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MEANS OF EGRESS - 2ND, 3RD, & 4TH FLOOR (NON-SEPARATED USE)

RESIDENTIAL OCCUPANCY (MOST RESTRICTIVE)

EGRESS COMPONENT	REQUIRED *	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2 PER FLOOR	2	NFPA 7.4.1.1
TRAVEL DISTANCE:			
COMMON PATH OF TRAVEL	75' MAX.	<75'	NFPA TABLE A7.6
EXIT ACCESS	250' MAX.	<250'	NFPA TABLE A7.6
DEAD END CORRIDOR	50' MAX.	<20'	NFPA TABLE A7.6
CORRIDOR WIDTH	44" MIN.	>44"	NFPA 101-2009 30.2.3.3
EGRESS DOOR WIDTH	32" (CLEAR)	34" (CLEAR)	NFPA 101-2009 7.2.1.2.3.2
EGRESS STAIR WIDTH	44" MIN.	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)
* - SPRINKLERED BUILDING			

MEANS OF EGRESS - FIRST FLOOR (NON-SEPARATED USE)

ASSEMBLY OCCUPANCY (MOST RESTRICTIVE)

EGRESS COMPONENT	REQUIRED *	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	3 PER FLOOR	7	NFPA 7.4.1.1
TRAVEL DISTANCE:			
COMMON PATH OF TRAVEL	75' MAX.	<75'	NFPA TABLE A7.6
EXIT ACCESS	250' MAX.	<250'	NFPA TABLE A7.6
DEAD END CORRIDOR	50' / 75' MAX.	<20'	NFPA TABLE A7.6
CORRIDOR WIDTH	44" MIN.	>44"	NFPA 101-2009 30.2.3.3
EGRESS DOOR WIDTH	32" (CLEAR)	34" (CLEAR)	NFPA 101-2009 7.2.1.2.3.2
EGRESS STAIR WIDTH	44" MIN.	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)
* - SPRINKLERED BUILDING			

OCCUPANT LOADS

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
FIRST	1LB	LOBBY	ASSEMBLY	5,040	15 NET	336
	1LR	LIBRARY				
	1BK	BREAKFAST AREA				
	1SV	SERVING				
	1LG	LOUNGE				
	1PR	PREP ROOM	ASSEMBLY	421	100 GROSS	5
	1EX	EXERCISE	ASSEMBLY	1400	50 GROSS	28
	1FD	FRONT DESK	BUSINESS	607	100 GROSS	7
	1VL	VALET				
	1GM	GEN. MGR.				
	1AGM	AGM				
	1WR	WORK ROOM				
	1LR	LAUNDRY	BUSINESS	750	100 GROSS	8
	1BR	BAR	BUSINESS	182	100 GROSS	2
	1CM1	COMMUNITY RM	ASSEMBLY	2,736	15 NET	183
	1CM2	COMMUNITY RM				
	1MG1	MEETING				
	1MG2	MEETING				
	1MG3	MEETING				
	1RC	RECEIVING	STORAGE	1530	500 GROSS	4
	1CS	COLD STORAGE				
	1SR1	STORAGE				
	1SR2	STORAGE				
	1SR3	STORAGE				
	1SR4	STORAGE				
	1SR5	STORAGE				
	1SR6	STORAGE				
	1SR7	STORAGE				
	1SR8	STORAGE				
	1SR9	STORAGE				
	1LN	LINEN				
	1LC	LINEN				
	1MC	MECHANICAL	INCIDENTAL	700	300 GROSS	3
TOTAL FIRST FLOOR OCCUPANCY LOAD						576

(NFPA 101 TABLE 7.3.1.2)

OCCUPANT LOADS

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
SECOND	202 - 251	GUEST ROOMS	RESIDENTIAL	9,604	200 GROSS	49
	2HK 2SR	HOUSE KEEP STORAGE	STORAGE	271	500 GROSS	1
	2UT 2MC	UTILITY MECHANICAL	INCIDENTAL	896	300 GROSS	3
TOTAL SECOND FLOOR OCCUPANCY LOAD						53

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
THIRD	301 - 352	GUEST ROOMS	RESIDENTIAL	14,310	200 GROSS	72
	3HK 3SR	HOUSE KEEP STORAGE	STORAGE	271	500 GROSS	1
	3UT	UTILITY	INCIDENTAL	224	300 GROSS	1
TOTAL THIRD FLOOR OCCUPANCY LOAD						74

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
FOURTH	401 - 452	GUEST ROOMS	RESIDENTIAL	14,310	200 GROSS	72
	4HK 4SR	HOUSE KEEP STORAGE	STORAGE	271	500 GROSS	1
	4UT	UTILITY	INCIDENTAL	224	300 GROSS	1
TOTAL FOURTH FLOOR OCCUPANCY LOAD						74

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
FIFTH	501 - 552	GUEST ROOMS	RESIDENTIAL	14,310	200 GROSS	72
	5HK 5SR	HOUSE KEEP STORAGE	STORAGE	271	500 GROSS	1
	5UT	UTILITY	INCIDENTAL	224	300 GROSS	1
TOTAL FIFTH FLOOR OCCUPANCY LOAD						74

FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
SIXTH	601 - 652	GUEST ROOMS	RESIDENTIAL	14,310	200 GROSS	72
	6HK 6SR	HOUSE KEEP STORAGE	STORAGE	271	500 GROSS	1
	6UT	UTILITY	INCIDENTAL	224	300 GROSS	1
TOTAL SIXTH FLOOR OCCUPANCY LOAD						74

CODE ANALYSIS

CODE SUMMARY: RETAIL/RESIDENTIAL
THE BUILDING IS DESIGNED IN COMPLIANCE WITH THE MAINE UNIFORM BUILDING AND ENERGY CODE (MUBEC) WITH AMENDMENTS WHICH INCLUDES IBC 2009, IECC 2009, MAINE STATE PLUMBING CODE, NEC 2011, STATE FIRE CODE SAF-C 6000, NFPA 101-2009, NFPA 1, AND ADAAG, ICC/ANSI A117.1-2003, ASME A17.1, AND ALL LOCAL, STATE AND FEDERAL CODES.

BUILDING DATA:
6 STORY

CONSTRUCTION TYPE IA LEVEL 1 & TYPE IIB LEVELS 2-6 (FULLY SUPERVISED AUTOMATIC SPRINKLER SYSTEM, IN ACCORDANCE WITH NFPA 13, NOT 13R) (IBC SECTION 903.3.1.1).

OCCUPANCY: MIXED OCCUPANCIES (SEE SECTION 508.1)

THE FIRST FLOOR CONTAINS USE GROUPS A-2, A-3, B, AND ACCESSORY USE S. THE FLOOR HAS BEEN DESIGNED TO THE MOST RESTRICTIVE USE GROUP (A2) AND COMBINED INTO NON-SEPARATED USES AREA - ELEVATOR 1 TO COMPLY WITH STATE OF MAINE ELEVATOR & TRAMWAY SAFETY PROGRAM LAWS & RULES, CHAPTER 513 TO ACCOMMODATE AN AMBULANCE STRETCHER 24"x76", IN THE HORIZONTAL, OPEN POSITION. THE ENTIRE FIRST FLOOR HAS BEEN SEPARATED FROM THE SECOND FLOOR BY A 3 HOUR FIRE-RESISTIVE HORIZONTAL ASSEMBLY PER IBC 509.2.

THE SECOND FLOOR CONTAINS USE GROUPS R-1, ACCESSORY USE S. SEPARATION IS NOT REQUIRED FOR AN ACCESSORY USE WITH AN AGGREGATE AREA LESS THAN 10% OF THE MAIN USE GROUP. GROUP R-1 OCCUPANCY MEETS THE HEIGHT AND AREA LIMITATIONS FOR ITS USE GROUP (IBC TABLE 503). INCIDENTAL ACCESSORY OCCUPANCY AREAS HAVE BEEN PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC TABLE 508.2.5. A HORIZONTAL ASSEMBLY PER IBC 712.3 EXCEPTION SEPARATES THE 3RD FLOOR.

THE THIRD, FOURTH, FIFTH AND SIXTH FLOORS CONTAIN USE GROUPS R-1 & ACCESSORY USE S. SEPARATION IS NOT REQUIRED FOR AN ACCESSORY USE WITH AN AGGREGATE AREA LESS THAN 10% OF THE MAIN USE GROUP. GROUP R-1 OCCUPANCY MEETS THE HEIGHT AND AREA LIMITATIONS FOR ITS USE GROUP (IBC TABLE 503). INCIDENTAL ACCESSORY OCCUPANCY AREAS HAVE BEEN PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC TABLE 508.2.5. A HORIZONTAL ASSEMBLY PER IBC 712.3 EXCEPTION SEPARATES EACH FLOOR

FIRE PROTECTION FEATURES:
THE ENTIRE BUILDING IS PROVIDED WITH A SUPERVISED FULLY AUTOMATIC FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH IBC SECTION 903.3.1.1 (NFPA 13). A CLASS 1 STANDPIPE IS LOCATED IN EACH STAIRWELL. FIRE ALARM, SMOKE, AND CARBON MONOXIDE DETECTION SYSTEMS ARE PROVIDE PER APPLICABLE CODES.

AREA MODIFICATION

Area Modification to IBC Table 506

Total building perimeter = 720 ft Min. width of public way or open space = 30 ft

Open building perimeter = 240 (North) + 99 (East) + 220 (South) + 99 (West) = 658 (Total)

Perimeter ratio = 0.914 (Open perim. / perim.)

Area increase - frontage = .664 (% Open perm - 0.25%) x W/30

% of Allowable tabular area, At (Table 503)		100.00 %
% Increase for frontage, If (506.2)	+	66.40 %
% Increase for automatic sprinklers, Is (506.3)	+	200.00 %
Total percentage factor	=	366.40 %

Area per story increase 3.66 (Total percentage factor / 100%)

HEIGHT MODIFICATION

Height modification to IBC 504.2

Sprinkler Increase = Building height increased by 20ft
Maximum no. stories increased by 1

(Buildings equipped with automatic sprinkler system per IBC 903.1.1)

MIXED OCCUPANCIES

Mixed Occupancies Nonseparated - IBC Section 506.5.2 & 508.3.2

Story	Group	Tabular Bldg Area / Story	Actual Bldg Area (s.f.)	Allowable Bldg Area / Story	Area Ratios	Actual height	Allowable height
1	A-2	UNLIMITED	19,458	UNLIMITED	N/A	14 ft, 1 stories	UNLIMITED

Permitted types of construction IA, IB, IIA,IIB, IIIA, IIIB, IV, VA Type specified IA

Story	Group	Tabular Bldg Area / Story	Actual Bldg Area (s.f.)	Allowable Bldg Area / Story	Area Ratios	Actual height	Allowable height
2	R-1	16,000	14,165	53,600	.264	10 ft, 1 stories	75ft, 5 stories
3	R-1	16,000	18,088	58,560	.309	20 ft, 2 stories	75ft, 5 stories
4	R-1	16,000	18,088	58,560	.309	30 ft, 3 stories	75ft, 5 stories
5	R-1	16,000	18,088	58,560	.309	40 ft, 4 stories	75ft, 5 stories
6	R-1	16,000	18,088	58,560	.309	51 ft, 5 stories	75ft, 5 stories
Total Firs 2-6			86,517 s.f.		1.5 ;	Total sum of ratios	</= 3

Permitted types of construction IA, IB, IIA,IIB, IIIA, IIIB, IV, VA Type specified IIB

Total Bldg		105,975 s.f.		

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS

FLOOR 1 -
TYPE IA CONSTRUCTION (IBC TABLE 601 & TABLE 602)
TYPE I (332) CONSTRUCTION (NFPA 101 A.8.2.1.2)

BUILDING ELEMENT	REQUIRED	PROVIDED
STRUCTURAL FRAME	3	3
BEARING WALLS		
EXTERIOR*	3	0
INTERIOR	3	0
NONBEARING WALLS		
EXTERIOR*	0	0
FIRE SEPARATION DISTANCE 10< X <30 (SEE PLANS)	1	1
INTERIOR	0	0
FLOOR CONSTRUCTION	2	SLAB ON GRADE
ROOF CONSTRUCTION	1 1/2	HORIZ. SEPERATION 3 HRS

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS

FLOORS 2, 3, 4, 5, 6
TYPE 2B CONSTRUCTION (IBC TABLE 601 & TABLE 602)
TYPE II (000) CONSTRUCTION (NFPA 101 A.8.2.1.2)

BUILDING ELEMENT	REQUIRED	PROVIDED
STRUCTURAL FRAME	0	0
BEARING WALLS		
EXTERIOR*	0	0
INTERIOR	0	0
NONBEARING WALLS		
EXTERIOR*	0	0
INTERIOR	0	0
FLOOR CONSTRUCTION	0	0
ROOF CONSTRUCTION	0	0

INTERIOR WALL & CEILING FINISH REQUIREMENTS - IBC TABLE 803.9

USE GROUP	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
A2-RESTAURANTS	B	B	C
A3-MEETING ROOM	B	B	C
R1-HOTEL	B	C	C

WALL AND CEILING FINISHES SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723
CLASS A: FLAME SPREAD 0-25; SMOKE-DEVELOPMENT 0-450
CLASS B: FLAME SPREAD 26-75; SMOKE-DEVELOPMENT 0-450
CLASS C: FLAME SPREAD 76-200; SMOKE-DEVELOPMENT 0-450

INTERIOR FLOOR FINISH REQUIREMENTS - IBC 804.1

NOTE: INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS IN EXIT ENCLOSURES, EXIT PASSAGEWAYS AND CORRIDORS SHALL BE CLASS I, AS TESTED IN ACCORDANCE WITH AND CLASSIFIED PER NFPA 253 .

INTERIOR TRIM REQUIREMENTS - IBC 806.5

INTERIOR TRIM SHALL MEET CLASS C FLAME SPREAD AND SMOKE-DEVELOPED INDEX PER ASTM E 84 OR UL 723 - MAX 10% OF WALL/CEILING AREA.

MEANS OF EGRESS - PER OCCUPANCY, SPRINKLERED

MEANS OF EGRESS - ASSEMBLY OCCUPANCY

EGRESS COMPONENT	REQUIRED	CODE REFERENCE	
NUMBER OF EXITS	2	NFPA 7.4.1.1	IBC TABLE 1015.1/1021.1
EXIT ACCESS TRAVEL DISTANCE:	250' MAX.	NFPA TABLE A7.6	IBC TABLE 1016.1/1028.7
COMMON PATH OF TRAVEL	75' MAX.	NFPA TABLE A7.6	IBC 1014.3
DEAD END CORRIDOR	20' MAX.	NFPA TABLE A7.6	IBC 1018.4
CORRIDOR WIDTH	44" MIN.	NFPA 101-2009 30.2.3.3	IBC 1005.1/1018.2
EGRESS DOOR WIDTH	32" (CLEAR - MIN.)	NFPA 101-2009 7.2.1.2.3.2	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)	IBC 1005.1/1009.1

MEANS OF EGRESS - RESIDENTIAL OCCUPANCY

EGRESS COMPONENT	REQUIRED	CODE REFERENCE	
NUMBER OF EXITS	2 PER FLOOR	NFPA 7.4.1.1	IBC TABLE 1015.1/1021.1
EXIT ACCESS TRAVEL DISTANCE:	250' MAX.	NFPA TABLE A7.6	IBC TABLE 1016.1
COMMON PATH OF TRAVEL	75' MAX.	NFPA TABLE A7.6	IBC 1014.3
DEAD END CORRIDOR	50' MAX.	NFPA TABLE A7.6	IBC 1018.4 Exception 2
CORRIDOR WIDTH	44" MIN.	NFPA 101-2009 30.2.3.3	IBC 1005.1/1018.2
EGRESS DOOR WIDTH	32" (CLEAR)	NFPA 101-2990 7.2.1.2.3.2	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)	IBC 1005.1

MEANS OF EGRESS - BUSINESS OCCUPANCY

EGRESS COMPONENT	REQUIRED	CODE REFERENCE	
NUMBER OF EXITS	2 PER FLOOR	NFPA 7.4.1.1	IBC TABLE 1015.1/1021.1
EXIT ACCESS TRAVEL DISTANCE:	300' MAX.	NFPA TABLE A7.6	IBC TABLE 1016.1
COMMON PATH OF TRAVEL	100' MAX.	NFPA TABLE A7.6	IBC 1014.3 Exception 1
DEAD END CORRIDOR	50' MAX.	NFPA TABLE A7.6	IBC 1018.4 Exception 2
CORRIDOR WIDTH	44" MIN.	NFPA 101-2009 30.2.3.3	IBC 1005.1/1018.2
EGRESS DOOR WIDTH	32" (CLEAR)	NFPA 101-2990 7.2.1.2.3.2	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)	IBC 1005.1/1009.1

MEANS OF EGRESS - STORAGE OCCUPANCY (ORDINARY HAZARD)

EGRESS COMPONENT	REQUIRED	CODE REFERENCE	
NUMBER OF EXITS	2 PER FLOOR	NFPA 7.4.1.1	IBC TABLE 1015.1/1021.1
EXIT ACCESS TRAVEL DISTANCE:	400' MAX.	NFPA TABLE A7.6	IBC TABLE 1016.1
COMMON PATH OF TRAVEL	100' MAX.	NFPA TABLE A7.6	IBC 1014.3 Exception 1
DEAD END CORRIDOR	30' MAX.	NFPA TABLE A7.6	IBC 1018.4 Exception 2
CORRIDOR WIDTH	44" MIN.	NFPA 101-2009 30.2.3.3	IBC 1005.1/1018.2
EGRESS DOOR WIDTH	32" (CLEAR)	NFPA 101-2990 7.2.1.2.3.2	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	NFPA TABLE 7.2.2.2.1.2(B)	IBC 1005.1/1009.1

MEANS OF EGRESS - EXIT PASSAGEWAY & EXIT DISCHARGE

IBC 1023 STAIR 1 UTILIZES EXIT PASSAGEWAY TO PUBLIC WAY.
WIDTH > 44", MAINTAINS 2 HR RATING OF STAIRWAY EXIT ENCLOSURE,
TERMINATES AT PUBLIC WAY, USED ONLY AS MEANS OF EGRESS

IBC 1027 STAIR 2 EXIT ENCLOSURE EGRESS THROUGH AREA ON THE LEVEL
OF EXIT DISCHARGE AS ALLOWED BY:
1027.1 EXCEPTION 1: LESS THAN 50% OF NUMBER & CAPACITY OF EXIT ENCLOSURES,
1.1 FREE & UNOBSTRUCTED PASSAGE TO EXIT DOORS
1.2 SEPARATED FROM AREAS BELOW (NON AS 1ST FLOOR SLAB ON GRADE)
1.3 ENTIRE AREA PROTECTED BY AUTOMATIC SPRINKLER SYSTEM

GYPSUM BOARD MATERIALS AND ACCESSORIES

GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL COMPLY WITH THE FOLLOWING:

ACCESSORIES FOR GYPSUM BOARD	ASTM C 1047
ADHESIVES FOR FASTENING GYPSUM WALLBOARD	ASTM C 557
EXTERIOR SOFFIT BOARD	ASTM C 931
FIBER-REINFORCED GYPSUM PANEL	ASTM C 1278
GLASS MAT GYPSUM BACKING PANEL	ASTM C 1178
GLASS MAT GYPSUM SUBSTRATE	ASTM C 1177
GYPSUM BACKING BOARD AND GYPSUM SHAFTLINER BOARD	ASTM C 442
GYPSUM CEILING BOARD	ASTM C 1395
GYPSUM SHEATHING	ASTM C 79
GYPSUM WALLBOARD	ASTM C 36
JOINT REINFORCING TAPE AND COMPOUND	ASTM C 474; C 475
STEEL SCREWS	ASTM C 954; C 1002
STEEL STUDS, NONLOAD BEARING	ASTM C 645
STANDARD SPECIFICATION FOR GYPSUM BOARD	ASTM C 1396
TESTING GYPSUM AND GYPSUM PRODUCTS	ASTM C 22; C 472; C 473
WATER-RESISTANT GYPSUM BACKING BOARD	ASTM C 630

GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WTH THE FOLLOWING:

GYPSUM BOARD	GA-216; ASTM C 840
GYPSUM SHEATHING	ASTM C 1280
STEEL FRAMING FOR GYPSUM BOARDS	ASTM C 754; C 1007

GUEST ROOM COUNT BREAKDOWN

	GRD FL	2ND FLR	3RD FLR	4TH FLR	5TH FLR	6TH FLR	TOTAL
ONE BEDROOM		1	1	2	2	2	8
KING STUDIO		12	21	21	21	22	96
QUEEN QUEEN STUDIO		12	13	13	13	14	64
ACCESSIBLE KING STUDIO			1	1	1		3
ACCESSIBLE QUEEN QUEEN STUDIO		1	1	1	1		4
ACCESSIBLE ONE BEDROOM			1				1
TOTAL		26	38	38	38	38	178

ACCESSIBLE ROOM MATRIX - 2010 ADA TABLE 224.2

REQUIRED BATHING TYPE	REQ'D	PROV'D	ROOM NUMBERS
ACCESSIBLE ROLL-IN SHOWER	2	2	308,408
ACCESSIBLE TUB or SHOWER	6	6	208, 344, 346, 446, 508, 546
TOTAL	8	8	

ACCESSIBLE ROOM MATRIX - COMMUNICATION FEATURES 2010 ADA TABLE 224.4

ROOM TYPE	REQ'D	PROV'D	ROOM NUMBERS
ONE BEDROOM		1	344
KING STUDIO		6	204,249,304,404,504,604
QUEEN QUEEN STUDIO		7	308,214,236,336,436,536,636,
TOTAL	14	14	

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LICENSED ARCHITECT
10-21-16
KEITH A KELLEY
No. 4212
STATE OF MAINE

AC HOTELS by MARRIOTT

Fore Street / Hancock Street / Thames Street
Portland, Maine

REVISION:
10-12-16 PLAN REVIEWER COMMENTS
. . .

ISSUED:
08-12-16 FOUNDATION & STEEL PERMIT
10-21-16 BUILDING SHELL PERMIT
. .

project architect: KAK
drawn by: DLS

LIFE SAFETY CODE INFORMATION

sheet number:
LS1.01

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