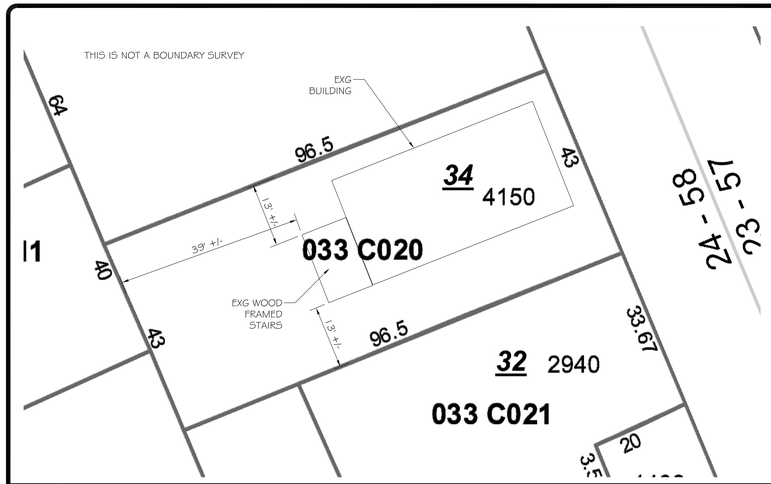


C3 SCHEMATIC PLOT PLAN

C2 EXISTING EXTERIOR STAIR PHOTO

GENERAL STRUCTURAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO:
   - -IBC/IEBC BUILDINGS CODE 2009 ED
   - - NFPA 101 (2009) LIFE SAFETY CODE
   - -ANSI-ASCE 7-05
   - -ACI 318-05 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   - -ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   - -AISC STEEL CONSTRUCTION MANUAL 9TH ED ASD
   - -AISI COLD FORMED STEEL DESIGN MANUAL
   - -ANSI-AF&PA NDS-2005
2. DESIGN LOADS:

LIVE LOAD	100 PSF (STAIRS)
SNOW LOAD	46 PSF
DEAD LOAD	10 PSF

3A. WIND LOADS :
BASED ON WIND SPEED OF 100 MPH, EXP. B, $\lambda = 1.0$, SIMPLIFIED PROCEDURE.

3B. SEISMIC LOADS :
N/A WIND CONTROLS

4. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS AND ALSO ANY CONDITIONS THAT PREVENT THE CONTRACTOR'S COMPLETION OF THE WORK AS SHOWN ON THE CONSTRUCTION DRAWINGS.

5. ALL WORK SHALL BE PERFORMED BY PERSONS QUALIFIED IN THEIR TRADE AND LICENSED TO PRACTICE SUCH TRADE IN THE STATE IN WHICH THE PROJECT IS LOCATED.

6. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, IN ADDITION TO SPECIFICATIONS AND ANY SHOP DRAWINGS PROVIDED BY SUBCONTRACTORS AND SUPPLIERS.

7. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY GENERAL CONTRACTOR (G.C.) AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

8. UNLESS OTHERWISE NOTED, DETAILS, SECTIONS, AND NOTES SHOWN ON ANY DRAWING SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR DETAILS.

9. THESE DRAWINGS DO NOT SHOW SIZE, LOCATION OR TYPE OF OPENING IN THE FOUNDATION SYSTEM FOR ELECTRICAL, PLUMBING OR MECHANICAL EQUIPMENT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THESE ITEMS.

10. ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OF MATERIAL OR THE PURCHASE OF NON-RETURNABLE STOCK. DIMENSIONAL REVIEW IS THE CONTRACTOR'S RESPONSIBILITY.

11. PROJECT NARRATIVE: THIS WORK INCLUDES THE REPAIRS AND RE-CONSTRUCTION OF AN EXISTING WOOD FRAMED EXTERIOR EXIT STAIR. THE STAIRS ARE LOCATED AT THE 2 ½ STORY WOOD FRAMED APARTMENT BUILDING LOCATED AT 34-36 ALDER ST IN PORTLAND, ME. THESE STAIRS PROVIDE A SECOND MEANS OF EGRESS FROM THE 720 SF DWELLING UNIT LOCATED ON THE 3RD FLOOR TO THE EXTERIOR ONLY. NO OTHER UNITS ARE SERVED BY THIS STAIR. NO CHANGES TO THE INTERIOR OF THE BUILDING ARE PROPOSED AT THIS TIME. THIS PROJECT IS DESIGNED UNDER THE PROVISIONS OF IEBC 2009, CHAPTER 5 - REPAIRS, AND APPLICABLE PROVISIONS OF THE 2009 IBC AND NFPA 101 BUILDING CODES.

B1 GENERAL NOTES

CODE ANALYSIS

NFPA 101 Life Safety Code – 2009 ed.

	Work Scope includes replacement of the exterior wood framed fire escape stair. No changes to the interior of the existing building are proposed. The current level of fire protection will be maintained.	
Section		
3.3.32.3	Building Classification:	Chapter 31 – Existing Apartment (720 net sf 3rd flr unit)
31.1.1.1		Option 1 - No automatic Sprinkler or Detection
	Construction Type:	v (000)
31.1.5	Hazard Classification:	Class B - Ordinary Hazard
T7.3.1.2	Occupant Loads:	200 sf / occ. @ 720sf = 4 occ.
T6.1.14.4.1B	Separation of Use Rating:	N/A
	Janitor, Mech, Stor. Rating:	N/A
	Exit Stair Enclosure Rating:	1 hour for common exits, NR for exits within the dwelling unit.
31.3.6.1	Corridor Wall Rating:	½ Hour
	Area of Refuge:	Permitted per 7.2.12
7.2.2.2.1.2	Minimum Stair width:	36" (occ load < 50)
T7.2.2.2.1.1a	Maximum Riser height:	7"
	Minimum Tread width:	11"
	Minimum Headroom:	6'-8" at stairs; 7'-6" at occupied spaces
	Maximum ht between landings:	12'-0"
7.2.2.4	Guardrail Height:	42"
	Handrail height:	34"
	Handrail top extension:	12" horz.
	Handrail bottom extension:	11" angled + 12" horz.
	Handrail diameter:	1-1/4" O.D.
	Maximum balluster open space:	less than 4"
31.2.6.1	Max. Allowable Travel Distance:	75' within unit
31.2.6.2		100' from unit to entrance door
31.2.6.3		200' from unit to exterior way of exit access
31.2.5.3.1	Max. Allowable Common Path:	35'
31.2.5.4	Max. Allowable Dead End Corridor:	50'
7.3.4.1.2	Minimum Egress Corridor Width:	28"
31.2.4.1	Minimum Number of Required Exits	2 at each unit
	Minimum Horz Egress Enclosure rating:	n/a
	Separation of exits:	0.5 the diagonal distance (.33 if fully sprinkled)
	Panic Hardware	Required if over 50 total occupants
	Fire Escapes stairs as means of egress:	Allowed
	Fire Escapes ladders as means of egress:	Allowed
	Minimum Egress Door Width:	36"
31.2.8	Exit Lighting:	Required
31.2.9	Emergency Lighting:	Not Required (<12 units, < 3 stories in height)
31.3.5.12.1	Fire Sprinkler System:	Not Required
31.3.4.1	Fire Alarm System:	Not Required <3 stories in height, Option #1
31.3.5.13	Portable Fire Extinguishers:	Required
31.3.4.4	Smoke Detector/Alarms:	Required
31.3.4.4	Heat Detectors/Alarms:	Required
31.3.3.2	Classification of Finishes:	Class A or B at Exit Enclosures Class A or Class B at Lobbies and Corridors Class A, B, or C at other areas

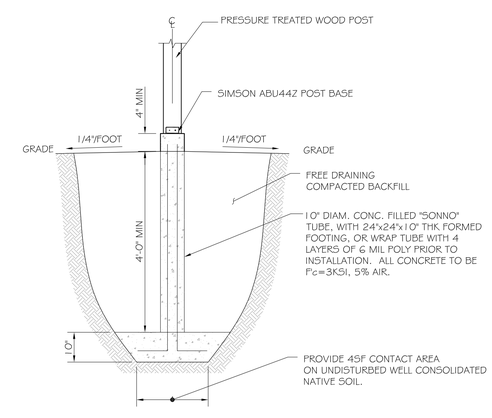
A3 NFPA CODE REQUIREMENTS

CODE ANALYSIS

International Existing Building Code – 2009 Ed
International Building Code – 2009 ed.

	Work is classified as a Repair per section 502 – Repairs Work Scope includes replacement of the exterior wood framed fire escape stair. No changes to the interior of the existing building are proposed. The current level of fire protection will be maintained.	
Section		
310	Building Use Group:	Residential R-2 (720 sf net, 840 sf gross 3rd flr unit)
T 601	Construction Type:	Vb
	Hazard Classification:	Moderate Hazard
T1004.1.1	Occupant Loads:	Residential: 200 gross sf/ occ. @ 840 sf = 5 occ.
T508.4	Separation of Use Rating:	N/A
T508.4	Janitor, Mech, Stor. Rating:	N/A
1022.1	Exit Stair Enclosure Rating:	N/A Occ Load < 10 and less than 1 story
T1018.1	Corridor Enclosure Rating:	N/A Occ Load <10
	Shafts/Elevators:	N/A
	Area of Refuge:	N/A
1009.1	Minimum Stair width:	36" (Occ load <50)
	Maximum Riser height:	7"
	Minimum Tread width:	11"
1009.2	Minimum Headroom:	6'-8" at stairs; 7'-6" at occupied spaces
	Maximum ht between landings:	12'-0"
1013.2	Guardrail Height:	42"
1012.2	Handrail height:	34"
	Handrail top extension:	12" horz.
	Handrail bottom extension:	11" angled + 12" horz.
1012.3.1	Handrail diameter:	1-1/4" O.D.
1013.3	Maximum balluster open space:	less than 4"
	Max. Allowable Travel Distance:	200' (250' if fully sprinkled)
1014.3	Max. Allowable Common Path:	75' (125' if fully sprinkled)
1018.4	Max. Allowable Dead End Corridor:	20' (50' if fully sprinkled)
1018.2	Minimum Egress Corridor Width:	36"
	Minimum Number of Required Exits	2 at each floor
	Minimum Horz Egress Enclosure rating:	N/A
1015.2.1	Separation of exits:	0.5 the diagonal distance (.33 if fully sprinkled)
	Panic Hardware	Required if over 50 total occupants
	Fire Escapes as means of egress:	Allowed
1008.1.1	Minimum Egress Door Clear Width:	32"
	Exit Lighting:	Required
	Emergency Lighting:	Required
903.2.8	Fire Sprinkler System:	Not Required – IEBC 503.1
907.2.9.1	Fire Alarm System:	Not Required -IEBC 503.1
906.1	Portable Fire Extinguishers:	Required
907.2.9.2	Smoke Detector/Alarms:	Required
	Heat Detectors/Alms:	Not Required
	Classification of Finishes:	Class A at Exit Enclosures Class A or Class B at Lobbies and non-rated Corridors

A2 IBC CODE REQUIREMENTS



A1 CONCRETE FROST PIER

SCALE: ½"= 1'-0"

STATE OF MAINE AARON S. WILSON No. 10429 PROFESSIONAL ENGINEER

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PROJECT: 34-36 ALDER ST.
PORTLAND, MAINE
FOR:

SHEET TITLE: STAIR NOTES AND DETAILS
ISSUED FOR PERMITTING

REVISIONS

No.	BY	DESCRIPTION	DATE
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DATE : 8-22-16
SCALE : AS NOTED
DESIGN BY: ASW
DRAWN BY: RSC
FILE #: 16240-A1.dwg
PROJECT NUMBER: 16240
SHEET NO: A3