ABC BUILDING, 234 PEARL ST, LA CROSSE, WI CITY OF LA CROSSE, LA CROSSE COUNTY CLIMATE ZONE: 6A GROUP B & R-2 OCCUPANCIES - SEPARATED CONSTRUCTION TYPE VB, NFPA-13 SPRINKLERED 2 STORIES, 4,200 SQUARE FOOTAGE ALTERATION LEVEL 3 / CHANGE OF OCCUPANCY REVIEW FOR: BUILDING (HVAC SUBMITTED SEPARATELY)

PROJECT SUMMARY:

THIS BUILDING WILL BE USED FOR OFFICE SPACE ON FIRST FLOOR AND 2 APARTMENTS ON SECOND FLOOR. AND CONTAINS 2,100 SQUARE FEET PER FLOOR, FOR A TOTAL OF 4,200 SQUARE FEET. 2,100 SQUARE FEET OF OFFICE SPACE AND 2,100 SQUARE FEET OF RESIDENTIAL SPACE. THIS IS A CHANGE OF USE FROM MERCHANTILE (M) TO OFFICE AND RESIDENTIAL (B AND R-2) OCCUPANCIES.

2018 WISCONSIN ADMINISTRATIVE CODE, SPS 361-366 2015 INTERNATIONAL BUILDING CODE (IBC)

2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)

2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

2015 INTERNATIONAL MECHANICAL CODE (IMC) 2015 INTERNATIONAL FUEL GAS CODE (IFGC)

2009 ICC / ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

OCCUPANCIES: B. R-2

CCUPANCIES: B, F	₹-2	CONSTRU	CTION TY	PE: VB				
	ACTUAL (IN FE		ALLOWA (TABLE			AL HEIGHT STORIES)		WABLE E 504.4)
ILDING HEIGHT	28	FEET	60	FEET	2	STORIES	3	STORIES

(NS) NON-SPRINKLERED (S1) SPRINKLERED ONE-STORY X (SM) SPRINKLERED MULTIPLE STORIES UNLIMITED AREA PARTIALLY SPRINKLERED, PLEASE DESCRIBE:

NFPA 13R NFPA 13D NFPA 72 - FIRE ALARM

NFPA 13

FIRE ALARM: COVERAGE: COMPLETE PARTIAL X NONE

TYPE: AUTOMATIC DETECTION MANUAL ALARM

MONITORING TYPE: CENTRAL STATION PROPRIETARY SUPERVISION

REMOTE SUPERVISION PROTECTED PREMISES

FRONTAGE INCREASES FROM SECTION 506.3 A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MIN. WIDTH =\_\_\_\_\_(F)

B. TOTAL BUILDING PERIMETER = \_\_\_\_(P)

F. W = MINIMUM WIDTH OF PUBLIC WAY = \_\_\_\_\_ OR WEIGHTED AVE. =  $[(L1 \times w1) + (L2 \times w2) + (L3 \times w3)...]/F$ 

G. FRONTAGE INCREASE If = [F/P - 0.25] X W/30 = \_\_\_\_\_

### MAXIMUM BUILDING AREA FROM SECTION 506.2 Aa = ALLOWABLE AREA (SQUARE FEET)

At = TABULAR ALLOWABLE AREA FACTOR

NS = TABULAR ALLOWABLE AREA FACTOR FOR NON-SPRINKLERED BUILDING (REGARDLESS OF SPRINKLERING) If = AREA FACTOR INCREASE DUE TO FRONTAGE (FROM ABOVE CALCULATION)

Sa = ACTUAL NUMBER OF BUILDING STORIES ABOVE GRADE PLANE(MAX. 3 FOR NS, 4 FOR SPRINKLERED) SECTION 506.2.1 MAXIMUM BUILDING AREA FOR A SINGLE-OCCUPANCY, ONE-STORY BUILDING

 $Aa = At + (NS \times If)$ SECTION 506.2.2 MIXED-OCCUPANCY, ONE STORY BUILDINGS

(OCCUPANCY 1 Aa / ALLOWABLE AREA) + (OCCUPANCY 2 Aa / ALLOWABLE AREA) + ... < 1.0 IS OK

SECTION 506.2.3 SINGLE-OCCUPANCY, MULTISTORY BUILDINGS  $Aa = [At + (NS \times If)] \times Sa$ 

SECTION 506.2.4 MIXED OCCUPANCY, MULTISTORY BUILDINGS EACH STORY (3 STORY MAX.) TO INDIVIDUALLY COMPLY USING MOST RESTRICTIVE OCCUPANCY IF UNSEPARATED ACCESSIBILITY IF SEPARATED: (OCCUPANCY 1 ACTUAL AREA / TABULAR ALLOWABLE AREA) + (OCC. 2...) + ... < 1.0 IS OK

STORY NUMBER	DESCRIPTION AND USE	BUILDING AREA PER STORY (ACTUAL)	TABLE 506.2 AREA	FRONTAGE INCREASE	ALLOWABLE AREA PER STORY OR UNLIMITED
1	B: OFFICE	2,100	27,000	N/A	27,000
2	R-2: DWELLINGS	2,100	21,000	N/A	21,000

508.2 MAIN OCCUPANCY: <u>B / R-2</u> ACCESSORY OCCUPANCY: <u>A-3</u>

508.3.3 UNSEPARATED OCCUPANCIES AND TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES B AND R2 = 1 HOURS

TABLE 509: LIST INCIDENTAL USES: \_\_\_\_\_

# TABLE 601 FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	 RATING PROVIDED	DESIGN SOURCE FOR RATED ASSEMBLY (ex. UL #)
PRIMARY STRUCTURAL FRAME	0	
BEARING WALLS EXTERIOR	0	
INTERIOR	0	
NON-BEARING INTERIOR WALLS	0	
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0	
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0	

# FIRE SEPARATION REQUIREMENTS PER TABLE 602: EXTERIOR NON-BEARING WALLS AND PARTITIONS

FIRE SEPARATION DIST.	CONSTRUCTION TYPE	OCCUPANCY:	USE	FIRE RATING (HOURS)
X < 5'	VB	B, R-2	Office/Apt	1
5' ≤ X < 10'	VB	B, R-2	Office/Apt	1
10' ≤ X < 30'	VB	B, R-2	Office/Apt	0
30' < X	VB	B, R-2	Office/Apt	0

# PERCENTAGE OF WALL OPENING PER TABLE 705.8

ELEVATION	FIRE SEPARATION (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (T.705.8)	ALLOWABLE AREA(%)	ACTUAL SHOWN ON PLANS (%)	
NORTH	24'	0	100%	20%	
WEST	0'	0	NOT PERMITTED	NONE	
EAST	12'	0	45%	0%	
SOUTH	18'	0	75%	18%	

FIRE AREA RATING REQUIREMENTS FOR FIRE BARRIER OR HORIZONTAL ASSEMBLIES TABLE 707.3.10

LOCATION	OCCUPANCY GROUP	FIRE-RESISTANCE RATING REQUIRED	FIRE-RESISTANCE RATING PROVIDED
FIRST FLOOR	В	2 HOUR	2 HOUR
SECOND FLOOR	R-2	2 HOUR	2-HOUR

### OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS TABLE 716.5

ASSEMBLY	REQ'D WALL ASSEMBLY RATING (HR)	MIN. FIRE DOOR ASS'Y RATING (HR)	DOOR VISION PANEL SIZE	FIRE-RATED DOOR GLAZING VISION PANEL	MIN. SIDELIGHT / TRANSOM ASS'Y RATING (HR)	FIRE-RATED GLAZING SIDELIGHT / TRANSOM PANEL
FIRE WALLS /BARRIERS	1	1	100 SQ IN	D-H-60	NOT PERMITTED	NOT PERMITTED
SHAFTS	1	1	100 SQ.IN.	D-H-60	NOT PERMITTED	NOT PERMITTED
HORIZ. EXITS						
FIRE PARTITIONS	0.5	1/3	MAX. SIZE TESTED	D-20	1/3	D-H-OH-20
EXT. WALLS	2	N/A	N/A	N/A	NOT PERMITTED	NOT PERMITTED
SMOKE BARRIERS						

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY TABLE 803.11

OCCUPANCY GROUP	INTERIOR EXIT STAIRWAYS / RAMPS / PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS/RAMPS	ROOMS AND ENCLOSED SPACES
В	В	С	С
R-2	С	С	С

### OCCUPANT LOAD CALCULATIONS

OCCUPANCY	AREA PER F	LOOR					1004.1.2 AREA	NUMBER OF	SPRINKLER
TYPE	BASEMENT	FIRST	SECOND	THIRD	ROOF	TOTAL	/ OCCUPANT	OCCUPANTS	REQ'D, 903.2
В		2,100				2,100	100 GROSS	21	NO
R-2			2,100			2,100	200 GROSS	11	YES

FLOOR LEVEL	OCCUPANT LOAD	EGRESS REQUIF	RED 1005.3 (INCHES)	EGRESS	PROVIDED
	PER FLOOR	STAIR (1005.3.1)	OTHER (1005.3.2)	STAIR	OTHER
BASEMENT					
FIRST FLOOR	21		4.2		108
SECOND FLOOR	11	3.3	2.2	108	64
THIRD FLOOR					
ROOF					

(1006: SINGLE OR MULTIPLE EXITS REQUIRED, BASED ON DISTANCE / # OF NUMBER AND ARRANGEMENT OF EXITS OCCUPANTS; 1017.2: TOTAL EXIT ACCESS TRAVEL DISTANCE ALLOWED)

110111221171112711111111	TO THE PARTY OF TH								
FLOOR, ROOM, SPACE PER STORY, INC.	MINIMUM NUMBER OF EXITS (1006)				REMOTENESS OF EXITS OR EXIT ACCESS DOORWAYS (1007.1.1)				
BASEMENTS	REQUIRED	ACTUAL	ALLOWABLE	ACTUAL	REQUIRED	ACTUAL			
FIRST	1	2	250	51	25	60			
SECOND	1	2	300	65	25	25			

CORRIDOR FIRE-RESISTANCE RATING (TABLE 1020.1): 0.5 MINIMUM WIDTH (TABLE 1020.2): 44

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ACCESSIBLE UNIT TYPE	TOTAL UNITS	ACCESSIBLE U	JNITS REQUIRED	ACCESSIBLE UNITS PROVIDED				
DWELLING UNITS: TYPE A (1107)	2	0 0		0				
TYPE B (1107) (INDICATE OPTION A OR B BATH)	2	0		0				
ACCESSIBLE (1107)		W/ ROLL-IN SHOWER			W/O ROLL-IN SHOWER			
	0	N/A	N/A	N/A	N/A			
PARKING (1106)	N/A							
SELF-STORAGE (1108.3)								

# PLUMBING FIXTURE REQUIREMENTS PER 2902.1

OCCUPANCY		WATER CLOSET		LAVATORY			SHOWER	DRINKING	FOUNTAIN	SERVICE	
TYPE		M.	W.	UNISEX	M.	W.	UNISEX	/ TUB	REGULAR	ACCESSIBLE	SINK
	REQUIRED	.42	.42		.26	.26			1	1	1
В	PROVIDE	1	1		1	1			1	1	1
_	(EXISTING)	0	0	0	0	0			0	0	0
R-2	REQUIRED		-	2	-	-	2	2	-	-	2
	PROVIDED	-	-	2	-	-	2	2	-	-	2
	(EXISTING)	0	0	0	0	0	0	0	-	-	0
	REQUIRED										
	PROVIDED										
	(EXISTING)										
TOTAL											I

ELEVATORS AND CONVEYING SYSTEMS - CHAPTER 30

ELEVATOR ESCALATOR PLATFORM LIFT STAIRWAY CHAIRLIFT DUMBWAITER ELEVATOR: SIZED TO ACCOMMODATE AN UNFOLDED AMBULANCE TYPE STRETCHER? 3002.4/SPS 362.3002(1) - MEETS HIGH RISE REQUIREMENTS IN 403.6 AND 911

- FIRE SERVICE ACCESS ELEVATOR REQUIRED (120') PER 403.6.1 AND 3007 - SERVES AS AN OCCUPANT EVACUATION ELEVATOR PER 403.6.2 AND 3007

- EQUIPPED WITH EMERGENCY STAND-BY POWER (REQUIRED OR VOLUNTARY) PER 3003 - DOOR AT THE LOCATION OF A HOISTWAY ENTRANCE TO LIMIT TRANSMISSION OF SMOKE INTO/OUT OF THE HOISTWAY PER ASME A17.1, 2.11.6.3, PARTICULARLY (d) FOR THE ABILITY TO SEE THROUGH THE DOOR WITH THE ELEVATOR HOISTWAY CAR AND HOISTWAY DOORS ONLY 1/4 OPEN

# ENVELOPE COMPLIANCE

UNHEATED BUILDING / SEASONAL OCCUPANCY ALTERATION, NO MODIFICATION TO BUILDING ENVELOPE X COMcheck/REScheck ATTACHED: IECC 2015 X ASHRAE 90.1-2013 PRESCRIPTIVE (COMPLETE CHART BELOW): IECC 2015 ASHRAE 90.1-2013 OTHER, PLEASE DESCRIBE:

PROJECT LOCATION: COUNTY LA CROSSE; ZONE: 6A X 7 OCCUPANCY GROUP: R X OTHER

### RISK CATEGORY: I II X III IV IV LIVE LOADS: ROOF 20 FLOOR 100 GROUND SNOW LOAD: 40 WIND LOAD: BASIC WIND SPEED 115 EXPOSURE CATEGORY B DESIGN WIND LOAD 90

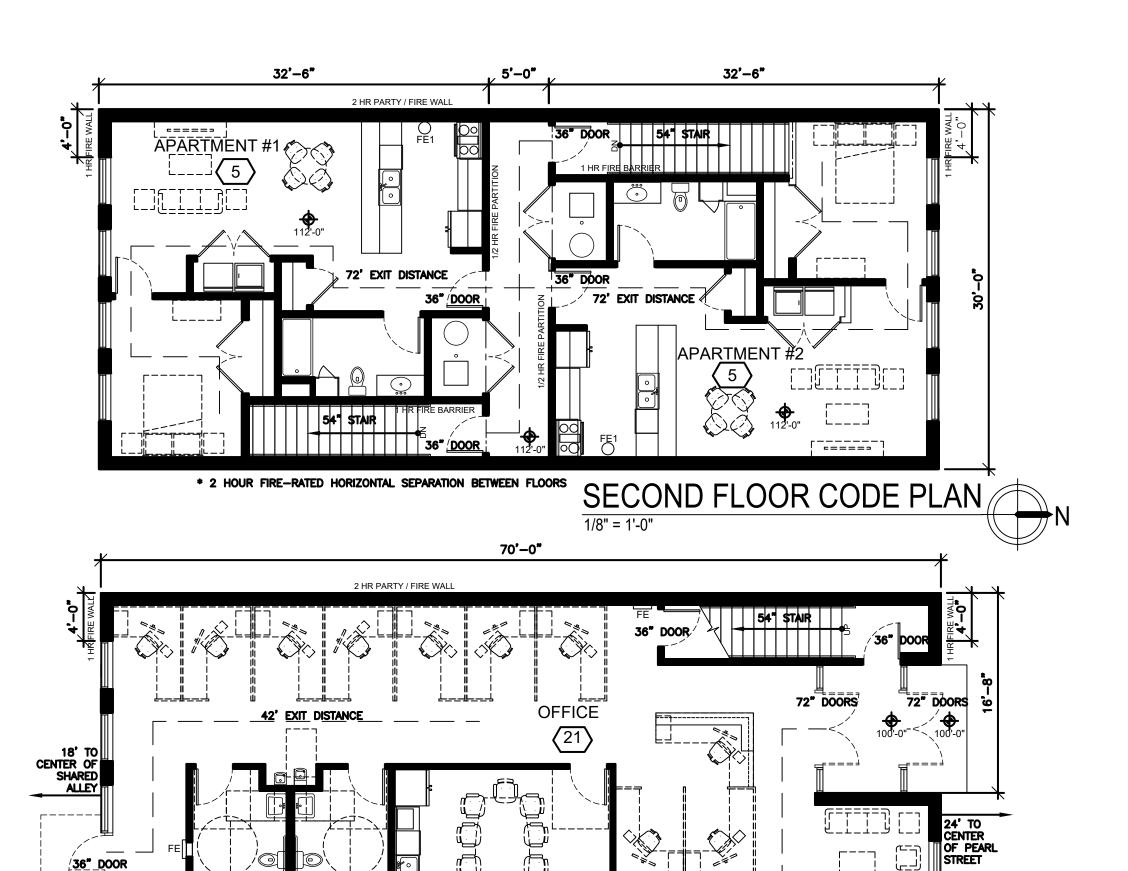
SEISMIC DESIGN CATEGORY: A

MECHANICAL SUMMARY: THERMAL ZONE WINTER DRY BULB: SUMMER DRY BULB: INTERIOR DESIGN CONDITIONS WINTER DRY BULB: SUMMER DRY BULB: RELATIVE HUMIDITY:

ST EQUIPMENT EFFICIENCIES:

ASSUMED SOIL BEARING PRESSURE: 2000 PSF BUILDING HEATING LOAD: 5 3000PSF, PROVIDE SOILS REPORT BUILDING COOLING LOAD: MECHANICAL SPACING CONDITIONING SYSTEM UNITARY: DESCRIPTION OF UNIT: **HEATING EFFICIENCY:** COOLING EFFICIENCY: SIZE CATEGORY OF UNIT: BOILER: SIZE CATEGORY IF OVERSIZED, STATE REASON CHILLER: SIZE CATEGORY IF OVERSIZED, STATE REASON.

CODE LEGEND:					
<del>-</del>	INDICATES OCCUPANCY LOAD				
	ACCESSIBLE EXIT PATH				
	$\frac{1}{2}$ HOUR RATED FIRE BARRIER				
	1 HOUR RATED FIRE BARRIER				
	2 HOUR RATED FIRE BARRIER				
000'-0"	ELEVATION OF FINISH FLOOR				
00" DOOR 00" STAIR	EXIT WAY IN INCHES				
<b>Q</b> FE1	FE1: WALL MOUNTED FIRE EXTINGUISHER				
FE	FE2: CABINET MOUNTED FIRE EXTINGUISHER				



# SPECIFICATION DATA: PROVIDE CODE EXCEPTIONS UTILIZED UNIQUE TO YOUR PROJECT

REFERENCED SECTIONS FROM THE IEBC and SPS 366

Chapter 2: Definitions Chapter 3: Provisions for All Compliance Methods

Chapter 4: Prescriptive Compliance Method 410.7 Exception 1: The costs of providing the accessible route are not required to exceed 20% of the costs of the alterations affecting the area of

CENTER OF

Chapter 5: Classification of Work 505.1: Scope. Level 3 alterations apply where the work area exceeds 50% of the building area.

Chapter 6: Repairs

Chapter 7: Alterations - Level 1

Chapter 8: Alterations - Level 2 Chapter 9: Alterations - Level 3

908.1: Minimum Requirements. Level 2 alterations to existing building s or structures are permitted without requireing the entire building or structure to comply with the energy requirements of the IECC. The alterations shall conform to the energy requirements of the IECC as they relate to new construction only.

Chapter 10: Change of Occupancy Chapter 11: Additions

Chapter 12: Historic Buildings

Chapter 13: Relocated or Moved Buildings Chapter 14: Performance Compliance Methods

REFERENCE SECTIONS FROM THE IBC and SPS 362 SPS 361: Administration and Enforcement

Chapter 2: Definitions

Chapter 3: Use and Occupancy Classification

Chapter 4: Special Detailed Requirements Based on Use and Occupancy 403.5.1 Remoteness of interior exit stairways. Required interior exit stairways shall be separated by a distance not less than 30 feet or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the enclosure surrounding the interior exit stairways. In buildings with three or more interior exit stairways, no fewer than two of the interior exit stairways shall comply with this section. Interlocking or scissor stairs shall be counted as one interior exit stairway.

420.2 Separation walls. Walls separating dwelling units in the same building, walls separating sleeping units in the same building and walls separating dwelling or sleeping units from other occupancies contiguous to them in the same building shall be constructed as fire partitions

in accordance with Section 708. 420.3: Horizontal separation. Floor assemblies separating dwelling units in the same buildings, floor assemblies separating sleeping units in the same building and floor assemblies separating dwelling or sleeping units from other occupancies contiguous to them in the same building shall be constructed as horizontal assemblies in accordance with 711.

Chapter 5: General Building Heights and Areas

Chapter 6: Types of Construction

603.1 Allowable materials. Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3: 1.

Chapter 7: Fire and Smoke Protection Features

713.4 Fire Resistance Rating. Shaft enclosures shall have a fire-resistance rating of not less than 2 hours where connecting 4 stories or more, and not less than 1 hour where connecting less than 4 stories. The number of stories connected by the shaft enclosure shall include any basements but not any mezzanines. Shaft enclosures shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours. Shaft enclosures shall meet the requirements of Section 703.2.1

713.6 Exterior Walls. Where exterior walls serve as a part of a required shaft enclosure, such walls shall comply with the requirements of Section 705 for exterior walls and the fire-resistance-rated enclosure requirements shall not apply. 716.5 Opening Fire Protection Assemblies. Door in 1 hour fire barrier for exit access stair required to have 1-hour fire door rating.

Chapter 8: Interior Finishes

Chapter 9: Fire Protection Systems 903.2.8 / SPS 362.0903(5) Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings

with a Group R fire area. Exceptions in SPS 362.0903(5)(b) and (cm) do not apply. 912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings or other fire apparatus. The location of fire department

connections shall be approved by the fire chief. 912.2.2 Existing buildings. On existing buildings, wherever the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" not less than 6" high and words in letters not less than 2" high or an arrow to indicate the location. Such signs shall be

913.2.1 Protection of fire pump rooms. Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour fire barriers constructed in accordance with Section 707 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both. Exception 2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.

51' EXIT DISTANCE

1010.1.5 There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit in 12 units horizontal (2%

1011.7.3 Enclosures under interior stairways. The walls and soffits within enclosed usable spaces under enclosed and unenclosed stairways shall be protected by 1-hour fire-resistance-rated construction or the fire-resistance rating of the stairway enclosure, whichever is greater. Access to the enclosed space shall not be directly from within the stairway enclosure.

FIRST FLOOR CODE PLAN

1028.1 exception 2. Not more than 50 percent of the number and minimum width or required stair capacity of the interior exit stairways is permitted to egress through a vestibule provided: the entire area of the vestibule is separated with the same fire resistance rating of the interior stair, the depth from the exterior of the building is not greater than 10 feet, the area is separated from the remainder of the level of exit discharge by a fire partition, and the area is only used for means of egress and exits directly to the outside.

Chapter 11: Accessibility (\*See also ANSI A117.1-2009)

1104.4 Exception 1: An accessible route is not required to stories and mezzanines that have an aggregate area of not more than 3,000 square feet and are located above and below accessible levels. This exception shall not apply to: 1.1 Multiple tenant facilities of Group M occupancies containing five or more tenant spaces used for the sales or rental of goods and where at least one such tenant space is located on a floor level above or below the accessible levels. 1.2 Stories or mezzanines containing offices of heath care providers (Group B or I); 1.3 Passenger transportation facilities and airports (Group A-3 or B); or 1.4 Government buildings.

1107.7.1 Structures without elevator service. Where no elevator service is provided in a structure, only the dwelling units and sleeping units that are located on stories indicated in Sections 1107.7.1.1 and 1107.7.1.2 are required to be Type A units and Type B units, respectively. The number of Type A units shall be determined in accordance with Section 1107.6.2.2.1.

Chapter 12: Interior Environment

1207.2 Air-borne sound. Walls, partitions and floor/ceiling assemblies separating dwelling units and sleeping units from each other or from public or service areas shall have a sound transmission class of not less than 50, or not less than 45 if field tested, for air-borne noise when tested in accordance with ASTM E 90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain required ratings. This requirement shall not apply to entrance doors; however, such doors shall be tight fitting to the frame and sill.

1210.2.1 Floors and wall bases. In other than dwelling units, toilet, bathing and shower room floor finish shall have a smooth, hard, nonabsorbent surface that extends upward onto the walls not less than 4".

1210.2.2 Walls and partitions. Walls and partitions within 2' of service sinks, urinals and water closets shall have a smooth hard nonabsorbent surface, to a height of not less than 4' above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture. Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

Chapter 13: Energy Efficiency (\*See also International Energy Conservation Code 2015)

Chapter 14: Exterior Walls

Chapter 16: Structural Design

Chapter 15: Roof Assemblies and Rooftop Structures

Chapter 18: Soils and Foundations

Chapter 19: Concrete

Chapter 20: Aluminum

Chapter 22: Steel

Chapter 21: Masonry

Chapter 23: Wood

2406.4.1 Glazing in doors. Glazing in all fixed and operable panels of swinging, sliding and bifold doors shall be considered a hazardous location.

Chapter 25: Gypsum Board, Gypsum Panel Products and Plaster

Chapter 26: Plastic

Chapter 27: Electrical

Chapter 28: Mechanical Systems

Chapter 29: Plumbing Systems 2902.2 Exception 1: Separate facilities shall not be required for dwelling units and sleeping units; 2: Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer; 3: Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or less.

Chapter 30: Elevators and Conveying Systems