Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 05/12/16

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OCCUPANT LOADS						
FLOOR		ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
FIRST		PARKING GARAGE	S-2 PARKING GARAGE	35,232	200 GROSS	177
SECOND		PARKING GARAGE	S-2 PARKING GARAGE	35,232	200 GROSS	177

CODE ANALYSIS

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

BUILDING DATA:
2 STORY

CONSTRUCTION TYPE IIB (FULLY SUPERVISED AUTOMATIC SPRINKLER SYSTEM, IN ACCORDANCE WITH NFPA 13, NOT 13R) (SECTION 903.3.1.1)

OCCUPANCY: LOW-HAZARD STORAGE, GROUP S-2 (SECTION 311.3)

THE FIRST FLOOR AND SECOND FLOOR CONTAIN PARKING USE WITH NO SEPARATION.

THE PARKING GARAGE HAS BEEN SEPARATED VERTICALLY FROM THE RETAIL/RESIDENTIAL BUILDING WITH A 2-HOUR FIRE WALL (TABLE 706.4, NOTE A AND SECTION 706.1.1 STEPPED BUILDINGS EXCEPTION 1 AND 2).

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

SINGLE OCCUPANCY

Parking Garage (Table 503 Section 504.2 & 506.3)

Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
1	S2	35,232	78,000	26,000	0.4517	15 ft, 1 stories	75ft, 4 stories	55ft, 3 stories
2	S2	35,232	78,000	26,000	0.4517	15 ft, 1 stories	75ft, 4 stories	55ft, 3 stories
			Total sum of ratios =		0.9034	<= 3		

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

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS - IBC TABLE 601

TYPE IIB CONSTRUCTION

BUILDING ELEMENT	REQUIRED	PROVIDED	CODE REFERENCE
STRUCTURAL FRAME	0	0	
FIRE WALLS AND PARTY WALLS	2	2	TABLE 706.4 AND SECTION 706.6.1
BEARING WALLS			
EXTERIOR*	0	0	
INTERIOR	0	0	
NONBEARING WALLS			
EXTERIOR*	0	0	
INTERIOR	0	0	
FLOOR CONSTRUCTION	NA	NA	
ROOF CONSTRUCTION	0	0	

MEANS OF EGRESS - STORAGE OCCUPANCY (ORDINARY HAZARD)

EGRESS COMPONENT	REQUIRED	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2	2	IBC TABLE 1021.1.2
TRAVEL DISTANCE:	300' MAX.	<300'	IBC 1016.1
EGRESS DOOR WIDTH	32" (CLEAR)	>32"	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	>44"	IBC 1018.2

PARKING GARAGE CODE INFORMATION

WALL SEPARATION LEGEND

1 HOUR FIRE RATED SEPARATION

2 HOUR FIRE RATED SEPARATION

1 FIRST FLOOR PLAN
1/16" = 1'-0"

PLAN NORTH

OCCUPANT LOADS						
FLOOR	RM. #	ROOM NAME	OCCUPANCY	AREA	SF/PERSON	OCC. LOAD
FIRST	1CT	COMMERCIAL TENANT	A-3 UNCONCENTRATED ASSEMBLY	14,350	15 NET	957
	1RS	RESIDENTIAL STORAGE	S-1 ACCESSORY STORAGE	2,022	300 GROSS	7
TOTAL FIRST FLOOR OCCUPANCY LOAD						964
SECOND	201 - 216	APARTMENTS	R-2 RESIDENTIAL	17,920	200 GROSS	90
	2TR	TRASH	S-1 ACCESSORY STORAGE	280	300 GROSS	2
	2ML 2LB 2VS	MAIL LOBBY VESTIBULE	A-3 UNCONCENTRATED ASSEMBLY	448	15 NET	30
	2FT	FITNESS	A-3 UNCONCENTRATED ASSEMBLY	510	50 GROSS	11
TOTAL SECOND FLOOR OCCUPANCY LOAD						133
THIRD	301 - 316	APARTMENTS	R-2 RESIDENTIAL	19,260	200 GROSS	97
FOURTH	401 - 416	APARTMENTS	R-2 RESIDENTIAL	19,260	200 GROSS	97
FIFTH	501 - 516	APARTMENTS	R-2 RESIDENTIAL	19,260	200 GROSS	97
TOTAL OCCUPANCY LOAD, THIRD - FIFTH FLOORS						291
TOTAL OCCUPANCY						1,388

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, IMC 2009, IPC 2009, NEC 2011, STATE FIRE CODE SAF-C 6000, AND ADAAG, ICC/ANSI A117.1-2003, ASME A17.1, AND ALL LOCAL, STATE AND FEDERAL CODES.

BUILDING DATA:
5 STORY

CONSTRUCTION TYPE IIB (FULLY SUPERVISED AUTOMATIC SPRINKLER SYSTEM, IN ACCORDANCE WITH NFPA 13, NOT 13R) (SECTION 903.3.1.1).

OCCUPANCY: MIXED USE: ASSEMBLY GROUP A-2 (RESTAURANT, SECTION 303.1) AND RESIDENTIAL GROUP R-2 (APARTMENT, SECTION 310.1).

THE FIRST FLOOR CONTAINS AN UNDETERMINED USE GROUP (DESIGNED AS MOST RESTRICTIVE USE, ASSEMBLY (RESTAURANT), AND STORAGE USE FOR RESIDENTIAL USE ABOVE. THE ASSEMBLY AREA USE HAS BEEN SEPARATED FROM THE STORAGE USE (S-1) FOR THE RESIDENTIAL BY A FIRE SEPARATION ASSEMBLY WITH A 1 HOUR RATING. THE ENTIRE FIRST FLOOR HAS BEEN SEPARATED FROM THE SECOND FLOOR BY A 1 HOUR FIRE-RESISTIVE HORIZONTAL ASSEMBLY (SECTION AND TABLE 508.4).

THE RETAIL/RESIDENTIAL BUILDING HAS BEEN SEPARATED VERTICALLY FROM THE PARKING GARAGE WITH A 2-HOUR FIRE WALL (TABLE 706.4, NOTE A AND SECTION 706.1.1 STEPPED BUILDINGS EXCEPTION 1 AND 2).

THE SECOND FLOOR CONTAINS USE GROUPS R-2, ACCESSORY USES B AND S, SEPARATION IS NOT REQUIRED FOR AN ACCESSORY USE WITH AN AGGREGATE AREA LESS THAN 10% OF THE MAIN USE GROUP. GROUP R-2 OCCUPANCY MEETS THE HEIGHT AND AREA LIMITATIONS FOR ITS USE GROUP (TABLE 503). INCIDENTAL ACCESSORY OCCUPANCY AREAS HAVE BEEN PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF TABLE 508.2.5. THE SECOND FLOOR IS SEPARATED FROM THE FIRST FLOOR WITH A 1 HOUR HORIZONTAL ASSEMBLY FOR USE GROUP SEPARATION (SECTION AND TABLE 508.4).

THE THIRD, FOURTH AND FIFTH FLOORS CONTAIN USE GROUP R-2. GROUP R-2 OCCUPANCY MEETS THE HEIGHT AND AREA LIMITATIONS FOR ITS USE GROUP (TABLE 503). THE FLOORS ARE SEPARATED FROM EACH OTHER WITH A 1/2 HOUR HORIZONTAL ASSEMBLY AS REQUIRED BY SECTION 709.3, EXCEPTION 2 FOR DWELLING UNITS.

FIRE PROTECTION FEATURES:
THE ENTIRE BUILDING IS PROVIDED WITH A SUPERVISED FULLY AUTOMATIC FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH 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.

MIXED OCCUPANCIES

Mixed Occupancies Separated (Section 508.4)

Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
1	A-2	17,921	38,000	9,500	0.4716	15 ft, 1 stories	75ft, 4 stories	55ft, 3 stories
Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
2	R-2	20,015	48,000	16,000	0.4170	15 ft, 1 stories	75ft, 5 stories	55ft, 4 stories
Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
3	R-2	20,015	48,000	16,000	0.4170	15 ft, 1 stories	75ft, 5 stories	55ft, 4 stories
Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
4	R-2	20,015	48,000	16,000	0.4170	15 ft, 1 stories	75ft, 5 stories	55ft, 4 stories
Story	Group	Actual Area (s.f.)	Adjusted Area (s.f.)	Allowable Area (s.f.)	Ratio of Area	Actual Height	Adjusted Height	Allowable Height
5	R-2	20,015	48,000	16,000	0.4170	15 ft, 1 stories	75ft, 5 stories	55ft, 4 stories
			Total sum of ratios =		2.1395	<= 3		

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

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS - IBC TABLE 601

TYPE IIB CONSTRUCTION

BUILDING ELEMENT	REQUIRED	PROVIDED
STRUCTURAL FRAME	0	0
BEARING WALLS		
EXTERIOR*	0	0
INTERIOR	0	0
NONBEARING WALLS		
EXTERIOR*	0	1 (WHERE REQUIRED, SEE PLAN)
INTERIOR	0	0
FLOOR CONSTRUCTION	0	1 AT FIRST, 1/2 AT UPPER
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
R2-APARTMENTS	B	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 701 IN ACCORDANCE WITH IBC SECTION 806.2 OR BE NONCOMBUSTIBLE
DECORATIVE TRIM SHALL MEET IBC SECITON 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.

MEANS OF EGRESS - PER OCCUPANCY

MEANS OF EGRESS - ASSEMBLY OCCUPANCY

EGRESS COMPONENT	REQUIRED	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2 PER FLOOR	2	IBC TABLE 1021.1
TRAVEL DISTANCE:	250' MAX.	<250'	IBC 1016.1
COMMON PATH OF TRAVEL	75' MAX.	<75'	IBC 1014.3
DEAD END CORRIDOR	20' MAX.	<20'	IBC 1018.4
CORRIDOR WIDTH	44" MIN.	>44"	IBC 1005.1
EGRESS DOOR WIDTH	32" (CLEAR)	>32"	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	>44"	IBC 1005.1

MEANS OF EGRESS - RESIDENTIAL OCCUPANCY

EGRESS COMPONENT	REQUIRED	PROVIDED	CODE REFERENCE
NUMBER OF EXITS	2 PER FLOOR	2	IBC TABLE 1021.1
TRAVEL DISTANCE:	250' MAX.	<250'	IBC 1016.1
COMMON PATH OF TRAVEL	125' MAX.	<125'	IBC 1014.3
DEAD END CORRIDOR	50' MAX.	<50'	IBC 1018.4
CORRIDOR WIDTH	44" MIN.	>44"	IBC 1005.1
EGRESS DOOR WIDTH	32" (CLEAR)	>32"	IBC 1008.1.1
EGRESS STAIR WIDTH	44" MIN.	>44"	IBC 1005.1

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

RESIDENTIAL UNIT BREAKDOWN

	2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	TOTAL
ONE BEDROOM	4	4	4	3	15
ACCESSIBLE ONE BEDROOM W/ DEN	0	0	0	1	1
TWO BEDROOM	10	10	11	11	42
ACCESSIBLE TWO BEDROOM	0	1	0	0	1
THREE BEDROOM	0	1	1	1	3
ACCESSIBLE THREE BEDROOM	1	0	0	0	1
TOTAL	15	16	16	16	63

ACCESSIBLE ROOM MATRIX

ROOM TYPE	REQ'D COUNT	PROV'D COUNT	RM NUMBERS
ONE BEDROOM	3	1	504
TWO BEDROOM		1	308
THREE BEDROOM		1	215
TOTAL	3	3	

ROOM TYPE		PROV'D COUNT	ROOM NUMBERS
ONE BEDROOM		1	504
TWO BEDROOM		1	308
THREE BEDROOM		1	215
TOTAL		3	

MIXED USE RETAIL/RESIDENTIAL CODE INFORMATION

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LICENSED ARCHITECT
4-01-16
KEITH A KELLEY
No. 4212
STATE OF MAINE

Mixed Use Development

York & High Street
Portland, Maine

REVISION: . . . .

ISSUED: 04-01-16 FOR STATE FIRE MARSHAL . . .

project architect: KAK
drawn by: JJD

LIFE SAFETY BLDG FIRST FLOOR PLAN

sheet number:
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