

ZONING ANALYSIS and REFERENCES

Project Address: 227 York Street, Portland Maine

Tax Map: 044 E002

Book & Page: 28620 / 234

Block & Lot: 44-E-2

Zoning: B-1 Neighborhood Business

Historic District: NA

Shoreland Zoning: NA

Existing Building (interior SF is noted):

Ground floor: 858 SF

1st floor: 1,126 SF

2nd floor: 908 SF (all area noted is minimum 4' high)

TOTAL SF: **2,892 SF**

Height: Approx. 27'-3" above sidewalk elevation to ridge; (approx. 22'-3" above median elevation of lot to ridge).

Proposed Building (interior SF is noted):

Ground floor: 978 SF

1st floor: 893 SF

2nd floor: 820 SF

TOTAL: **2,691 SF**

Height: 33'-0" above sidewalk elevation (@ 74', per survey) to ridge; (approx. 28'-0" above median elevation of lot to ridge).

PROPOSED BUILDING: New building is proposed due to extensive decay of existing structure. Existing building is to be demolished and new proposed building conforms to existing first floor footprint (see survey of existing conditions and new proposed site plan). (Note: one of the reasons for existing building's decay is that the first floor framing is too low with respect to existing grade.)

CITY OF PORTLAND CODE OF ORDINANCES / SECTION 14: REFERENCES

Sec. 14-385. Restoration or reconstruction within an existing footprint of damaged nonconforming structure.

A nonconforming structure damaged by...decay or otherwise may be restored or rebuilt only where:

(a) The restoration or reconstruction is of a building which is nonconforming only as to land area, setbacks or any other dimensional requirements; and

(b) Where the restoration or reconstruction will occur City of Portland Land Use Code of Ordinances Chapter 14 Sec. 14-385 Rev.3-4-13 14-582 entirely within the existing footprint and previous shell of the building and will not create a new nonconformity; and

(d) Restoration or reconstruction necessitated by decay must be completed within one (1) year of the demolition of the building or the commencement of the restoration or reconstruction, whichever occurs first.

Note: The proposed structure lies within the existing footprint, except that the non-conforming area is reduced since the proposed building is not as long as the original – reduced in length

by approximately five feet (5'-2"). (Dimension is approximate because the existing building is not square).

Sec. 14-436. Building extensions.

Existing non-residential and residential principal structures which are nonconforming as to any area and/or yard requirements may be enlarged within the existing footprint subject to the following provisions:

(b) For residential principal structures conforming as to land area per dwelling unit as of July 19, 1988, but lawfully nonconforming as to any yard setback or nonresidential principal structures that are lawfully nonconforming as to any yard setback: The floor area of the expansion shall be limited to no more than eighty (80) percent of the first floor footprint. The additional floor area shall be created by raising the existing roof configuration the minimum amount required to create an additional story of habitable space, or by the use of dormers, turrets or similar structures.

Note: The proposed structure is less square feet than the original (see calculations above).

CODE ANALYSIS and REFERENCES

2009 INTERNATIONAL BUILDING CODE

Occupancy Type: R-3, *Single Family residence

Construction Type: VB

Sprinklered

**Note: B-1 Zoning allows for commercial tenant on ground floor, residential above*

Fire Resistance Ratings: Ref. Table 601

Fire Resistance Rating Bearing Walls: 0 hour

Fire Resistance Rating Non-Bearing Walls & Partitions: 0 hour

Fire Resistance Rating Floor Construction: 0 hour

Fire Resistance Rating Roof Construction: 0 hour

Fire Separation Between R & (future) B occupancies: Ref. IBC 2009 Sec. 508, Table 508.4

Fire Resistance Rating @ Ground Floor Ceiling: 1 hour (*Allowance for future commercial tenant in ground floor*).

UL Design #L530 is the basis of design at this location.

Lot Line Walls: Ref. Table 602 & Section 705.5

South-West wall of the existing and proposed new building is/are approximately 4" (0.3') from lot line. Required Fire Resistance Rating Exterior Wall this location: 1 hour, rated for exposure from both sides. Proposed construction includes fire-rate sheathing at exterior wall and 5/8" Type X gypsum board at interior wall surfaces along lot line wall, with standard NFPA 13R sprinkler system throughout residential interior, and NFPA 13 sprinkler system at commercial space.

UL Design #U344 is the basis of design at this location.

Lot Line Windows: Ref. Section 705.8.

Limited windows along the lot line wall within the R-3 Residential area are proposed for ventilation. Proposed protection includes, in addition to fully sprinklered interior per NFPA 13R, an additional sprinkler head located above each lot line window at the interior. (No lot line windows are proposed at the ground floor space.)

Note: Proposed lot-line windows total 48 SF, approximately 30% less SF than original lot-line openings; original windows/glazed door along this wall are approximately 62 SF.

The existing lot line windows (59 SF on the first floor) comprise 10.5% of the total interior wall area at this level of the lot line wall.

The proposed lot line windows at the first floor (33 SF) comprise 5.7% of the total interior wall area at this level of the lot line wall.

The proposed lot line windows at the second floor (15 SF) comprise 3.1% of the total interior wall area at this level of the lot line wall.

Description of Egress:

1st floor Living Spaces: One exit to grade & two exits to terrace, all via 36" wide doors

1st floor Bedroom: Egress window: casement window @ 36"w x 48"h

2nd floor Bedroom (Bedrm. #2): Egress window: casement window @ 36"w x 48"h

2nd floor Bedroom (Master Bedrm.): Two exits to terrace via 36" wide doors

Sound Transmission: Ref. Section 1207.2

Floor/Ceiling assembly between Ground Floor commercial space and Residential space above shall have acoustical insulation with a minimum STC rating of 50 for air-borne noise. (This will be applied under interior portion of first floor, but not under terrace where framing cavity will be filled with thermal insulation.)

2009 INTERNATIONAL ENERGY CONSERVATION CODE

Building is located in Zone 6. Required insulation values are:

Fenestration: U 0.35

Roof: R49 or R38 if continuous insulation at

Wood frame wall: R20

Basement wall: R19 in cavity or R15 continuous

Slab: R10

NFPA 101

Occupancy Classification: Residential One-Family Dwelling Unit Ref: 6.1.8 and 24.1.1.1

Required Separation of Occupancies: Ref: Table 6.1.14.4.1(a)

- Residential area: None
- Between Resid. & potential/future Business Occupancy at Ground Floor: 2 hour, can be reduced to one hour if building is protected by automatic sprinkler system.

Minimum Construction Requirements: no special requirements Ref. 24.1.6.

Means of Escape Requirements: Ref. 24.2.2.1.2 & 24.2.2.2

- Secondary means of escape not required if building is protected by automatic sprinkler system. Ref. 24.2.2.1.2
- Primary means of escape is provided by ramp, stair or doorway with unobstructed travel to grade Ref: 24.2.2.2

Doors Ref 24.2.4.

- Interior doors shall be minimum 28" wide x 6'-6" high, except that bathroom doors shall be minimum 24" wide. Doors shall be swinging or sliding.

Interior Finishes Ref: 24.3.3.2 and 24.3.3.3

- Wall and Ceiling: Class A, B or C
- Floor Finish: No requirement

Detection & Alarm Systems Ref: 24.3.4 & 24.3.2

- Smoke alarms to be placed in each bedroom, immediately outside of each bedroom, on each level of the residence. Battery-operated units are permitted.
- Carbon Monoxide detector or alarms are required immediately outside each bedroom and on each occupied level

Protection of Vertical Openings. None required. Ref: 24.3.1.

Automatic Sprinkler System Ref. 24.3.5.2

- Automatic Sprinkler System to comply with Section 9.7 and with NFPA 13R

Interior Stairs Ref. 7.2.2.2.1.2 & 7.2.2.4.1.6 & 7.2.2.4.4 & 7.2.2.4.5

- Interior stairs shall be minimum width of 36", with maximum projections of 4 ½" for handrails.
- Handrail is required on one side, continuous along path of travel, and shall be mounted at minimum 24", maximum 38" above leading edge of treads, and shall be clear of wall by minimum 2 ¼". Handrails shall return to wall or newel posts at ends.
- Maximum riser height shall be 7" and minimum height 4". Minimum tread depth shall be 11". Minimum headroom shall be 6'-8". Maximum height between landings shall be 12'. Landings shall be minimum 36" in direction of travel.

- Guards shall be not less than 42" high and have openings no greater than 4"x4".

ASHRAE 62.2 – 2007 (Ventilation and IAQ) – See Engineers Drawings

E-1465-2006 (Standard Practice for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings):

Passive Radon Ventilation System is incorporated into project requirements, using EPA 402-95012, May 1995 guidelines.