0 BASEMENT
SCALE: 3/16" = 1'-0"

KEY:
- Rated Exit Enclosure
- Living Space
- Covered Deck
- One-Hour Exterior Wall
- Two-Hour Interior Wall

1 GROUND FLOOR
SCALE: 3/16" = 1'-0"

5 SOUTH ELEV.- OPENING PERCENTAGE
SCALE: 3/16" = 1'-0"

Applicable Codes:
City of Portland, Maine Code of Ordinances
Maine Uniform Building and Energy Code (MUBEC)
- 2009 International Residential Code (IRC)
- 2009 International Building Code (IBC)
- 2009 International Existing Building Code (IEBC)
- 2009 International Energy Conservation Code (IECC)

American Society of Heating, Refrigerating & Air-Conditioning Engineers (ASHRAE) Standards
- 2007 ASHRAE 62.1 - Ventilation for Acceptable Indoor Air Quality
- 2007 ASHRAE 62.2 - Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings
- 2007 ASHRAE 90.1 - Energy Standard for Buildings except Low Rise Residential Buildings w/out addenda

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

CODE REVIEW SUMMARY:
Portland ORDINANCE REVIEW:

ITEM	CITY OF PORTLAND, MAINE CODE OF ORDINANCES REQUIREMENTS	ACTUAL
Zoning		
Zone: R-6		
Minimum Lot Size	2,000 sq ft/ 750 sq ft per dwelling	3,122 sq ft (4 units allowable)
Minimum Street Frontage	20 ft	50 ft
Minimum Side Street Yard Setback	0 ft/ 10ft	0 ft and 21 ft
Minimum Rear Yard Setback	10 ft	0 ft - Nonconforming
Parking	0 in R-6 (otherwise 1 space per unit)	2
Maximum Building Footprint	60%/ 1,873.2 sq ft	1,565 sq ft (not including street side deck & steps)
Minimum Landscaped Open Space (not parking)	20%/ 624.4 sq ft	0% - Nonconforming
Maximum Building Height	45 ft	32'-2" grade to bottom of cornice
Structure Setbacks	Above 35'- 10' from side property line, 15' from rear property line when abuts residential zone. Does not apply to side yards on side streets	

CODE REVIEW BY SECTION: IBC and NFPA 101						
ITEM #	ITEM	MUBEC / 2009 IBC: SECTION	REQUIREMENT/CONDITION	2009 NFPA 101 - Life Safety Code SECTION	REQUIREMENT/CONDITION	PROPOSED COMPLIANCE
1.0	**USE AND OCCUPANCY**					
	Basement		Unoccupiable			No Change in Use
	Ground Floor	310	R-2 Residential - Apartments		Residential- Apartment Building	No Change in Use
	Second Floor	310	R-2 Residential - Apartments		Residential- Apartment Building	No Change in Use
	Third Floor	310	R-2 Residential - Apartments		Residential- Apartment Building	No Change in Use
	Roof Deck		R-2 Residential - Apartments		Residential- Apartment Building	No Change in Use
2.0	**CONSTRUCTION TYPE & GENERAL BUILDING HEIGHT AND AREA LIMITATIONS**					
	Construction Type	602.5	Type V-B (Existing)	Table A.8.2.1.2	Type V (000) (Existing)	No Change of Use, Construction Type shown for compliance with current standards
	Area Limitation: Group R-2	Table 503 and 506.3	R-2: V-B 7,000 sq ft per story, increase by 200% per story w/ sprinkler			
	Story Limitation: Group R-2	Table 503 and 504.2	V-B - 2 stories, increase up to 3 stories w/ sprinkler	NFPA 5000 7.4.1	NFPA 5000 not adopted by the Maine State Fire Marshal's Office	Existing 3- Story building
	Height Limitation: Group R-2	Table 503 and 504.2	V-B - 40 ft, increase up to 60 ft w/ sprinkler	NFPA 5000 7.4.1	NFPA 5000 not adopted by the Maine State Fire Marshal's Office	41'-7" Proposed
3.0	**BUILDING SEPARATION & EXPOSURE PROTECTION**					
	Exterior Walls: Load Bearing & Non-load Bearing	Table 602	K-15 up to 30 = 1 hr, X≥30 0 hr			
	Separation of Occupancies	Table 508.4	R2 - no fire separation requirements			
4.0	**FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS**					
	All Building Elements	Table 601		Table A.8.2.1.2		
	Shaft Enclosures	708.4	Fire Resistant Rating for an Elevator Connecting 4 Stories 2-Hours	Table 8.3.4.2	Elevator Hoistways= 2 hours	2- hour walls shall be installed at the Elevator Shaft. Door Rating shall meet code, but shall be by Elevator Manuf.
	Shaft Enclosure at Bottom	708.11	Shaft Enclosure at Bottom of Elevator shall match 2-Hour Rating of Shaft			Shaft Enclosure at Bottom of Elevator shall match 2-Hour Rating of Shaft
	Shaft Enclosure at Top	708.12	Shaft Enclosure at top of Elevator shall match 2-Hour Rating of Shaft			Shaft Enclosure at top of Elevator shall match 2-Hour Rating of Shaft
	Horizontal Assemblies	712.3	Fire-Resistant Rating: Dwelling and sleeping unit separations in buildings with type VB construction shall have fire resistance rating of not less than 1 hour in buildings equipped throughout with an 13R automatic sprinkler system.	31.2.4.3	Condition 7 for Single Exit requires min. 1/2 Horizontal rating betweewn Units.	1-Hour Horizontal Assemblies Provided between ground and second floors and second and third floors.
5.0	**FIRE AND SMOKE PROTECTION FEATURES**					
	Automatic Sprinkler Systems	903/ 903.2.8	Sprinkler system required for Group R	31.1.1.1	Option #4: Buildings Protected Through-out by an Approved Automatic Sprinkler System	13R Sprinkler System Shall be Installed.
	Corridor Construction	1018.1	1 hour w/ No Reduction for 13 R System			Exit Access Corridors due not exist in this project because Unit Doors are directly adjacent to a Rated Stair Enclosure
	Sleeping Unit Separation	420.2/709.3 ex 2	1 hr required. If Units are adjacent to each other. No Reduction w/ 13R System.			Not Required: Apartments are made-up of an entire floor and are not adjacent to each other.
	Exit Stair Enclosure	1022.1/ 1022.6	Exit Enclosures shall have a fire-resistance rating of not less than 2-hours where connecting 4-stories or more. Basements are included as a story. Doors shall have a minimum 1 1/2 hour Fire Protection Rating/ Exit Enclosure Exterior Walls: Exterior walls adjacent to Exit Enclosure and less than 180 degrees (Existing Bay Window)shall be 1-hour rated to 10'-0" away from intersection of walls, Openings within exterior walls and 10'-0" or less away from wall intersection shall have an opening protection of 3/4 hour min.	31.2.2.1.2	Buildings using Option 4, Exit enclosures shall have a minimum 1- Hour Fire Resistance Rating. Doors shall have a minimum 1 hour Fire Protection Rating.	Exit Stair Enclosure, including the basement = 4-stories, therefore shall have a 2-hour rating/ Exit Enclosure Exterior Walls: Exterior walls adjacent to Exit Enclosure and less than 180 degrees (Existing Bay Window)shall be 1-hour rated to 10'-0" away from intersection of walls and to at least 10'-0" above upper landing or to height of existing/ new structure. Openings within exterior walls and 10'-0" or less away from wall intersection shall have an opening protection of 3/4 hour min.
	Opening Protectives	Table 715.4	Fire Barriers having a rating of 2-Hours requires a Fire Door Rating of -1 1/2 Hours	31.2.2.1.2	Doors shall have a minimum 1 hour Fire Protection Rating and be self-closing and self-latching.	Fire Door Rating shall be 1 1/2- hour and provided w/ a Closer for doors in Interior walls of the Exit Enclosure
6.0	**MEANS OF EGRESS**					
	Occupant Load	Table 1004.1.1	200 sq ft gross per floor/ 1,404 s.f. = 7 per floor for 3- Floors, Plus a 256 s.f. Roof Deck = 2 People, Total Occupant Load= 23	7.3.1.2	200 sq ft gross per floor/ 1,404 s.f. = 7 per floor for 3- Floors, Plus a 256 s.f. Roof Deck = 2 People, Total Occupant Load= 23	Actual Occupant load is anticipated at 3-4 per floor
	Egress Width per Occupant	1005.1	.3" per person Stairways x 7= 2.1" .2" per Person Horizontal= 1.4"	7.3.3.1	.3" per person Stairways x 7= 2.1" .2" per Person Horizontal= 1.4"	3'-0" + provided due to Occupant Load of 23
	Minimum Door Widths	1008.1.1	32" Minimum Clear Width	7.2.1.2.3	32" Minimum Clear Width	Provided at all doors for egress passage in new work areas
	Common Path of Travel	1014.3	R-2: 75 ft or 125 ft w/ sprinkler			Common Path of Travel is 0'-0" because Unit Doors are directly adjacent to a Rated Stair Enclosure. Furthest travel Distance Outside Units is from roof deck to Exterior Door = 125'-0"
	Travel Distance	Table 1016.1	R: 200 Feet or 250 Feet with sprinkler system	31.2.6	Within Apartment using Option 4= 125'-0" max. Max Distance other than Units= 250' 0" in Buildings protected through-out by an approved automatic sprinkler system	Max. Distance within Apartment= 66'-0". Furthest travel Distance Outside Units is from roof deck to Exterior Door = 125'-0"
	Spaces w/ 1 exit Access	Table 1015.1 and 1015.1.1	R2 - maximum Occupant load 10, R-2 - one means of egress permitted from individual dwelling units w/ maximum Occupant Load of 20 w/ sprinkler.	31.2.4.3	Total number of stories not to exceed 4 w/ sprinkler system.	Existing 3- Story Apartment building to Remain. Additional roof deck proposed, but the only access will be within the third floor unit. NFPA Conditions 1-7 shall b e met.
	Corridor Width	1018.2	44" min when occupancy > 50 36" min when occupancy < 50	7.4.3	44" min when occupancy > 50 36" min when occupancy < 50	All corridors serve less than 50 persons, min 36" provided throughout
	Dead End Corridors	1018.4	20 Feet or 50 Feet with sprinkler system	29.2.5.5	50 Feet max	No new or existing dead end corridor exceeds 50'-0"
	Number of Exits and Continuity	1021.1	Exception 4. Group R-2 occupancy is allowed 1 means of egress if occupant load per floor is less than or equal to 20	31.2.4	Number of Exits: One allowed if all 7 conditions are met	IBC- Occupant load is 7- per floor and 2- for roof deck. NFPA 101- All 7 conditions shall be met with the renovations
	Exit Discharge	1027.1	Exits shall discharge directly to the exterior.	7.7.1	Exits shall discharge directly to the exterior.	Exit discharges directly to the exterior
	Emergency Egrees and Escape	1029.1	Exception #1: Buildings equipped throughout with an approved Automatic Sprinkler System in Accordance w/ Section 903.3.1.1 or 903.3.1.2			
7.0	**SPECIAL OCCUPANCY REQUIREMENTS**					
	Max. Area Ext. Wall opening is used on fire separation distance and degree of opening protection.	Table 705.8	15'-0" to less than 20'-0". Unprotected and Sprinklered= 75%			Proposed Openings at Rear Elevation Closest to Neighbor= 126 s.f. / 865
	Hoistway Enclosures	3002.4	Elevator Car to Accommodate Ambulance Stretcher, if four or more stories			Elevator Car not Required to Accommodate and Ambulance Stretcher due to Elevator access to Three-Stories only.
	Hoistway Venting	3004.1	Venting Required if penetrating more than three-stories.			Venting not Required due to only three-story penetration of Hoistway.
8.0	**STAIRWAYS (IN AREAS OF NEW WORK)**					
	Stairway Width	1009.1	44" Min (36" min, for <50 Occupants)	7.2.2.2.1.2	44" Min (36" min, for <50 Occupants)	All Stairways serve less than 50occs
	Headroom	1009.2	80" min headroom clearance	7.2.2.2.1.1(a)	80" min headroom clearance	
	Stair Treads and Risers	1009.4	4" min < Riser < 7" max 11" min tread	7.2.2.2.1.1(a)	4" min < Riser < 7" max 11" min tread	Stairs meet rise and run requirements
	Profile	1009.4.5	Risers shall be solid			
	Stairway Landing	1009.5	Required at top and bottom. Width and distance in direction of travel equal to or greater than stair width	7.2.2.3.2	Landing size can not decrease in the path of travel. Distance in direction of travel equal to or greater than stair width	Stair meets landing requirements
	Vertical Rise	1009.7	12' max vertical rise between floors or landings	7.2.2.2.1.1(a)	12' max vertical rise between floors or landings	Proposed Stair is 9'-6" Floor to floor and 10'-6" floor to upper landing at roof deck interior landing
	R-6 Handrails	1009.12	Handrails required on both sides	7.2.2.4.1.1	Handrails required on both sides	
	Handrail Height	1012.2	34" min and 36" max above stair tread nosing	7.2.2.4.4.1	34" min and 36" max above stair tread nosing	Stair Handrails meet requirements
	Handrail Graspability	1012.1.1	Must comply with Type I			Stair Handrails meet requirements
	Handrail Extensions	1012.6	must extend 12" beyond top riser and depth of 1 tread beyond bottom riser	7.2.2.4.4.10	must extend 12" beyond top riser and depth of 1 tread beyond bottom riser	Stair Handrail extensions meet requirements
	Guard Rails	1013.1	Required on landings > 30" high			Guardrails meet requirements
	Guard Rail Height	1013.2	42" min	7.2.2.4.5.2	42" min	Guardrails meet requirements
	Opening Limitations	1013.3	4" max opening	7.2.2.4.5.3	4" max opening	Guardrails meet requirements

2 SECOND FLOOR
SCALE: 3/16" = 1'-0"

3 THIRD FLOOR
SCALE: 3/16" = 1'-0"

4 ROOF
SCALE: 3/16" = 1'-0"

/Volumes/Network Files/CJAB/PROJECTS/B COMMERCIAL STUDIO/1 Current Projects/Grisanti Munjoy St/1 DESIGN/DRAWINGS/5 CD/ARCHICAD/Grisanti CD NEW EXIT STAIR OPTION 2.4.27.17.pln

CALEB JOHNSON ARCHITECTS + BUILDER
265 MAIN STREET, SUITE 201 BIDDEFORD, ME 04005. C.J.A.B.M
T: 207.283.8778 F: 207.283.8778

Date: 01/25/18

STUDIO MANAGER:
PROJECT ARCHITECT:

CHANGES THIS ISSUE:

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#AARON JONES

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GRISANTI - MUNJOY ST

SUSAN GRISANTI
60 MUNJOY ST PORTLAND ME 04101

LICENSED ARCHITECT CALEB M. JOHNSON NO. 2918 STATE OF MAINE

PERMIT SET

ORDINANCE AND CODES

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