up for serving outside; the fencing will not impede egress through the doors. Locking devices are permitted; the exits will not be locked when the bar/lounge is open for business. One of any of the double doors will provide more than half of the expected occupancy load, per 13.2.3.6.2; the total opening is 55". The doors are approximately 18' apart; due to the slope of the grade there is no other practicable location for doors. The doors meet the requirement for separation in 13.2.3.7.2. Two means of egress are provided as required by 13.2.4.2.

The exit doors discharge directly onto Wharf Street. The area immediately outside the bar/lounge is illuminated with a street light. There is additional lighting for identifying the bar/lounge and at each door. The exit discharge meets the requirements of 13.2.7 and 13.2.8.

Battery powered emergency lighting shall be provided per 13.2.9.1 and 7.9.2.5, with two lamps in the basement (one on each side), one in the stairwell, one on each side of the bar/lounge, and one in each bathroom. Lighted EXIT signs will be provided over each front exit door and at the basement stair, per 7.10.1.5.1 and 7.10.7.1.

Food cooking is limited to a microwave oven. This meets the requirements of 13.3.2.2.

Thank you for the opportunity to provide engineering services to you.

Yours truly,

STATE OF MAINE
HELEN C. WATTS
No. 526
PROFESSIONAL ENGINEER

Helen C. Watts, PE
4/7/14

Helen C. Watts, P.E.
Principal

Enclosures: SKETCH
HWE\ *C:\Users\Ralph\Documents\HWE\37-9 Wharf\37-39 Wharf LS Code ltr 3.docx*

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ASSEMBLY GROUP A-2 (RESTAURANTS, TAVERNS AND BARS) (IBC), EXISTING ASSEMBLY (NFPA 101)
BUILDING TYPE VA, SPRINKLERED (IBC), V(111) SPRINKLERED (NFPA 101)
OCCUPANCY PER TABLE 1004.1.1 (IBC): ASSEMBLY WITH TABLES AND CHAIRS, NO FIXED SEATS
15 SF NET/PERSON, = 80 PERSONS (88 PERSONS IF OCCUPANCY OF 4 ASSIGNED TO EACH BATHROOM)
▦ ILLUMINATED EXIT SIGN (5 REQUIRED). EMERGENCY LIGHTING NOT SHOWN (5 REQUIRED)
○ ABC FIRE EXTINGUISHER

PER 13.2.6.2 (1) THE EGRESS DISTANCE MUST BE LESS THAN 250'.

INTERIOR FINISHES: CLASS A, B, OR C PER 13.3.3.3

CEILING: 2-HOUR FIRE RATED WITH 2 LAYERS OF 5/8" TYPE X DRYWALL, STAGGERED SEAMS, TYPE X CAULKED PENETRATIONS
FLOOR: EXISTING WOOD

BATHROOM WALLS: 2X4 SPF #2 STUDS WITH 5/8" DRYWALL
BATHROOM FLOORS: TILE
OTHER WALLS: BRICK MASONRY

EXISTING 90-MIN RATED DOOR W/ CLOSER @ ENCLOSED EGRESS FROM LIFE IS GOOD SHOP
2-HOUR FIRE-RATED WALLS PER T 6.1.14.4.1 (a)
90-MIN RATED DOOR W/ CLOSER, ACCESS TO BASEMENT

COOKING: MICROWAVE PER 13.2.2.2(3)

THE DOORS HAVE AN OPENING OF 55" EACH. THE DOORS WILL HAVE PANIC HARDWARE.

EXTERIOR DOORS ARE EXISTING AND WILL BE RE-HUNG TO SWING OUT

WHARF STREET

NOTE: THE TOTAL BUILDING AREA IS ~9000 SF; THE UPPER FLOORS EXITS DISCHARGE TO FORE STREET EXCEPT FOR THE FLOOR DIRECTLY ABOVE, 1800 SF @ 30 PERSONS/sf = 60, PER TABLE 7.3.1.2, CLASS C MERCANTILE, 37.1.2.2.1 (c) WITH ORDINARY HAZARD PER 6.2.2.3. THE BASEMENT IS A LOW-HAZARD STORAGE SPACE SERVING THE BAR/LOUNGE WHICH DISCHARGES TO THE BAR/LOUNGE SPACE AND IS USED BY EMPLOYEES ONLY. THE LOT LINE IS JUST OUTSIDE THE FACE OF THE BUILDING, WITH A NARROW FENCED AREA BEING APPROVED FOR SERVING OUTSIDE WHICH WILL PROVIDE PROTECTION FOR THE SWING OF THE DOOR AT WHARF STREET.

SKETCH – NOT TO SCALE

HWE P/N 14-007
04/7/2014
Helen C. Watts, P.E.

STATE OF MAINE
HELEN C. WATTS
LICENSED
PROFESSIONAL ENGINEER
4/7/14

LIFE SAFETY PLAN: 37-39 WHARF ST
PORTLAND, ME
TANNER HERGET, BONFIRE LLC

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