

Residence Inn by Marriott

City of Portland

Cumberland County, Maine

CODE REVIEW

A. Summary of the Work:

This project consists of a new two story hotel facility of steel and plank construction containing 179 guestrooms and assembly spaces (Meeting and Breakfast Rooms, Swimming Pool) for the site use of the hotel guests. The first floor also contains retail space. The entire building is sprinkled in accordance with NFPA-13.

- Construction Type: 2A
- Use Group: R-1: Hotel (Second thru Fourth Floors)
 - A-3 Assembly (First Floor Lobby, Food and Meeting Rooms)
 - M: Mercantile

Separate use groups shall be separated from adjoining use groups with a 1 hour fire separation wall (Table 502.3.3 exception 1 sprinkler)

B. Allowable Area Calculations Data:

Use Group:	Construction Type:	Allowable Area:	Allowable Height:	Adjusted Height:
R-1 (IBC 2003)	2A	10,200 sf (Table 503)	4 st 65'-0"	5 st 75'-0"
Area Modification: (Sec. 506.2.506.3)			1 st 20'-0"	
$A_0 = 24,000 + 24,000 \times 4.5 + 24,000 \times 200$				
$A_0 = 36,220$				
Allowed Area:		36,220 sf Max. per Floor		5 st 75'-0"

Use Group:	Construction Type:	Allowable Area:	Allowable Height:	Adjusted Height:
A-3 (IBC 2003)	2A	15,500 sf (Table 503)	3 st 65'-0"	4 st 85'-0"
Area Modification: (Sec. 506.2.506.3)			1 st 20'-0"	
$A_0 = 15,500 + 15,500 \times 4.5 + 15,500 \times 200$				
$A_0 = 51,847$				
Allowed Area:		51,847 sf Max. per Floor		4 st 85'-0"

C. Building Areas Per Floor:

Floor	Actual Gross Area per Floor	Allowable Gross Area per Floor (Table 503)	Measure Allowable Area of 4 stories (Section 504.2)
First	6,817 sq. ft.	36,720 sq. ft.	
Second	26,001 sq. ft.		
Third	26,001 sq. ft.		
Fourth	26,001 sq. ft.		
Fifth	26,001 sq. ft.		
Total	110,821 sq. ft.	146,880 sq. ft.	

Floor	Actual Gross Area per Floor	Allowable Gross Area per Floor (Table 503)
A-3	19,063 sq. ft.	51,847 sq. ft.
First	4,233 sq. ft.	per floor - 4 allowed floors
Second	4,233 sq. ft.	
Total	23,316 sq. ft.	207,388 sq. ft.

Floor	Actual Gross Area per Floor	Allowable Gross Area per Floor (Table 503)
M	1,987 sq. ft.	71,947 sq. ft.
First (only)		per floor - 5 allowed floors
Total	1,987 sq. ft.	359,735 sq. ft.

D. Public Toilet Room Design:

Use Group	Public Toilets	Other Facilities
Hotel	132 design occupant load	Required
First Floor	132 design occupant load	1 Drinking Fountain / 150
Assembly	2 WC per 51-150 people	2 Drinking Fountain Required
Bar / lounge and Meeting areas	1 Lav. per 150 people	1 Service Sink Required
25 Employees	1 Lav. per 150 people	Provided
Total 264	2 WC and 1 unisex provided	1 H11 LO Drinking Fountain Provided
Second through fifth floors	1 Lav. per 3 provided	1 Service Sink Provided
Assembly	N/A	

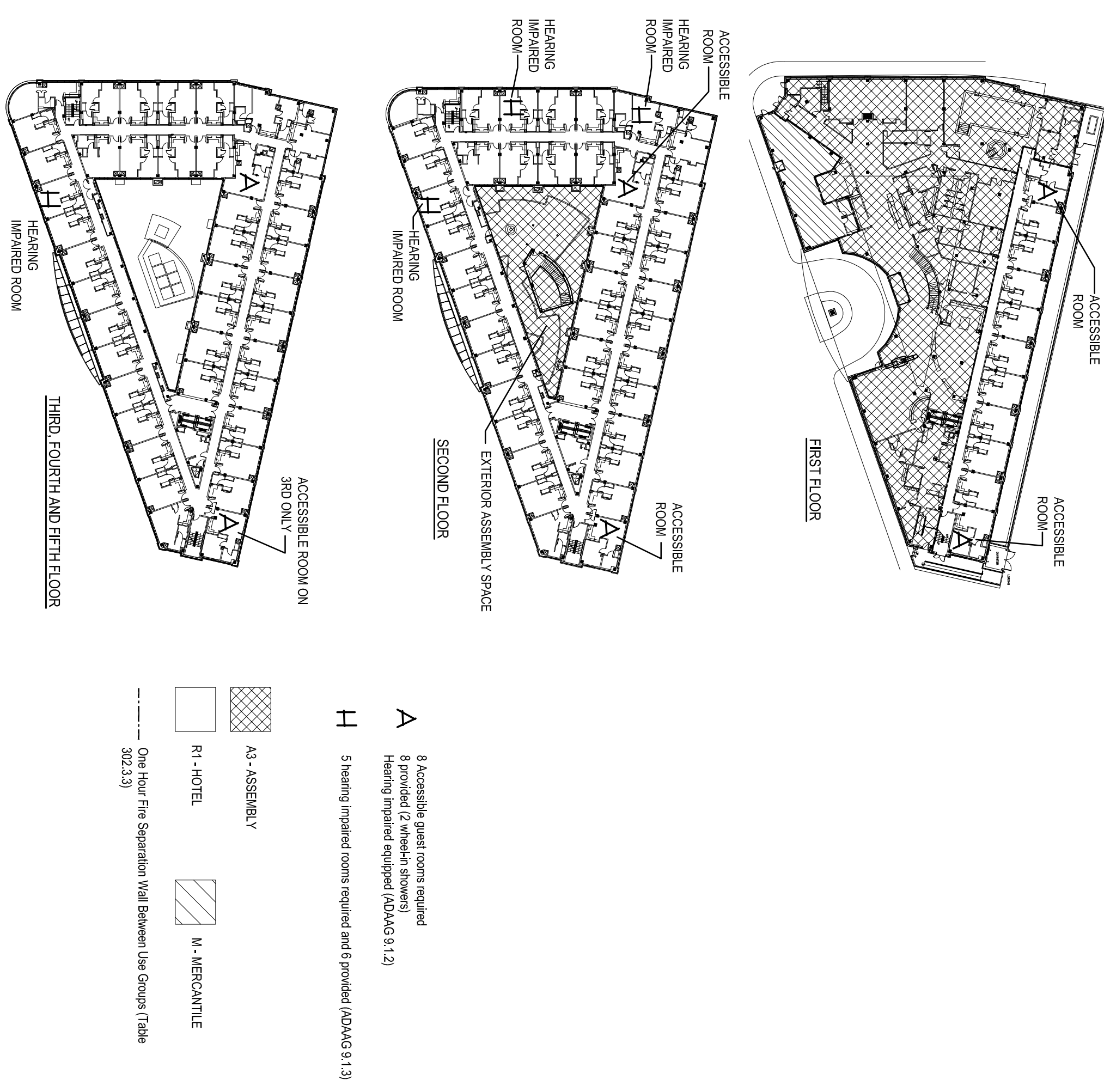
Use Group	Public Toilets	Other Facilities
Mercantile	15 design occupant load	Required
First Floor	15 design occupant load	1 WC per 1-15 people
Merchandise	30 occupants	0.1 unisex per 40 people
Man and Women	1.1 Lav. per 40 people	1 Service Sink and Women
11WC required		11WC provided
11WC provided		11WC provided
11Lav. provided		11Lav. provided

E. Construction Summary:

Structure Element	Rating
Structural Frame	1 hour
Bearing Walls - Exterior	1 hour
Bearing Walls - Interior	1 hour
Nonbearing Walls - Exterior (Table 602)	1 hour
(4" to 20" thick)	
Floor Construction	1 hour
Roof Construction	1 hour

Area	Rating
Furnace Rooms with Equipment over 400,000 BTU Input	1 hour or automatic sprinkler
Boilers over 15 PSI and 10 HP	1 hour or automatic sprinkler
Laundry Rooms over 100 S.F.	1 hour or automatic sprinkler
Storage Rooms over 100 S.F.	1 hour or automatic sprinkler
Water and linen collection rooms over 100 S.F.	1 hour
Boiler and furnace rooms	Automatic sprinkler
Storage rooms	Automatic sprinkler and smoke separation walls

Building Element	Rating
R-1 Sleeping Unit Separation (R-1,M to A-3 Table 502.3.3)	1 hour
Separated Uses (Except 1 Sprinkler)	1 hour
Stair exit enclosure shafts	2 hour
Elevator shafts	2 hour
All other shafts (connecting 4 stories 707.4)	2 hour
Exit access corridors (table 1016.1) with sprinkler Assembly and Mercantile Residential	1 hour
All other ratings to comply with Table 715.3	1/2 hour
Interior finishes (Table 803.5.1 Sprinkler)	R-1
Vertical Egress and Passageways	Class B
Rooms or enclosed areas	Class C
Roof Covering:	Class B
Roof Material Classification (sec. 1505.1)	Class C



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