



DeLUCA-HOFFMAN ASSOCIATES, INC.
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- SITE PLANNING AND DESIGN
- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- PERMITTING
- AIRPORT ENGINEERING
- CONSTRUCTION ADMINISTRATION
- LANDSCAPE PLANNING

MEMORANDUM

Date: October 30, 2012

To: Captain Chris Pirone, Portland Fire Dept.

From: Steve Bushey, P.E.

Subject: Canal Landing Boat Repair and Maintenance Facility
40 West Commercial Street, New Yard LLC, C/O Portland Yacht Services
NFPA 1 Review to Access and Other Fire Department Issues

DeLuca-Hoffman Associates, Inc. reviewed the Fire Department Checklist that is part of the City of Portland Level III Site Plan Application and we have also reviewed NFPA 1 pertaining to Fire Department access into the Canal Landing site. We offer the following information and supporting plans:

➤ **Fire Department Checklist:**

1. Name, address, telephone number of applicant:

New Yard, LLC
c/o Portland Yacht Services
58 Fore Street
Portland, Maine 04101
Cell: 912-399-5180
flight@portlandyacht.com

2. Name address, telephone number of architect:

Ryan Senatore Architecture
67 Gray Road
Gorham, Maine 04038
Phone: (207) 650-6414

3. Proposed uses of any structures [NFPA and IBC classification]:

The following IBC and NFPA classifications will apply to the Phase 1 development:

| IBC | NFPA Classification |
|-----|---------------------|
| 2B | II (000) |
| 5B | V (000) |

4. Square footage of all structures [total and per story]:

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| PHASE I BUILDING PROGRAM | | |
|---------------------------------|--------------|--------------------|
| Structure | Total | Per Story ± |
| Tension Fabric Building | 19,200 SF | same |
| Temporary Portable Structure | 1,904 SF | Same –single story |
| Boat Sales/Brokerage building | 760 SF | 760 SF |

| PHASE II BUILDING PROGRAM (APPROXIMATE) | | |
|--|--------------|--------------------|
| Structure | Total | Per Story ± |
| Future Tension Fabric Building | 11,200 SF | same |
| Future Operations | 21,000 SF | 21,000 SF |

5. Elevation of all structures:

Building elevations are currently being prepared and will be provided to the Fire Department upon completion.

6. Proposed fire protection of all structures:

None of the structures is proposed to have a sprinkler system. Fire protection is currently provided by an existing onsite hydrant and hydrants within Commercial Street in the vicinity of the site.

7. Hydrant locations:

The accompanying utility plan depicts the location of two existing hydrant assemblies located along Commercial Street opposite the site. An existing private hydrant is located within the gas distribution yard area. The Fire Department should review and provide any additional information necessary regarding placement and locations of fire hydrants on the site. All hydrants to be installed shall comply with the Portland Water District and Portland Fire Department standards pertaining to manufacturer, style, and installation specifications.

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8. Water main[s] size and location:

The site is served by an 8" water main that extends off the 12" main in Commercial Street along the existing driveway entrance into the gas distribution facility. Current planning includes the replacement of the water meter pit and the installation of a new Fire Line Supply meter assembly. Below the meter pit the project water main size will be a minimum of 6" to serve the development site.

9. Access to all structures [min. 2 sides]:

The accompanying site plan depicts the site's access conditions that include access to two or more sides of the buildings.

10. A Code Summary shall be included referencing NFPA 1 and all Fire Department Technical Standards.

➤ **NFPA 1 – Chapter 18 Fire Department Access and Water Supply**

18.2 Fire Department Access

The project access conditions include a primary entrance at the eastern side of the site generally in the location of an existing gated fence location just below the Casco Bay Bridge. A secondary access will be available from the existing driveway into the gas distribution facility. The driveways will be greater than 24 feet in width which satisfies NFPA 1 18.2.3.4.1.1 that requires a minimum width of 20 ft.

Per NFPA 1 Chapter 18.2.3.2.1 the interior site access conditions will extend to within 50 ft. of at least one exterior door of all structures. This is satisfied on the site plan.

Per NFPA 1 Chapter 18.2.3.2.2 all first story floors shall be located not more than 150 ft. from the Fire Department access road. This is satisfied on the site plan.

NFPA 1 18.2.3.3 pertains to the number of access roads required and states that this determination is subject to the Authority Having Jurisdiction (AHJ).

69. 3.3.4 Minimum Separation Distances

DeLuca-Hoffman Associates, Inc. reviewed NFPA 1 pertaining to separation distances between LP gas storage containers and buildings. In conducting this review we contacted NGL Energy to determine the storage tank sizes currently on their property. NGL has two 30,000 gal. tanks, one 45,000 gal. tank and two 60,000 gal. tanks on the property that are located per the accompanying figure. Per Section 69.3.3.1 and Table 69.3.3.1 of NFPA 1 the required building setback from these tanks is 75 feet, hence we see no issue with the placement of the proposed Canal Landing buildings with respect to setbacks from aboveground LP storage tanks on the NGL site. These findings are subject to review and concurrence from the Portland Fire Department.

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➤ **City of Portland Technical Manual Section 3 – Public Safety**

Part 3.4 Site Access Standards

3.4.1. Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Supporting evidence: The development site is located along Commercial Street which is accessible from either direction. A minimum of two points of access will be provided into the site.

3.4.2. Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Supporting evidence: As depicted on the site plans, the proposed building layout provides for a minimum two sided access to all structures.

3.4.3. Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Supporting Evidence: The proposed development layout has contemplated emergency access conditions and provided for safe and efficient access for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Supporting Evidence: All buildings will be provided with an exterior entrance door that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

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Supporting Evidence: A minimum 9 ft. vertical clearance will be provided below any overhead signage or utilities entering the site. Generally speaking all utilities will be underground.

3.4.6. Elevators shall be sized to accommodate an 80 x 24 inch stretcher.


Supporting evidence: There are no elevators proposed for the project.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Supporting Evidence: The applicant will work with the City's Public Services Division to assign street addresses and numbering to meet City standards.

Prepared By:

DeLuca-Hoffman Associates, Inc.



Stephen R. Bushey, P.E.
Senior Engineer

Attachments: Overall Site Plan
Utility Plans – Progress Prints