Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 07/12/13

MEANS OF EGRESS - ASSEMBLY OCCUPANCY			
EGRESS COMPONENT	REQUIRED	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2 PER FLOOR	2 PER FLOOR	IBC TABLE 1021.1/NFPA 7.4.1.1
TRAVEL DISTANCE	250' MAX.	<250'	NFPA 101-2009 TABLE A7.6
COMMON PATH OF TRAVEL	20'/75' MAX.	<20'	NFPA 101-2009 TABLE A7.6
DEAD END CORRIDOR	20' MAX.	<20'	NFPA 101-2009 TABLE A7.6
CORRIDOR WIDTH	44" MIN.	60"	IBC 1005.1/NFPA 12.2.3.8
EGRESS DOOR WIDTH	36"	36"	IBC 1005.1/NFPA 7.2.1.2.4(4)
EGRESS STAIR WIDTH	44" MIN.	50"	IBC 1005.1/NFPA 7.2.2.2.1.2(B)

MEANS OF EGRESS - RESIDENTIAL OCCUPANCY			
EGRESS COMPONENT	REQUIRED	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2 PER FLOOR	2 PER FLOOR	IBC TABLE 1021.1/NFPA 7.4.1.1
TRAVEL DISTANCE	250' MAX.	<250'	NFPA 101-2009 TABLE A7.6
200' MAX. FROM APT. OR HOTEL ROOM ENTRANCE DOOR TO EXIT			NFPA 101-28.2.6.3.3.1 & 30.2.6.3.2
COMMON PATH OF TRAVEL	50' MAX.	<50'	NFPA 101-2009 TABLE A7.6
DEAD END CORRIDOR	50' MAX.	<50'	NFPA 101-2009 TABLE A7.6
CORRIDOR WIDTH	44" MIN.	60"	IBC 1005.1/NFPA 30.2.3.3
EGRESS DOOR WIDTH	36"	36"	IBC 1005.1/NFPA 7.2.1.2.4(4)
EGRESS STAIR WIDTH	44" MIN.	50"	IBC 1005.1/NFPA 7.2.2.2.1.2(B)

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS-IBC TABLE 601		
TYPE IA CONSTRUCTION - FLOOR 1		
BUILDING ELEMENT	REQUIRED	PROVIDED
STRUCTURAL FRAME	3	3
BEARING WALLS		
EXTERIOR	3	N/A
INTERIOR	3	N/A
NONBEARING WALLS		
EXTERIOR	0	1 HR. WHERE NOTED ON PLANS DUE TO SEPARATION DISTANCE
INTERIOR	0	N/A
FLOOR CONSTRUCTION	2	SLAB ON GRADE
ROOF CONSTRUCTION	1 1/2	HORIZ. SEPARATION-3HRS.

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS-IBC TABLE 601		
TYPE IIB CONSTRUCTION - FLOORS 2, 3, 4, 5 & 6		
BUILDING ELEMENT	REQUIRED	PROVIDED
STRUCTURAL FRAME	0	0
BEARING WALLS		
EXTERIOR	0	N/A
INTERIOR	0	N/A
NONBEARING WALLS		
EXTERIOR	0	1 HR. WHERE NOTED ON PLANS DUE TO SEPARATION DISTANCE
INTERIOR	0	N/A
FLOOR CONSTRUCTION	0	0
ROOF CONSTRUCTION	0	0

INTERIOR FINISH REQUIREMENTS (IBC TABLE 803.9)			
USE GROUP	VERTICAL EXITS AND EXIT PASSAGEWAYS	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	ROOMS AND ENCLOSED SPACES
A2-RESTAURANTS	B	B	C
A3-MEETING ROOM	B	B	C
R1-HOTEL	B	C	C
R2-APARTMENTS	C	C	C

WALL AND CEILING FINISHES SHALL BE TESTED IN ACCORDANCE WITH ASTM E 84
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

DECORATIVE MATERIALS SHALL MEET NFPA 101 IN ACCORDANCE WITH IBC SECTION 806.2 OR BE NONCOMBUSTIBLE
DECORATIVE TRIM SHALL MEET IBC SEGITON 806.5.

NOTE: INTERIOR FLOOR FINISHES IN VERTICAL EXITS, EXIT PASSAGEWAYS AND EXIT ACCESS CORRIDORS SHALL BE CLASS II AS CLASSIFIED PER NFPA 253 AND TESTED IN ACCORDANCE WITH ASTM E 648.

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 WITH THE FOLLOWING:

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

EMERGENCY LIGHTING SHALL BE PROVIDED FOR THIS ENTIRE BUILDING AS REQUIRED BY IBC 2009 SECTION 1006.1 AND BE POWERED BY EMERGENCY GENERATOR AS REQUIRED BY SECTION 1006.3

HOTEL AND RESIDENTIAL ELEVATORS ARE CONSIDERED TO BE PART OF THE ACCESSIBLE MEANS OF EGRESS, THEY SHALL CONFORM TO THE REQUIREMENTS OF IBC SECTIONS 1007.2.1, 1007.4 AND SECTION 2.27 OF ASME A17.1.

OCCUPANT LOAD BY FLOOR
NFPA TABLE 7.3.1.2

ASSEMBLY AREAS SHALL HAVE THEIR MAX. ALLOWABLE OCCUPANT LOAD POSTED NEAR THE ROOM'S MAIN EXIT DOORWAY.

FLOOR LEVEL	AREA	OCCUPANCY	FLOOR AREA	S.F./PERSON	OCCUPANT LOAD (CALCULATED)	OCCUPANT LOAD (ACTUAL)	TOTAL/ FLOOR (ACTUAL)
FIRST FLOOR	BUSINESS AREAS	BUSINESS (ACCESSORY)	452	100 GROSS	4.5	4	168
	LOBBY	ASSEMBLY	3,020	15 NET	201	50	
	SWIMMING POOL-WATER	ASSEMBLY	275	50 NET	5.5	6	
	SWIMMING POOL-DECK	ASSEMBLY	994	15 NET	66	66	
	HOTEL RESTAURANT	ASSEMBLY	1,414	15 NET	94	42 SEATS	
	RESTAURANT-(PROPOSED)	ASSEMBLY	4,485	15 NET	299	299	
SECOND FLOOR	HOTEL	RESIDENTIAL	15,623	200 GROSS	78	78	182
	MEETING ROOM	A-3 (ACCESSORY)	1,276	15 NET	85	85	
	LAUNDRY/BREAK RM/TOILETS	RESIDENTIAL	1865	100 GROSS	19	19	
THIRD FLOOR	HOTEL	RESIDENTIAL	18,760	200 GROSS	94	80	94
FOURTH FLOOR	HOTEL	RESIDENTIAL	18,760	200 GROSS	94	80	94
FIFTH FLOOR	HOTEL	RESIDENTIAL	18,760	200 GROSS	94	80	94
FIFTH FLOOR	APARTMENTS	RESIDENTIAL	18,760	200 GROSS	94	80	94

PLUMBING FIXTURE REQUIREMENTS
MAINE STATE PLUMBING CODE-2009 UPC Table 4-1

USE GROUP	FLOOR LEVEL	OCCUPANT LOAD	WATER CLOSETS				LAVATORIES			DRINKING FOUNTAINS		SERVICE SINK
			RATIO	M	RATIO	W	RATIO	M	W	RATIO	FIXTURES	
UNFINISHED SPACE	1	-----	-----	-----	-----	-----	-----	-----		-----		
A-2 HOTEL CAFE/LOUNGE	1	80 SEATS	1 PER 50	1 WC & 1 UR REQUIRED	1 PER 50	2 WC REQUIRED	1 PER 150-M 1 PER 150-W	1 REQUIRED @ EACH		0 REQUIRED	-----	1 PER BUILDING
MEETING ROOMS	2	121 PEOPLE	1 PER 100	1 WC & 1 UR REQUIRED	SAME AS MALES (NOTE 14)	2 WC REQUIRED	1 PER 200-M 1 PER 200-W	1 REQUIRED @ EACH		1/150	1 REQUIRED	
R-1 & R-2 RESIDENTIAL	2-6	--		1 PER UNIT			1 PER UNIT			--	--	1 KITCHEN SINK PER APARTMENT

BUILDING INFORMATION

APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
MAINE UNIFORM BUILDING AND ENERGY CODES-COMMERCIAL BUILDING CODE
INTERNATIONAL BUILDING CODE 2009
NFPA 101 LIFE SAFETY CODE 2009
AMERICANS WITH DISABILITIES ACT ARCHITECTURAL GUIDELINES (ADAAG)
ICC/ANSI A117.1-2003
MAINE HUMAN RIGHTS LAWS
MAINE STATE PLUMBING CODE-LATEST EDITION
NATIONAL ELECTRIC CODE-LATEST EDITION
ALL LOCAL, STATE AND FEDERAL CODES TO INCLUDE CITY OF PORTLAND, CODE OF ORDINANCES

USE GROUPS: IBC- R-1 HOTEL: FLOORS 2-5
R-2 APARTMENTS: FLOOR 6
A-2 RESTAURANTS/HOTEL LOBBY: FLOOR 1
A-3 MEETING ROOM (ACCESSORY USE TO HOTEL): FLOOR 2

NFPA 101- RESIDENTIAL-HOTEL
RESIDENTIAL-APARTMENTS
ASSEMBLY-RESTAURANTS
ASSEMBLY-MEETING ROOM

GENERAL HEIGHT AND AREA LIMITATIONS (SECTION 503):
FLOOR 1: USE GROUP A-2 RESTAURANTS/LOBBY
CONSTRUCTION TYPE-IA
HEIGHT: UNLIMITED HEIGHT & NUMBER OF STORIES
AREA ALLOWED: UNLIMITED

FLOORS 2-5: USE GROUP R-1 HOTEL
CONSTRUCTION TYPE-IIB
HEIGHT: 55 FEET, 4 STORIES
AREA ALLOWED: 16,000 SF

FLOOR 6: USE GROUP R-2 APARTMENTS
CONSTRUCTION TYPE-IIB
HEIGHT: 55 FEET, 4 STORIES
AREA ALLOWED: 16,000 SF

THIS BUILDING IS DESIGNED UTILIZING THE HORIZONTAL BUILDING SEPARATION ALLOWANCE IN IBC 2009 SECTION 503.2. THE FIRST AND SECOND FLOORS ARE SEPARATED BY A 3 HOUR HORIZONTAL ASSEMBLY AND THE STRUCTURE OF THE FIRST FLOOR IS DESIGNED TO MEET THE REQUIREMENTS FOR TYPE IA CONSTRUCTION. THE UPPER 5 FLOORS ARE DESIGNED FOR TYPE IIB CONSTRUCTION AS ALLOWED BY SECTION 503 AND MODIFICATIONS ALLOWED BY SECTION 506.

HEIGHT MODIFICATIONS (SECTION 504.2):
ADD ONE STORY AND 20 FEET (EQUIPPED WITH NFPA 13 AUTOMATIC SPRINKLER SYSTEM)

TOTAL ALLOWABLE HEIGHT: 5 STORIES - 75 FEET

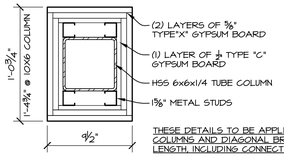
AREA MODIFICATIONS (SECTION 506;EQUATION 5-1):
INCREASE ALLOWABLE AREA BY 275 PERCENT (EQUIPPED WITH NFPA 13 AUTOMATIC SPRINKLER SYSTEM)
-75% FRONTAGE INCREASE
-200% SPRINKLER INCREASE
TOTAL ALLOWABLE FLOOR AREA CALCULATION:
FIRST FLOOR: UNLIMITED
FLOORS 2-6: 16,000 SF + (16,000 SF/FLOOR X 275%)=60,000 SF
TOTAL BUILDING AREA ALLOWED: (IBC SECTION 506.4.1-2)
FLOORS 2-6: 60,000 SF X 3=180,000 SF

FIRE SPRINKLER SYSTEM (SECTION 903):
TYPE: LIGHT HAZARD IN ACCORDANCE WITH NFPA 13
CLASS I STANDPIPE SYSTEM-IBC 905.3.1 EXC. 1 & NFPA 14:PROVIDE STANDPIPE IN TWO STAIRWELLS W/ 2 1/2" HOSE CONNECTIONS-NATIONAL STANDARD THREADS. HOSE CONNECTIONS MAY BE PROVIDED AT FLOOR LEVEL LANDINGS IF APPROVED IN ADVANCE BY AHJ. 4" STORZ CONNECTION REQUIRED. EACH STANDPIPE TO HAVE HOSE CONNECTION AT ROOF LEVEL.

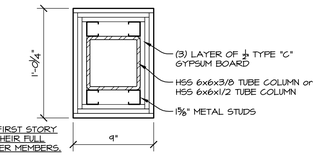
ROOM COUNT SUMMARY

ROOM TYPE	1ST FLOOR	2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	TOTAL	%
KING	0	6	12	12	12	42	KING GUEST ROOMS - 42% OF TOTAL
KING-EXTENDED	0	0	1	1	1	3	
KING-MOD. EXT.	0	0	1	1	1	3	
KING-ACCESSIBLE	0	0	1	1	1	3	
KING SUITE	0	1	1	2	2	6	
KING SUITE-ACC.	0	0	1	0	0	1	
QUEEN/QUEEN	0	16	15	16	16	63	Q/Q GUEST ROOMS - 58% OF TOTAL
QUEEN/QUEEN EXT.	0	0	1	1	1	3	
Q/Q ACCESSIBLE	0	0	1	1	1	3	
Q/Q SUITE	0	1	1	1	1	4	
TOTAL	0	24	35	36	36	131	
FLOOR AREAS:							
FOOTPRINT	19,501 SF						
UPPER FLOORS	18,764 SF x 5 FLOORS = 93,820 SF						
TOTAL	113,321 SF						

50% TUBS & 50% SHOWERS IN Q/Q ROOMS.



1 A0.1 WRAPPED COLUMN DETAIL PC-A (3 HR.)
NOT TO SCALE (IBC EQUATION 7-12)



2 A0.1 WRAPPED COLUMN DETAIL PC-B (3 HR.)
NOT TO SCALE (IBC EQUATION 7-12)

FIGURE 721.5.1(3) GYPSUM WALLBOARD PROTECTED STRUCTURAL STEEL COLUMNS WITH STEEL STUD/SCREW ATTACHMENT SYSTEM

1. Structural steel column, either wide flange or tubular shapes.

2. 15/8-inch deep studs fabricated from 0.0179-inch minimum thickness galvanized steel with 15/16 or 17/16-inch legs. The length of the steel studs shall be 1/2 inch less than the height of the assembly.

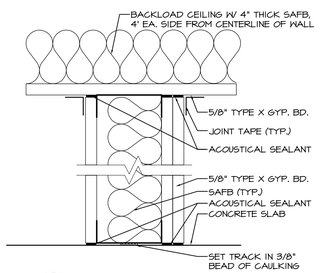
3. Type X gypsum wallboard in accordance with ASTM C 36. For single-layer applications, the wallboard shall be applied vertically with no horizontal joints. For multiple-layer applications, horizontal joints are permitted at a minimum spacing of 8 feet, provided that the joints in successive layers are staggered at least 12 inches. The total required thickness of wallboard shall be determined on the basis of the specified fire-resistance rating and the weight-to-heated-perimeter ratio (W/D) of the column.

4. Galvanized 0.0149-inch minimum thickness steel corner beads with 11/2-inch legs attached to the wallboard with 1-inch-long Type S screws spaced 12 inches on center.

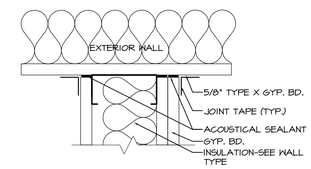
5. No. 18 SWG steel tie wires spaced 24 inches on center.

6. Sheet metal angles with 2-inch legs fabricated from 0.0221-inch minimum thickness galvanized steel.

7. Type S screws, 1 inch long, shall be used for attaching the first layer of wallboard to the steel studs and the third layer to the sheet metal angles at 24 inches on center. Type S screws 13/4-inch long shall be used for attaching the second layer of wallboard to the steel studs and the fourth layer to the sheet metal angles at 12 inches on center. Type S screws 21/4 inches long shall be used for attaching the third layer of wallboard to the steel studs at 12 inches on center.



3 A0.1 SOUND ISOLATION DETAIL
NOT TO SCALE
(TYPICAL ALL GUESTROOM AND DWELLING UNIT DEMISING WALLS)



PLAN VIEW

4 A0.1 SOUND ISOLATION DETAIL
NOT TO SCALE
(TYPICAL ALL GUESTROOM AND DWELLING UNIT DEMISING WALLS)

REVISION SCHEDULE

DATE	REVISION DESCRIPTION	BY
06-24-13	ADDED REFERENCE TO CITY OF PORTLAND, CODE OF ORDINANCES	
07-03-13	ADDED REQUIREMENTS FOR COLUMN ENCLOSURES, ACCESSIBLE ELEVATORS AND REVISED OCCUPANCY CALCULATION FOR POOL DECK.	
07-09-13	REVISED TABLE 601 RE:EXTERIOR WALL RATING	

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CODE INFORMATION

PROJECT:
COMMERCIAL & MAPLE STREET
MIXED USE DEVELOPMENT
PORTLAND, ME

DATE: 05-09-13
SCALE: SEE PLAN
DRAWN BY: KPH

SHEET: A0.1