

UPC (Uniform Plumbing Code)	CODE REF.	PAGE
<b>Determine Occupancy Type</b>	"in accordance with the Building Code" 50% male, 50% female	T4-1 Intro 36
<b>IBC Occupancy</b>	<b>Business</b> TOTAL: 10 OCCUPANTS, 5 M, 5 F <b>Educational</b> TOTAL: 42 OCCUPANTS, 21 M, 21 F	
<b>Plumbing Fixture Count</b>	<b>Business</b> WC: Male 1-100 = 1 WC: Female 1-100 = 1 <b>Educational</b> WC: Female 1-20 = 1 WC: Male 1-20 = 1 LAVATORY: 1 each = 2 total <b>Residential Lobby</b> WC: Male = 1 WC: Female = 1 LAVATORY: 1 each = 2 total	T4-1 38 T4-1 38 T4-1 37

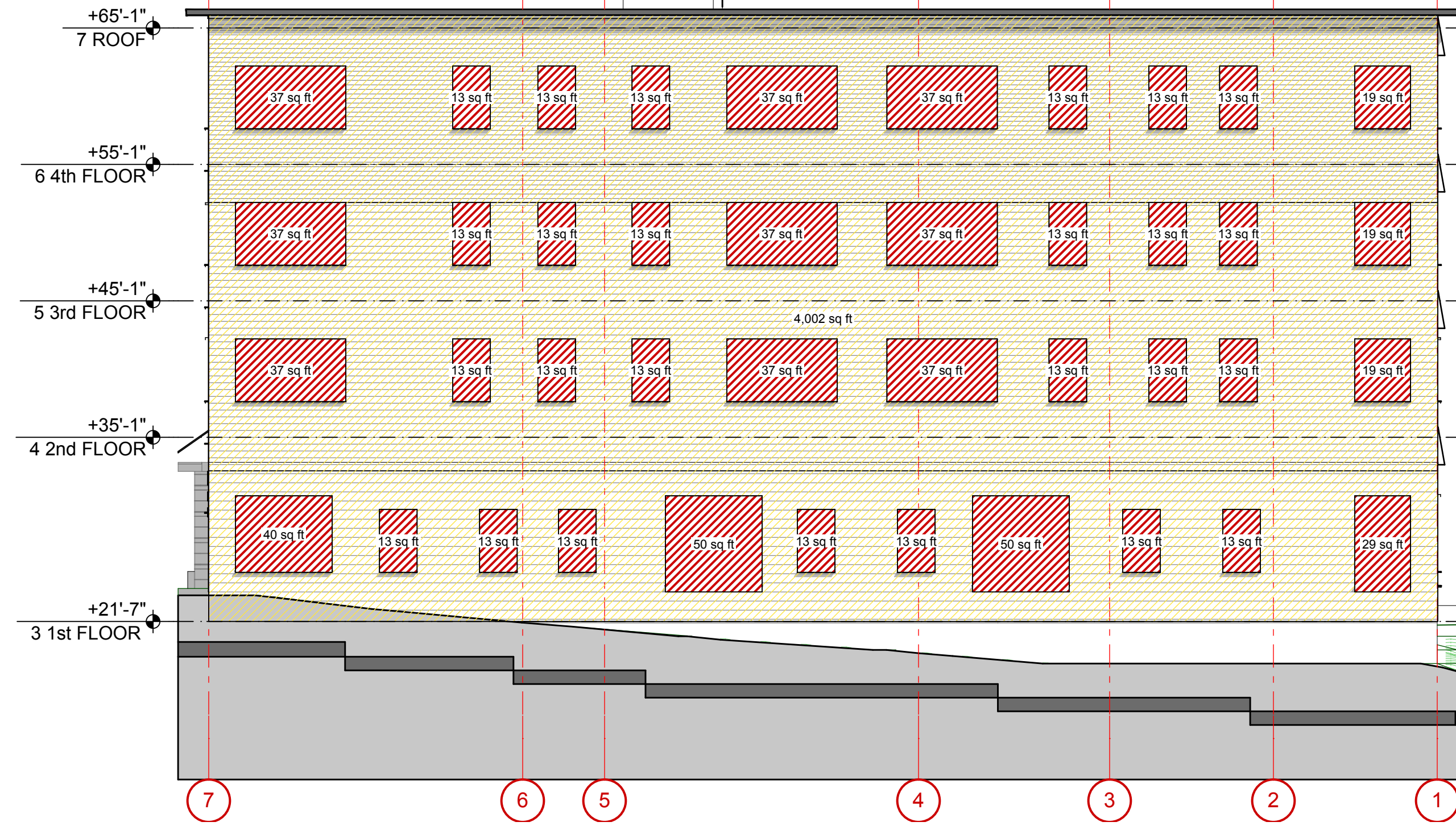
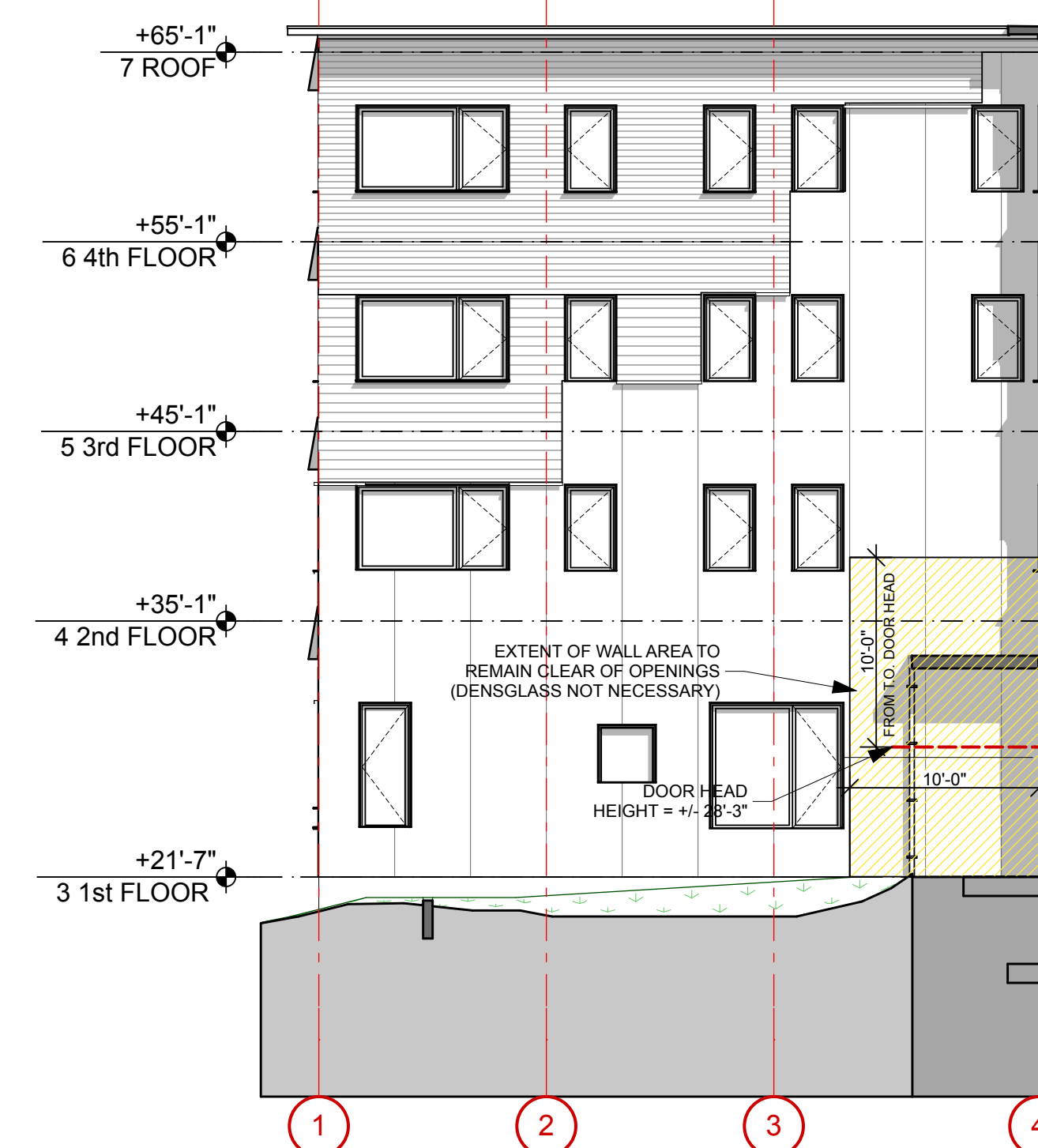
NFPA	ALLOWED BY CODE	CODE REF.	PAGE	AS DRAWN
<b>Occupancy</b>	Apartment Building (3 or more dwelling units) Business Day Care Separated Occupancy Fire Resistance rating may be reduced by 1 Hour if Sprinklered	3.3.1.7 & 6.1.8.1.5 3.3.3.4 & 6.1.11 3.3.5.0 & 6.1.4 6.1.14.2.3 6.1.14.4.9	101-42 101-42 101-43 101-43	
<b>Separation</b>	Apartment to Business = 1 Hour with Sprinklers Apartment to Day Care = 1 Hour with Sprinklers Business to Day Care = 1 Hour with Sprinklers	Table 6.1.14.4.1(b)	101-45	1 HR
<b>Exit Access Corridor</b>	Occupancy Group R-2 (0,900 SF) - 1 Hour exit access corridors	7.1.3.2.1	101-44	1/2 HR - Load < 30
<b>Exits</b>	1 Hour Fire Resistance for 3 Stories or less 2 Hour Fire Resistance for 4 Stories or more 1 Hour for Apartment buildings with Sprinkler per 30.2.2.1.2 & 30.3.5 Structural elements that support exit components & penetrate or are	7.1.3.2.1 (1) 7.1.3.2.1 (2) 7.1.3.2.1 (2) ( C ) 7.1.3.2.1 (5)	101-44 101-44	2 HR 1 HR
<b>Headroom</b>	Headroom in means of egress = 7'-6" min Headroom in spaces = 7'-6" min (1/3 max may be 6'-8") Headroom in stairs = 6'-8" min	7.1.5.1 7.1.5.2 7.1.5.3	101-46	
<b>Door Openings</b>	Door leaf in means of egress min width = 32" minimum Min Width = 44" (< 2,000 occupants) Max height of risers = 7" Min tread depth = 11" Min headroom = 6'-8"	7.2.1.2.3.2 Table 7.2.2.1.1(a)	101-48 101-55	
<b>Guards &amp; Handrails</b>	Stairs & ramps handrails both sides Handrail within 30" of all portions of egress width Handrails continue full length of stairs, continuous on inside face bottom riser Guards = 42" min (within dwelling units = 36")	7.2.2.4.1.1 7.2.2.4.1.2 (1) 7.2.2.4.2 7.2.2.4.4.10 7.2.2.4.5.2	101-56 101-57	
<b>Fire Barriers</b>	Rating & discharge directly to outside Outside walls <180 degrees @ horiz exit = 1 HR outside wall FRR & 3/4 HR opening protection for 10'-0" on each side of horiz exit.	7.2.4.3.3 7.2.4.3.4	101-62	
<b>Ramps</b>	Ramps in means of egress = 44" W, 1:12 slope, 30" max rise	Table 7.2.5.2 (a)	101-63	
<b>Occupant Load</b>	Residential Apartment Buildings (200 SF / person) Business (100 net SF / person) Day Care (35 net SF / person)	Table 7.3.1.2	101-70	9,423 SF / 200 = 48 Occupants/Floor 35,227 Total SF = 177 Occupants Total 1,215 SF = 13 Occupants 1,250 SF = 36 Occupants
<b># Means of Egress</b>	2 means of egress except as under Chapter 11 -> 43	7.4.1	101-72	2 Means of Egress Provided
<b>Fire Barriers</b>	Residential Business Day Care Electrical Room # of means of egress per NFPA 70	7.4.2.1	101-72	
<b>Fire Barriers</b>		8.3		
<b>Number of Exits</b>	New Apartment Buildings Access to 2 Separated Exit per Dwelling Unit	30.2.4.1	101-248	Access Provided
<b>Detection &amp; Alarm</b>	Four or more stories or > 11 units = Section 9.6	30.3.4.1.1	101-250	Detection, Alarm and Comm System
<b>Exit Access</b>	Common Path of Travel Occupancy E: 100-0 Max Common Path of Travel Occupancy B: 100-0 Max Dead end corridors < 50' w/ sprinkler Common Path of Travel Occupancy R-2: 50-0 Max	16.2.5.3.1 101-159 18'-0" 38.2.5.3.1 101-294 55'-5" 30.2.5.4.2 101-250 48'-6" Max 30.2.5.3.2 101-249 40'-6"		
<b>Exit Access Travel Distance</b>	Occupancy E: With sprinkler - 150' max from room door to nearest exit, 200' from any point to nearest exit Occupancy B: With sprinkler - 200' max Occupancy R: With sprinkler - 125' max within unit - 200' max from unit entry to nearest exit	16.2.6.2, 16.2.6.3 38.2.6.3 101-159 101-294	101-159 101-294	Door: 48'-4", Furthest point: 37'-2" Furthest point: 35'-5" Within Unit: 32'-9", Unit Entry to Exit: 40'-6"

Code Summary	Bayside Anchor
<b>Project address:</b>	81 East Oxford St
<b>Project type:</b>	45 Unit Multifamily Building with ground floor mixed use
<b>Square Foot:</b>	48,000 SF
<b>Building code:</b>	City of Portland IBC 2009 NFPA 101 Maine Human Rights Commission

IBC	ALLOWED BY CODE	CODE REF.	PAGE	AS DRAWN
<b>Occupancy Type</b>	MIXED USE: Residential R-2, Business B, Educational E	304, 305,	24, 35	R-2, B, E
<b>Detailed Requirements</b>	Dwelling Units shall be separated by Fire Partitions per 709 Horizontal Assemblies separating Dwelling Units shall be constructed as Horizontal Assemblies per Section 712	420.2	76	Separated
<b>Allowable Building Height</b>	Type VA: 30'-0" max height (2'-0" max height if sprinklered)	Table 503	80	In Compliance
<b>Allowable Stories, Area</b>	VA: (R-2) Stories: 3, Area: 12,000 (4 Stories & 36,000 when Sprinklered) VA: (B) Stories: 3, Area: 18,000 (4 Stories & 54,000 Sprinklered) VA: (E) Stories: 1, Area: 18,500 (2 Stories & 37,000 Sprinklered)	Table 503	80	4 Stories & 9, 423 SF 1 Story & 1,244 SF 1 Story & 986 SF
<b>Allow Area Increase</b>	Incidental Accessory Occupancies: 100% when sprinklered & 400 SF per 100 SF	Table 508.2.5	85	0% & 400 SF/100 SF
<b>Incidental Accessory Occupancies</b>	Laundry Rooms over 100 SF: 1 Hour of Automatic Sprinkler	Table 508.2.5	85	1 HR & Sprinklered
<b>Req'd Separation of Occupancies</b>	R & E - 1 Hour when Sprinklered R & B - 1 Hour when Sprinklered	Table 508.4	86	1 HR 1 HR
<b>Construction Type</b>	Type VA Sprinklered Primary Structural Frame: 1 Hour Bearing Walls, Exterior & Interior: 1 Hour Non-bearing walls & partitions: 0 Hour Floor Construction & Secondary Members: 1 Hour Roof Construction & Secondary Members: 1 Hour Exception B: Sprinklers may be substituted for 1 hour rating if no floor area or height increase taken, 1 Hour exterior wall rating must be maintained.	Table 601	88	1 HR Fire Resistance Rating (FRR) 1HR FRR 1HR FRR 1 HR FRR
<b>Fire Separation Distance</b>	Occupancy R, B, E Type VA: X < 5 = 2 Hour 5 < X < 10 = 1 Hour 10 < X < 30 = 1 Hour	Table 602	90	1 HR 1 HR 1 HR
<b>Fire Protection: Exterior Walls</b>	Cornices, eave overhangs: 1/2 distance to lot line where all openings are permitted to be to unprotected or automatic sprinkler system per Section 705.8.2 Type V: Projections shall be of any Approved material Exterior Walls: Fire separation > 10'-0" rated from inside, Fire separation < 10'-0" rated from both sides.	705.2.2 705.2.2	97	In Compliance
<b>Maximum Area of Exterior Openings</b>	5-0 to 10-0: Unprotected & sprinklered = 25% 10-0 to 15-0: Unprotected & sprinklered = 45% 15-0 to 20-0: Unprotected & sprinklered = 75% 20-0 & greater: Unprotected & sprinklered = No Limit Parapets: Not Required if wall is permitted to have 25% unprotected openings.	Table 705.8	99	21.80% 21.80% 21.80% 21.80%
<b>Fire Barriers</b>	Exterior Walls as part of rated shaft or exit per 705 only (exception Section 1022.6 Exit Enclosures) Incidental Accessory Occupancies: 1 Hour OR Automatic Fire Extinguishing System: Furnace Rm over 400kbtu/hr, Laundry Rm > 100 SF, Waste Rm > 100 SF	707.4	103	
<b>Shaft Enclosures</b>	Fire Rating: Connecting 4 stories + 2 Hours, <4 stories, <4 stories Shaft FR = Ft of floor being penetrated minimum, 2 hr max Openings protected per Section 715, doors self-closing. Elevator lobby: not required with automatic sprinkler system	Table 708.2.5 708.4 708.4 708.7	85	1 HR Laundry Rm & 1 HR Waste Rm 1 HR Shaft FRR Shaft FRR = 1 HR No openings
<b>Fire Partitions</b>	Dwelling Units: Fire Rating not less than 1 Hour (exception Corridor walls per 1018.1) Separating Dwelling Units horizontally = 1 Hour	709.1, 709.3 712.3	107	1 HR FRR Demising walls 1/2 HR FRR Corridor walls 1 HR FRR No lobby
<b>Fire Door Assemblies</b>	Shaft, Exit fire barriers: 1 hr Wall = 1 hr Door Assembly Other fire barriers: 1 hr Wall = 3/4 hr Door Assembly Fire Partitions: Corridor Walls: 1 hr wall = 1/3 hr door Fire Partitions: Corridor Walls: 1/2 hr wall = 1/3 hr door Other fire partitions: 1 hr wall = 3/4 hr door Other fire partitions: 1/2 hr wall = 1/3 hr door	Table 715.4	114	1 HR Door Assemblies @ 1 HR 3/4 HR Door Assembly No 1 HR Corridor Wall 1/3 HR Door None Shown
<b>Ducts &amp; Air Transfer Openings</b>	Ducts and air transfer openings that penetrate fire partitions shall be protected with fire dampers except in buildings equipped with an automatic sprinkler system and the duct is protected as through penetration	716.5.4 (Ex 1)	120	No Fire Dampers @ corridor walls Ducts and Openings to comply with 708
<b>Concealed Spaces</b>	Horizontal Assemblies: protected by shaft enclosure per 708 Groups R-2: Draftstopping not required with automatic sprinkler	716.6 717.3.2.2	120	No Draftstopping included. Sprinklers installed in combustible concealed spaces
<b>Interior Finishes</b>	R-2: Wall, Ceiling, Exit Enclosures/Passageway Finishes: Class C throughout E, B, Wall & Ceiling Finishes: Class C throughout	Table 803.9 Table 803.9	177	Class C Finishes Throughout Class C Finishes Throughout
<b>Sprinklers</b>	All Group R buildings to be sprinklered Group R - up to & including 4 stories in height = NFPA-13 Quick-response & residential sprinklers: Dwelling & sleeping Units Group R	903.2.8 903.3.1.1 903.3.2	185	Sprinklered
<b>Standpipes</b>	Height: Class C required for Group R if highest story > 30' above lowest level of fire dept vehicle access Class 1 allowed if sprinklered per NFPA 13 or 13R	905.3.1 905.3.1.1	190	Sprinklered Dwelling Units Class 1 Standpipe, See exception Class 1 Standpipe
<b>Fire Alarms &amp; Detection Systems</b>	One manual fire alarm box provided Not required for R-2 unless required by fire code official Group B: Manual alarm not req'd if occupant load < 500 persons Group E: Manual alarm not req'd if occupant load < 50 Group R-2: Manual fire alarm req'd if any dwelling unit 3+ stories above level of exit discharge or > 16 dwelling units Manual fire alarm not req'd with automatic sprinklers & occupant notification upon a sprinkler waterflow Group R-2: Outside of sleeping area, in bedrooms, each story Interconnection required for Group R Visible Alarm in all Group R-2 req'd to have a fire alarm system	907.2 907.2 (Ex 2) 907.2.2 (Ex 1) 907.3 (Ex 1) 907.2.9.1 907.2.9.1 (Ex 2) 907.2.11.2 907.2.11.3 907.5.2.3.4	195	One box None None None 197 198 199 199 203
<b>Occupant Load</b>	Group B: Floor 1: 100 SF/Occupant @ 1,000 SF Group E: Floor 1: Day Care: 35 SF/Occupant @ 1,500 SF Group R-2: Floor 1: 200 SF/Occupant @ 7,162 Floor 2, 3 & 4: 200 SF/Occupant @ 9,800 SF Total Occupancy:	Table 1004.1.1	220	10 Occupants 42 Occupants 36 Occupants 49 Occupants Each 235 Total Occupants
<b>Egress Width</b>	Stairways: 49 / 2 * 0.3" = 17" Other egress: 49 / 2 * 0.2" = 5"	1005.1 1005.1	221	44" Minimum 44" Minimum
<b>Means of Egress Illumination</b>	Illuminated at all times except dwelling units in Group R-2	1006.1 (Ex 2)	221	
<b>Accessible Means of Egress</b>	Elevator not accessible means of egress if <4 stories above discharge	1007.2.1	221	
<b>Door Width</b>	Clear width of 48" stairway not req'd if sprinklered & 1016.1 Area of Refuge not req'd in Group R-2	1007.3 (Ex 2) 1007.3 (Ex 7)	222	44" Minimum No Area of Refuge
<b>Stairways</b>	Minimum 32" Clear Exception: Group R-2 doors not part of Means of Egress Stairway Width: Minimum 44" (36" < 50 occupant load) Headroom stair & landing: 80" clear Max. stair riser = 7", min. stair tread = 11" R-2 Inside Units: 7 3/4" rise, 10" tread Landings top & bottom, min depth = stair width Max Stair Flight Vertical Rise = 12'-0" Stairway to Roof: 4 Story + required, Roof hatch OK Roof hatch to have min. 16sf area, & min. 2' dimension Guard req. if hatch <10' of roof edge, 21"e min. opening	1008.1.1 (Ex 1) 1009.1 (Ex 1) 1009.2 1009.4.2 1009.4.2.5 1009.5 1009.7 1009.13 1009.13.1 1013.6	224	36" Egress Doors 44" Minimum 44" Minimum 80" Clear maintained Risers = 6 13/16" Max, Treads = 11" No Treads inside units 44" Minimum 5'-0" Maximum Roof Hatch 4'x4' Roof Hatch 20' +/- from roof edge to roof hatch
<b>Exit &amp; Exit Access Doorways</b>	2 Exits: B & E: Occupancy > 49; R: Occupancy > 20 Sprinklered Exit Separation shall be > 1/3 maximum diagonal distance	Table 1015.1 1015.2.1 (Ex 2)	237	B - 1 Exit, E - 2 Exits, R - 2 Exits 1/3 Max Diagonal Distance = 55'-4" Exit Separation Dist = 66'-6"
<b>Corridors</b>	Fire Resistance Rating: Occupancy R sprinklered = 0.5 hour Width 44" min, width 36" if occupancy < 50 Width 36" min within a dwelling unit Dead Ends: R-2: Maximum 50'-0" sprinklered	Table 1018.1 1018.2 1018.2.3 1018.4	241	1/2 HR 65" 42" 48'-6"
<b>Number of Exits &amp; Continuity</b>	Group R-2: Single exit in dwelling units occupancy < 20 Min. # of exits per story: Occupant Load 1 - 500 = 2 Exits	1021.1 Ex 4 Table 1021.1	243	1 Exit per unit 2 Exits per story, Min.
<b>Exit Enclosures</b>	Min Fire Rating = 2 hr if connecting >= 4 stories Exterior walls: Non-rated walls exposed <180 degrees 1 Hour rating within 10-0 of non-rated wall. Openings protected 3/4 hour	1022.1 1022.6	244	2 HR 1 HR FRR
<b>Exit Passageways</b>	Width: 44" minimum. Occupancy Load < 50 = 36" minimum. Construction: 1 Hour minimum or not less than Exit Enclosure	1023.2 1023.3	246	44" Minimum 2 HR
<b>Emergency Escape &amp; Rescue</b>	Emergency Egress Opening not required with automatic sprinkler	1029.1 Ex 1		None

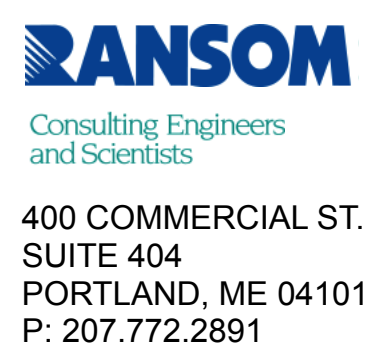
**MAX AREA OF EXT. WALL OPENINGS PER TABLE 705.8 - 5' TO LESS THAN 10' FOR UNPROTECTED, SPRINKLERED**

GROSS AREA: 4,002 SF  
GLAZING AREA: 884 SF  
GLAZING %: 22%  
ALLOWABLE GLAZING %: 25%



**2 NO OPENINGS**  
SCALE: 1/8" = 1'-0"

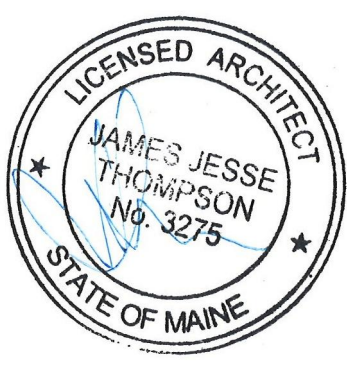
**1 PERCENTAGE OF UNPROTECTED OPENINGS**  
SCALE: 1/8" = 1'-0"



**PRICING DOCUMENTS**

PROJECT: BAYSIDE ANCHOR  
PHDC & AVESTA HOUSING  
81 EAST OXFORD STREET  
PORTLAND, ME

DRAWING: CODE SUMMARY AND ALLOWED OPENINGS  
SCALE: DRAWN BY: JJT  
DATE: 12/18/15 REVISED:



**A005**