Southern Nevada Amendments

To The

2000

International Building Code

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Preface

This report is the recommendation from the multi-jurisdictional committee, which reviewed the 2000 International Building Code (IRC) for adoption in southern Nevada. The intent is to publish a document that will include the 2000 IBC and local revisions. For the purpose of discussion and clarity the text has been noted as follows:

Local jurisdictions have committed to adopting the Uniform Plumbing and Uniform Mechanical codes; therefore the plumbing and mechanical SECTIONs, and all references have been removed in this document. Additionally, the National Electrical Code is typically adopted in a cycle different from the other codes; therefore the electrical portion and all references have been removed from the IBC text.

Table of Contents

Preface

Chapter 1	Administration1
Sections 101.1 a	nd 101.2
202	Definitions
Table 302.1.1	Incidental Use Areas
302.3.3	Separated Uses
303.1	Assembly Group A
304.1	Business Group B
307.2	Definitions
Table 307.7(1)	Maximum Allowable Quantity Per Control Area of Hazardous Materials 4
308.2	Group I-1
308.3	Group I-2
310.4	Visual Access
402.6	Type of Construction
403.1	Applicability
403.3	Reduction in Fire Resistance Rating
403.3.1	Type of Construction
403.3.2	Shaft Enclosures
403.9	Elevators
403.10.1.1	Fuel Supply9
403.10.1.3	Connected Facilities Power
403.11	Stairway Door Operation
403.13.1	Smoke Control
404.3	Automatic Sprinkler Protection
404.8	Interior Finish
406.2.6.1	Specific Use Provisions
406.3.3	Construction
406.4.2	Ventilation

406.6.3	Ventilation	. 10
406.6.4	Floor Surface	. 11
410.6	Automatic Sprinkler System	.11
411.2.1	Movie Theaters	. 11
412.2.6	Fire Suppression	. 11
412.3.4	Smoke Detection	. 12
412.4.5	Fire Suppression	. 12
414.2.2	Number	.12
Table 414.2.2	Design and Number of Control Areas	. 12
502.1	Definitions	.12
507.1	Unsprinklere d, one -story	.13
507.2	Sprinklered, one -story	.13
507.9	Area and Height	.13
Table 601	Fire Resistance Rating Requirements for Building Elements	.13
602.6	Small Structures	. 14
602.7	Combustible Decora tive Materials and Architectural Features	.14
603.1	Allowable Uses	. 15
704.1.1	Extension Through Attics and Concealed Spaces	. 15
704.2.1	Types I & II Construction	. 15
704.5	Fire-Resistive Ratings	.15
Table 704.8	Maximum Area of Exterior Wall Openings	. 15
704.8.1	Automatic Sprinkler System	. 16
704.12	Opening Protection	.16
705.6	Vertical Continuity	.16
707.2	Shaft Enclosure Required	. 17
707.4	Fire-Resistance Rating	. 18
707.6	Exterior Walls	. 18
707.13.4	Termination Room	.18
707.14.1	Elevator Lobby	. 18
708.3	Fire-Resistance Rating	. 18
708.4	Continuity	. 18
709.4	Continuity	. 19

710.3	Fire-Resistance Rating	19
713.2.1	Individual Protection	19
713.6	Bottom Flange Protection	19
714.2.4	Doors in Exit Enclosures	19
714.2.4.1	Glazing in Doors	19
714.2.7	Door Closing	19
715.5.2	Fire Barriers	20
715.5.3.1	Penetrations of Shaft Enclosures	20
715.5.4	Fire Partitions	20
716.3.2	Groups R-1, R-2, R-3 and R-4	21
716.3.3	Other Groups	21
716.3.3.2	Dwelling Units, Hotels, and Shopping Centers	21
716.4.2	Groups R-1 and R-2.	22
716.4.3	Other Groups	22
716.5	Combustibles in Concealed Spaces in Types I and II Construction	22
803.3.4	Materials	22
901.3	Modifications	23_
901.3 901.5	Modifications	_
901.5		23
901.5	Acceptance Test	23 23
901.5 901.6, 901.6.1, 90	Acceptance Test	23 23
901.5 901.6, 901.6.1, 90 903.1.3	Acceptance Test	23 23 23
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2	Acceptance Test	23 23 23 23
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5	Acceptance Test	23 23 23 23 23
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1	Acceptance Test	23 23 23 23 23 23
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7	Acceptance Test	23 23 23 23 23 24 24
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7 903.2.8	Acceptance Test	23 23 23 23 23 24 24
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7 903.2.8 903.2.9	Acceptance Test	23 23 23 23 23 24 24
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7 903.2.8 903.2.9 903.2.10.1	Acceptance Test	23 23 23 23 23 24 24 24
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7 903.2.8 903.2.9 903.2.10.1 903.2.10.3	Acceptance Test	23 23 23 23 24 24 24
901.5 901.6, 901.6.1, 90 903.1.3 903.2.2 903.2.5 903.2.6.1 903.2.7 903.2.8 903.2.9 903.2.10.1 903.2.10.3 903.2.12.4	Acceptance Test	23 23 23 23 24 24 24 24 24

905.3.1	Building Height	. 25
905.3.2	Building Area	. 25
905.3.3	Group A	. 26
905.3.4	Covered Mall Buildings	. 26
905.3.6	Underground Buildings	. 26
907.2.2	Group B	. 27
907.2.6.2.3	Smoke Detectors	. 27
907.2.8	Group R-1	. 27
907.2.9	Group R-2	. 27
907.2.12	High-rise Buildings	. 28
907.2.12.1	Automatic Fire Detection	. 28
907.2.12.2	Emergency Voice/Alarm Communication	.28
907.2.12.3	Fire Department Communication System.	. 29
907.2.15	Special Egress-Control Devices.	. 29
907.2.19	Underground Buildings	. 29
907.2	Manual Fire Alarm Boxes	. 29
907.3	Manual fire alarm boxes	. 29
907.3.1	Protective Covers	.30
907.3.2 - 907.3.4	30	
907.9.1	Visible Alarms	. 30
907.9.2	Audible Alarms	. 30
907.14	Monitoring	. 30
909.4.4	HVAC Systems	. 31
909.4.4	Air-handling systems	.31
909.5.2	Opening Protection	.31
909.16.1	Smoke Control Systems	. 31
909.16.2	Smoke control panel	.31
909.17	System Response Time	. 31
909.18.8.3	Reports	. 32
909.18.10	Alternative Testing Method	. 32
909.20.4 – 909.20	.4.4	. 32
909.20.5	Stair Pressurization Alternative	.32

909.20.5	Stair pressurization alternative	. 32
909.20.5.1	Pressure Difference	.33
909.20.5.2	Vestibule Do ors	.33
909.20.5.3	Dampered relief opening.	.33
909.20.5.4	Standpipe	.33
909.21	Underground Building Smoke Exhaust System	.33
910.2.3	High-piles Combustible Storage	.33
910.3.1.2	Sprinklered Buildings	.34
910.3.4	Curtain Boards	. 34
Table 910.3	Requirements For Curtain Boards and Smoke Venting	. 34
911.1	Features	.35
1002.1	Definitions	.35
Table 1003.2.2.2	Maximum Floor Area Allowances Per Occupant	.35
Table 1003.2.3	Egress Width Per Occupant Served	.36
1003.2.5.1	Headroom	.36
1003.2.10	Exit signs.	.36
1003.2.10.6	Floor-level exit signs	.37
1003.2.11	Means of egress illumination	.37
1003.3.1.1	Size of doors	.37
1003.3.1.3.1	Revolving doors	.38
1003.3.1.8.2	Delayed Egress Locks	39_
1003.3.1.8	Locks and latches.	.39
1003.3.1.3.4	Access-controlled Egress Doors	.39
1003.3.3.3.2	Profile	.40
1003.3.5	Turnstiles	.40
1004.2.2.1	Two Exit or Exit Access Doorways	.41
1004.2.3	Egress through intervening spaces	.41
1004.2.4	Exit Access Travel Distance	.41
1004.2.4.3	Corridor increases	.41
1004.3.1.4	Hallways	.43
1004.3.1.4.1	General	.43
1004.3.1.4.3	Construction	.43

1004.3.1.4.4	Openings	44
1004.3.1.4.5	Elevator lobbies	44
1004.3.1.4.6	Group R Occupancies	44
Table 1004.3.2.1	Corridor Fire-Resistance Rating	44
1004.3.2.1	Construction	45
1004.3.2.3	Dead ends	45
1004.3.2.4	Air Movement in Corridors	45
1005.2.2	Buildings with one exit	45
Table 1005.2.2		46
1005.3.2	Vertical Exit Enclosures	46
1005.3.2.4	Stairway floor number signs	47
1005.3.2.5	Smokeproof enclosures	47
1005.3.6.1	Use in a means of egress	47
1005.3.6.2:	Open Side:	47
1006.1	General	48
1006.2.2	Exit discharge location	48
1008.5.2.1	Smoke control	48
1008.5.2.3	Automatic sprinklers	49
1009.1	General	49
1009.2	Minimum size	49
Chapter 11		49
Section 1101		49
Section 1102		49
Section 1103		51
Section 1104		52
Section 1105		53
Section 1106		53
Section 1107		54
Section 1108		59
Table 1109.12.2		65
Section 1110	Signage	66
1202.1	General	67

1202.2	Attic Spaces	67
1202.4.1.3	Guest Rooms and Habitable Rooms	68
1202.4.1.4	Bathrooms, Water Closets, Laundry Rooms and Similar Rooms in R Occupancie	s . 68
1202.4.1.5	Toilet Rooms	68
1202.4.2.1	Bathrooms	68
1202.6	Mechanical Ventilations	69
1202.6.5	Motor Vehicle Related Occupancies	70
1202.6.5.1	Repair Garage	70
1207.2	Minimum Ceiling Heights	70
1208.2	Attic Spaces	70
1406.3	Balconies and Similar Projections	70
1406.4	Bay Windows and Oriel Windows	70
1503.4	Roof Drainage	71
1503.4.2	Roof drains	71
1503.4.3	Overflow drains and scuppers	71
1503.4.4	Concealed piping	71
1503.4.5	Over public property	71
1604.8.2	Concrete and Masonry Walls	71
Table 1607.1	Minimum Uniformly Distributed Live Loads And Minimum Loads	72
1612.3	Establishment of flood hazard areas	72
1704.1.2	Report requirement	73
1704.4	Concrete Construction	73
1704.5	Masonry Construction	73
1704.7	Soils	74
1704.7.4	Excavation	74
1704.15	Amusement and Transportation Systems Special Cases	74
1802.1	General	74
1802.2	Where required	75
1802.2.3	Groundwater Table	75
1802.3.2	Expansive Soils	75
1802.3.3	Standard 60 pounds per square foot swell test	76
1802.4.2	Minimum exploration requirements	76

1802.6	Reports	77
1803.4	Compacted Fill Material.	78_
1805.1.1	Minimum Distances to Ground Faulting	78
1805.5.2	Foundation Wall Materials	79
1805.8.2	Slab- on- Ground Foundations	79
Table 1805.8	Post Tensioned Slab Criteria	80
1911.2	Post Tension Slab Provisions	81
2101.2.6	New Fireplaces in Construction	81
2305.3.3	Shear Wall Aspect Ratios	82_
Table 2305.3.3		82
2305.3.8	Summing shear capacities	82
Table 2902.1	Minimum Number of Plumbing Fixtures	82
2902.2	Separate facilities	85
3003.1	Fire-fighters' Emergency Operation	85
3109	Swimming Pool Enclosures	85
Chapter 34	Existing Structures.	85
Chapter 35 –	Reference Standards	85
Appendix A	Employee Qualifications	85
Appendix B	Board of Appeals	85
Appendix D	Fire Distircts	86
Appendix E	Supplementary Accessibility Requirements	86
Appendix F	Rodent Proofing	86
Appendix G	Flood Resistant Construction	86
Appendix H	Signs	86
Appendix J	Supplementary Accessibility Requirements for Qualified Historic Buildings	86
Appendix K		86
1.1	General	86
1.2	Definitions	87
1.3	Permits Required	88
1.4	Permit Application And Submittals	89
1.5	Inspections	90
1.6	Excavations	93

1.7	Fills	93
1.8	Setbacks	93
1.9	Drainage And Terracing	94
1.10	Erosion Control	94
Appendix L -	Fences, Walls and Retaining Walls	97
1.1	General	97
2.0	Definitions	97
3.0 -	Permits	97
4.0 -	General Requirements And Limitations	98
5.0 -	Implementation	99

Chapter 1- Administration

Delete chapter 1 in its entirety except 101.1 and 101.2.

SECTIONs 101.1 and 101.2

SECTIONs 101.1 and 101.2 are amended to read as follows:

101.1 Title. These regulations shall be known as the Building Code of Clark County, hereinafter referred to as "this code."

101.2 Scope. The provisions of the *International Building Code* shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.

202 Definitions.

Add the following definitions in alphabetic order:

Apartment House – is any building or portion there of which contains three or more dwelling units, and for the purpose of this code, includes residential condominiums.

Code Official -The building official, fire chief, fire marshal, code enforcement officer, or other designated authority charged by the applicable governing body with the duties of administration and enforcement of the code, or a duly authorized representative.

International Electrical Code – means the Electrical Code of Clark County as defined in chapter 22.02 of the Clark County Code.

International Mechanical Code – means the Mechanical Code of Clark County as defined in chapter 22.02 of the Clark County Code.

International Plumbing Code – means the Plumbing Code of Clark County as defined in chapter 22.02 of the Clark County Code.

Mini-Storage Warehouse— is a Group S Division 1 occupancy partitioned into areas which are rented or leased by individuals or companies for the purpose of storing personal or business items."

Shopping Center - is a structure of at least 3000 square feet overall and consisting of a group of at least two retail stores or service establishments.

Table 302.1.1 Incidental Use Areas

Table 302.1.1 Incidental Use Areas is amended to read as follows:

TABLE 302.1.1 INCIDENTAL US E AREAS

ROOM OR AREA	SEPARATION ^a
Furnace room where largest piece of	1 hour.
equipment is over 400,000 Btu per hour	
input	
Boiler over 15 psi and 10 horsepower	1 hour.
Refrigerant machinery rooms	1 hour.
Automotive parking garage in other than	2 hours
Group R-3	
Incinerator rooms	2 hours and automatic sprinkler system
Laboratories and vocational shops, not	1 hour.
classified as Group H, located in Group E	
and I-2 occupancies.	
Laundry rooms over 100 square feet	1 hour
Storage rooms over 100 square feet	1 hour
Group I-3 padded cells	1 hour
Waste and linen collection room over 100	1 hour
square feet	
Stationary lead-acid battery systems having	1-hour fire barriers and floor-ceiling
a liquid capacity of more than 100 gallons	assemblies in Group B, F, H, M, S, and U
used for facility standby power, emergency	occupancies. 2-hour fire barriers and floor
power or uninterrupted power supplies.	ceiling assemblies in Group A, E, I, and R
	occupancies.
Fire pump rooms	2 hour

For SI: $1 \text{ square foot} = 0.0929 \text{m}^2$, 1 pound per square inch = 6.9Pa,

1 British thermal unit = 0.293 watts, 1 horsepower = 746 watts,

1 gallon = 3.785 L.

302.3.3 Separated Uses

Add exception 5 to SECTION 302.3.3 to read:

5. Separations specified in Table 302.3.3 are not required between like occupancies, i.e. M to M except as needed to comply with the fire area separation provisions of SECTION 903.

303.1 Assembly Group A

Add a new category "Casinos" to subSECTION 303.1, A-2.

304.1 Business Group B

SECTION 304.1 is amended by adding classification as follows:

Outpatient clinic and medical offices: (where five or less patients in a tenant space are not capable of self-preservation);

307.2 Definitions.

The definitions Barricade, Deflagration, Organic Peroxide, and Unstable (Reactive) Material of SECTION 307.2 are amended to read:

BARRICADE. A structure that consists of a combination of walls, floor and roof, which is designed to withstand the rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other approved method of shielding from explosive materials by a natural or artificial barrier.

DEFLAGRATION is an exothermic reaction, such as the extremely rapid oxidation of a combustible dust or flammable vapor in air, in which the reaction progresses through the unburned material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

ORGANIC PEROXIDE is an organic compound that contains the bivalent -O- O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical. Some organic peroxides can present an explosion hazard (detonation or deflagration) or they can be shock sensitive. Organic peroxides will decompose over time at a rate that increases with increasing temperature. Decomposition products may be flammable. Organic peroxides are subdivided into classes as follows:

Detonable: Detonable organic peroxides are capable of detonation. These organic peroxides present an extremely high explosion hazard through rapid explosive decomposition and are regulated as explosives.

Class I: Class I organic peroxides are capable of deflagration but not detonation. These organic peroxides present a high explosion hazard through rapid decomposit ion.

Class II: Class II organic peroxides burn very rapidly and present a severe reactivity hazard.

Class III: Class III organic peroxides burn rapidly and present a moderate reactivity hazard.

Class IV: Class IV organic peroxides burn in the same manner as ordinary combustibles and present a minimum reactivity hazard.

Class V: Class V organic peroxides burn with less intensity than ordinary combustibles or do not sustain combustion and do not present a reactivity hazard.

UNSTABLE (Reactive) MATERIAL is a material which, in pure state or as commercially produced

will vigorously polymerize, decompose, or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure or temperature.

Class 4: Materials that, in themselves, are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This degree includes, among others, materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

Class 3: Materials that, in themselves, are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or that must be heated under confinement before initiation. This class includes, among others, materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

Class 2: Materials that readily undergo violent chemical change at elevated temperatures and pressures. This class includes, among others, materials that exhibit an exotherm at temperatures less than or equal to 302^{0} F (150^{0} C) when tested by differential scanning calorimetry.

Class 1: Materials that, in themselves, are normally stable, but that can become unstable at elevated temperatures and pressures. This class includes, among others, materials that change or decompose on exposure to air, light or moisture, and materials that exhibit an exotherm at temperatures greater than $302^{0}F$ ($150^{0}C$), but less than or equal to $572^{0}F$ ($300^{0}C$) when tested by differential scanning calorimetry.

Table 307.7(1) Maximum Allowable Quantity Per Control Area of Hazardous Materials Posing a Physical Hazard

Amend Table 307.7(1) to read:

 $Table\ 307.7\ (1)$ TABLE 307.7(1) — MAXIMUM ALLOWABLE QUANTITIES PER CONTROL AREA EXEMPT AMOUNTS OF HAZARDOUS MATERIALS PRESENTING A PHYSICAL HAZARD 1 When two units are given, values within parentheses are in cubic feet (cu. ft.) or pounds (lbs.) (Apply table as specified in SECTION 307.7)

Condition		Occupancy Group when	Storage ²			Use ²	Closed S	Use ² – Open Systems		
Material	Class	the Allowable quantity is exceeded	Solid Lbs ³ (cubic feet) x0.4536 for kg	Liquid Gal ³ (pounds) X3.785 for L	Gas Cubic Feet	Solid Lbs (cubic feet) x0.4536forkg	Liquid Gal (pounds) X3.785forL	Gas Cubic Feet X0.0283form ³	Solid Lbs (cubic feet) x0.4536forkg	Liquid Gal (pounds) X3.785 for L
1.1 Combustible	П	H-2 or H-3	x 0.0283 for m ³ N.A.	X 0.4536 for kg 120 ¹⁰	N.A.	x0.0283 for m ³ N.A.	X0.4536 for kg 120	N.A.	x0.0283 for m ³ N.A.	X 0.4536 for kg 30
Liquid 4,5,6,8,9,15	III-A	H-2 or H-3	N.A.	33010	N.A.	N.A.	330	N.A.	N.A.	80
'	III-B	H-2 or H-3	N.A.	13,200	N.A.	N.A.	13,20011	N.A.	N.A.	3,30011
1.2 Combustible fiber 17 (loose) (baled)	-	H – 3	(100) (1,000)	N.A. N.A.	N.A. N.A.	(100) (1,000)	N.A. N.A.	N.A. N.A.	(20) (200)	N.A. N.A.
1.3 Cryogenic, flammable or oxidizing ¹⁷	-	H – 2	N.A.	45	N.A.	N.A.	45	N.A.	N.A.	45
2.1 Explosives 12,17,18	-	H 1	110,13	(1) 10,13	N.A.	1/4	(1/4)	N.A.	1/4	(1/4)
2.2 Fireworks, (Class C, Consumer)	1.4G	H-3	125 6,10,18	N.A.	N.A.	N.A.	N.A.	NA	N.A.	N.A.
3.1 Flammable solid 17	-	H – 3	125 ^{6,10}	N.A.	N.A.	125	N.A.	N.A.	25	N.A.
3.2 Flammable gas ¹⁷ (gaseous) (liquefied)	-	H – 2	N.A. N.A.	N.A. 15 ^{6,10}	750 ^{6,10} N.A.	N.A. N.A.	N.A. 15 ^{6,10}	750 ^{6,10} N.A.	N.A. N.A.	N.A. N.A.
3.3 Flammable liquid 4,5,6,8,9,	I-A	H-2 or H-3	N.A.	30	N.A.	N.A.	30	N.A.	N.A.	10
15	I-B	H-2 or H-3	N.A.	60	N.A.	N.A.	60	N.A.	N.A.	15
	I-C	H-2 or H-3	N.A.	90	N.A.	N.A.	90	N.A.	N.A.	20
	Combination	H-2 or H-3	N.A.	120	N.A.	N.A.	120	N.A.	N.A.	30

4.1 Organic peroxides, detonatable, unclassified	U	H – 1	1 ^{10,12}	(1) 10,12	N.A.	½ ¹²	(1/4) ¹²	N.A.	1/4 12	(1/4)12
4.2 Organic peroxide	I	H – 2	5 ^{6,10}	(5) ^{6,10}	N.A.	1 ⁶	(1) ⁶	N.A.	1 ⁶	(1) ⁶
	II	H – 3	50 ^{6,10}	(50) ^{6,10}	N.A.	50 ⁶	(50) ⁶	N.A.	10 ⁶	(10) ⁶
	III	H – 3	125 ^{6,10}	(125) ^{6,10}	N.A.	125 ⁶	(125) ⁶	N.A.	25 ⁶	(25) ⁶
	IV	H – 3	500 ^{6,10}	(500) ^{6,10}	N.A.	500 ⁶	(500) ⁶	N.A.	100 ⁶	(100) ⁶
	V		N.L.	N.L.	N.A.	N.L.	N.L.	N.A.	N.L.	N.L.
4.3 Oxidizer	4	H – 1	1 ^{10,12}	(1) 10,12	N.A.	1/4 12	(1/4) ¹²	N.A.	1/4 12	(1/4) ¹²
	3 ¹⁶	H – 2	10 ^{6,10}	(10) ^{6,10}	N.A.	2 ⁶	(2) ⁶	N.A.	2 ⁶	(2) ⁶
	2	H – 3	250 ^{6,10}	(250) 6,10	N.A.	250 ⁶	(250) ⁶	N.A.	50 ⁶	(50) ⁶
	1	H – 3	4,0006,10	(4,000)6,10	N.A.	4,000°	(4,000)6	N.A.	1,000°	(1,000)6
4.4 Oxidizer – gas										
(gaseous) ^{6,10,17}	-	H – 3	N.A.	N.A.	1,500	N.A.	N.A.	1,500	N.A.	N.A.
(liquefied) 6, 10, 17			N.A.	15	N.A.	N.A.	15	N.A.	N.A.	N.A.
5.1 Pyrophoric ¹⁷	-	H – 2	4 ^{10,12}	(4) 10,12	50 ^{10,12}	112	(1) ¹²	10 ^{10,12}	0	0
6.1 Unstable (reactive) 17	4	H – 1	110,12	(1) 10,12	10 ^{10,12}	1/4 12	(1/4)12	210,12	1/4 12	(1/ ₄) ¹²
	3	H – 1	5 ^{6,10}	(5) ^{6,10}	50 ^{6,10}	1 ⁶	(1) ⁶	10 ^{6,10}	1 ⁶	(1) ⁶
	2	H – 2	50 ^{6,10}	(50) ^{6,10}	750 ^{6,10}	50 ⁶	(50) ⁶	750 ^{6,10}	10 ⁶	(10) ⁶
	1	H – 3	N.L.	N.L.	N.L. 6,10	N.L.	N.L.	N.L.	N.L.	N.L.
7.1 Water Reactive	3	H – 2	5 ^{6,10}	(5)6,10	N.A.	5 ⁶	(5) ⁶	N.A.	1 ⁶	(1) ⁶
	2	H – 3	50 ^{6,10}	(50) ^{6,10}	N.A.	50 ⁶	(50) ⁶	N.A.	10 ⁶	(10) ⁶
N.A. Net confinels	1		N.L.	N.L.	N.A.	N.L.	N.L.	N.A.	N.L.	N.L.

N.A.—Not applicable, N.L.—Not limited.

- 1. Control areas shall meet the requirements of SECTION 414.2 and Fire Code SECTIONs 204 and 8001.10.2.
- The aggregate quantity in use and storage shall not exceed the quantity listed for storage. Quantities shall not exceed limits set forth in Fire Code SECTION 8001.15.2.
- The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials within a single control area of Group M Occupancies used for retail sales may exceed the exempt amounts when such areas are in compliance with Fire Code SECTION 8001.14.
- 4. For flammable and combustible liquids, see Fire Code Article 79. See also Fire Code SECTION 8001.1.1, Exception 2.
- 5. For aerosols, see Fire Code Article 88.
- 6. Quantities may be increased 100 percent in sprinklered buildings. When Footnote 10 also applies, the increase for both footnotes may be applied.
- 7. (Not Used)
- 8. For wholesale and retail sal es use, see Fire Code SECTION 7902.5.10.2.
- 9. Spray application of any quantity of flammable or combustible liquids shall be conducted as set forth in Fire Code Article 45.
- 10. Quantities may be increased 100 percent when stored in approved storage cabinets, gas cabinets or exhausted enclosures as specified in Fire Code SECTIONs 8001.3.2, 8003.3.1.3.2 and 8003.3.1.3.3. When Footnote 6 also applies, the increase for both footnotes may be applied.
- 11. The quantities permitted in a sprinklered building are not limited.
- 12. Permitted in sprinklered buildings only. None is allowed in unsprinklered buildings.
- 13. One pound (.454 kg) of black sporting powder and 20 pounds (9 kg) of smokeless powder are permitted in sprinklered or unsprinklered buildings.
- 14. See definitions of Group H, Divisions 2 and 3 Occupancies in SECTION 307.
- 15. See Fire Code Article 79.
- 16. A maximum quantity of 200 pounds (90.7 kg) of solid or 20 gallons (75.7 L) of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation σ sanitation of equipment. Storage containers and the manner of storage shall be approved.
- 17. For any amount, see Fire Code Articles 28, 30, 45, 46, 48, 50, 74, 75, 76, 77 and 78 as applicable for the hazard category.
- 18. Unless the actual weight of the pyrotechnic composition of the fireworks, 1.4G is known, 25 percent of the gross weight of the fireworks, including packaging, maybe used to determine the weight of the fireworks for the purpose of this table.

Table 307.7(2) Maximum Allowable Quantity Per Control Area of Hazardous Material Posing a Health Hazard $^{\rm a,b,c}$

Table 307.7(2) is amended to read:

TABLE 307.7(2) — MAXIMUM ALLOWABLE QUANTITIES PER CONTROL AREA^{1, 2, 14} EXEMPT AMOUNTS OF HAZARDOUS MATERIALS PRESENTING A HEALTH HAZARD

When two units are given, values within parentheses are in cubic feet (cu. ft.) or pounds (lbs.) (Apply table as specified in SECTION 307.7.)

	0		Storage ³		Use ³	- Closed Sys	Use3- Open Systems		
	Occupancy Group when the Allowable quantity is	Solid Pounds 4,5,6	Liquid Gallons ^{4,5,6} (pounds)	Gas Cubic Feet⁵	Solid Pounds ⁵	Liquid Gallons ^{4, 5, 6} (pounds)	Gas Cubic Feet ⁵	Solid Pounds	Liquid Gallons (pounds)
Material	exceeded	x0.4536forka	X 3.785 for L X 0.4 536 for kg	X 0.0283 for m ³	x 0.4536 for ka	X 3.785 for L X 0.4536 for kg	X 0.0283 for m ³	x 0.4536 for kg x 0.0283 for m ³	X3.785forL X0.4536forkg
Corrosives	H-4 or H5	5,000	500	810 ⁶	5,000	500	810°	1,000	100 ⁵
2. Highly Toxics 11	H-4 or H5	10	(10)	2012	10	(10)	2012	3°	(3) 5
3. Irritants 7,15	H-4 or H5	N.L.	N.L.	810 ^{6,9}	N.L.	N.L.	810 ⁹	5,000°	500 ⁹
4. Sensitizers 7, 15	H-4 or H5	N.L.	N.L.	810 ^{6, 9}	N.L.	N.L.	810 ^{6,9}	5,000°	500 ⁹
5. Other Health Hazards 7,15	H-4 or H5	N.L.	N.L.	810 ^{6, 9}	N.L.	N.L.	810 ^{6,9}	5,000	500 ⁹
6. Toxics 11	H-4 or H5	500	(500)	810 ⁶	500	(500)	810 ¹²	125 ⁵	(125) 5

NI = Not Limited

- 1. Control areas shall meet the requirements of SECTION 414.2 and Fire Code SECTIONs 204 and 8001.10.2.
- See Fire Code SECTION 8001.1.1, Exception 2.
- The aggregate quantity in use and storage shall not exceed the quantity listed for storage. Quantities shall not exceed limits set forth in Fire Code SECTIONs 8001.15.2 and 8001.15.3.
- 4 The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid health hazard materials within a single control area of Group M and Group S Occupancies may exceed the exempt amounts when such areas are in compliance with Fire Code SECTION 8001.14.
- Quantities may be increased 100 percent in sprinklered buildings. When Footnote 6 also applies, the increase for both footnotes may be applied.
- Quantities may be increased 100 percent when stored in approved storage cabinets, gas cabinets or exhausted enclosures as specified in Fire Code SECTIONs 8001.3.2, 8003.3.1.3.2 and 8003.3.1.3.3. When Footnote 5 also applies, the increase for both footnotes may be applied.
- Irritants, sensitizers and other health hazards do not include commonly used building materials and consumer products that are not otherwise regulated by this code.
- See also applicable federal and state OSHA guidelines.
- The quantities allowed in a sprinklered building are not limited when exhaust ventilation in accordance with Fire Code SECTIONs 8003.1.4, 8004.1.11, 8004.2.2.2 and 8004.2.3.3, as applicable to the material condition, is provided.
- 10. The quantities allowed in a sprinklered building are not limited when exhaust ventilation in accordance with Fire Code SECTIONs 8003.1.4, 8004.1.11, 8004.2.2.2 and 8004.2.3.3 and spill control and secondary containment in accordance with Fire Code SECTIONs 8003.1.3, 8004.1.4, 8004.2.2.5 and 8004.2.3.6, as applicable to the material condition, is provided.
- 11. For special provisions, see Fire Code SECTIONs 8003.3, 8003.12, 8004.2,3,7 and 8004.3,5,
- 12. Permitted onlywhen located in approved gas cabinets, exhausted enclosures or gas rooms. See Fire Code SECTIONs 8003.3.1.3.2, 8003.3.1.3.3 and 8003.3.1.3.4.
- 13. Licensed, sealed sources for instruments, calibration devices and equipment are exempt. Licensing requirements and determination of whether a source is sealed or nonsealed shall be as set forth in Nuclear Regulatory Commission regulations. Individual containers shall not exceed a quantity of 2 mCi (7.4 _ 107 becquerels) for alpha emitters, 200 Ci (7.4 _ 1012 becquerels) for beta emitters and 0.1 Ci (3.7 _ 109 becquerels) for gamma emitters. Ci = curies, mCi = millicuries

 14. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with SECTION
- 414.2.4, see Table 414.2.4.
- 15. See Fire Code for definitions.

308.2 Group I-1

SECTION 308.2 is amended to read:

308.2 Group I-1. This occupancy shall include a building or part thereof housing more than 16 persons, who because of age, mental disability or other reas ons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

residential board and care facilities, assist-ed living facilities, half-way houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers and convalescent facilities.

- A facility such as the above with fiveor fewer persons shall be classified as a Group R-3.
- A facility such as above, housing at least six and not more than 16 persons shall be classified as a Group R-4.

308.3 Group I-2

SECTION 308.3 Group I-2 is amended to read:

3083 Group **F2.** This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care of more than five persons

who are not capable of self-preservation. This group shall include, but not be limited to the following: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals and detoxification facilities.

- A residential facility such as the above with five or fewer persons shall be classified as a Group R-3
- A medical treatment or health care facility such as the above with five or fewer persons shall be classified as a Group B.

310.4 Visual Access

A new SECTION 310.4 is added to read:

310.4 Visual Access. All front entrance doors of individual rooms in motels, hotels, apartment houses and condominiums shall contain a means to provide occupants of the room, condominium or apartment with visual access through the door.

402.6 Type of Construction.

SECTION 402.6 is amended to read:

402.6 Types of construction. The area of one-and two-level covered mall building, including anchor buildings of Types I, II, III and IV construction shall not be limited provided the covered mall building and attached anchor buildings and parking structures are surrounded on all sides by a permanent open space of not less than 60 feet (18, 288 mm). Three-level covered mall buildings, including anchor buildings, shall be at least Type IIA construction and not be limited.

403.1 Applicability

SECTION 403.1 is amended to read:

403.1 Applicability. The provisions of this SECTION shall apply to all high-rise buildings. A high-rise building is defined as a building having occupied floors located more than 55 feet (16,764 mm) above the lowest level of fire department vehicle access.

403.3 Reduction in Fire Resistance Rating.

Delete SECTION 403.3 in its entirety.

403.3.1 Type of Construction.

Delete SECTION 403.3.1 in its entirety.

403.3.2 Shaft Enclosures.

Delete SECTION 403.3.2 in its entirety.

403.9 Elevators

SECTION 403.9 is amended to read:

403.9 Elevators. Elevator operation and installation shall be in accordance with Chapter 30 and the following:

Note: A bank of elevators is a group of elevators or a single elevator controlled by a common operating system; that is, all those elevators that respond to a single call button constitute a bank of elevators. There is no limit on the number of cars that may be in a bank or group, but there may not be more than four cars within a common hoist way.

Elevators on all floors shall open into elevator lobbies that are separated from the remainder of
the building, including corridors and other means of egress, by walls extending from the floor to
the underside of the fire-resistive floor or roof above. Such walls shall not be of less than onehour fire-resistive construction. Openings through such walls shall conform to SECTION
1004.3.2.1 and 707.14.1.

EXCEPTIONS:

- 1. The main entrance -level elevator lobby in office buildings.
- 2. Elevator lobbies located within an atrium complying with the provisions of SECTION 402.
- 3. In fully sprinklered office buildings, corridors may lead through enclosed elevator lobbies if all areas of the building have access to at least one required means of egress with out passing through the elevator lobby.
- 2. Each elevator lobby shall be provided with approved smoke detector(s) installed in accordance with their listings. When the detector is activated, elevator doors shall not open and all cars serving that lobby are to return to the main floor and be under manual control only. If the main floor detector or a transfer floor detector is activated, all cars serving the main floor or transfer

floor shall return to a location approved by the fire department and building official and be under manual control only. The detector may serve to close the lobby doors, additional doors at the hoistway opening allowed in SECTION 3007 and smoke dampers serving the lobby.

3. Elevator hoistways shall not be vented through an elevator machine room. Each elevator machine room shall be treated as a separate smoke-control zone.

403.10.1.1 Fuel Supply

Delete the exception to SECTION 403.10.1.1.

403.10.1.3 Connected Facilities Power:

SECTION403.10.13 is amended to read:

403.10.1.3 Connected Facilities Power and lighting facilities for the fire command center and elevators specified in SECTIONs 403.8 and 403.9, as applicable, and electrically powered fire pumps required to maintain pressure, shall be automatically transferable to the standby source. Standby power when required by SECTION403 shall be provided to at least one elevator in each bank. Standby power shall be manually transferable to all elevators in each bank.

403.11 Stairway Door Operation

SECTION 403.11 is amended to read:

403.11 Stairway door operation. Stairway doors other than the exit discharge doors shall be permitted to be locked from stairway side. All Stairway and vestibule doors that are locked from the stairway side shall be capable of being unlocked simultaneously without unlatching when any of the following occur: A signal from the central control station; an activation of an audible and visual fire alarm in the area served by the stairway; or a power failure.

403.13.1 Smoke Control

Add a new SECTION 403.13.1 to read:

403.13.1 Smoke Control. A smoke control system meeting the requirements of Chapter 9 shall be provided.

404.3 Automatic Sprinkler Protection

SECTION404.3, exceptions 1 and 2 are deleted and a new exception is added to read:

1. Where the ceiling of the atrium is more than 55 feet (16 764 mm) above the floor, sprinkler protection at the atriummay not be required when approved by the building official.

404.8 Interior Finish:

SECTION 404.8 is amended to read:

404.8: Interior Finish The interior finish of walls and ceilings of the atrium and all unseparated tenant spaces shall not be less than Class A with no reduction in class for sprinkler protection.

406.2.6.1 Specific Use Provisions

A new SECTION 406.2.6.1 is added to read:

406.2.6.1 Specific use provisions. If floor drains are installed in an enclosed parking garage, the floors shall drain to an approved sand/oil separator.

406.3.3 Construction

SECTION 406.3.3 is amended to read:

406.3.3 Construction. Open parking garages shall be of type I or II construction. Open parking garages shall meet the design requirements of Chapter 16. For vehicle barriers, see SECTION 406.2.4.

406.4.2 Ventilation

SECTION 406.4.2 is amended to read:

406.4.2 Ventilation. A mechanical ventilation system shall be provided capable of exhausting a minimum of 1.5 cubic feet per minute (cfm) per square foot (0.71 L/s/m2) of gross floor area. The building official may approve an alternate ventilation system designed to exhaust a minimum of 14,000 cfm (6608 L/s) for each operating vehicle. Such system shall be based on the anticipated instantaneous movement rate of vehicles, but not less than 2.5 percent (or one vehicle) of the garage capacity. Automatic carbon monoxide-sensing devices may be employed to modulate the ventilation system to maintain a maximum average concentration of carbon monoxide of 50 parts per million during any eight-hour period, with a maximum concentration not greater than 200 parts per million for a period not exceeding one hour. Connecting offices, waiting rooms, ticket booths and similar uses shall be supplied with conditioned air under positive pressure.

406.6.3 Ventilation

SECTION 406.6.3 is amended to read:

406.6.3 Ventilation. A mechanical ventilation system shall be provided capable of exhausting a minimum of 1 cubic foot per minute per square foot (0.044 L/s/m2) of floor area. Each engine repair stall shall be equipped with an exhaust pipe extension duct, extending to the outside of the building, which, if

over 10 feet (3048 mm) in length, shall mechanically exhaust 300 cubic feet per minute (141.6 L/s). Connecting offices and waiting rooms shall be supplied with conditioned air under positive pressure.

Exception. In repair garage where there is no open flame and welding being performed within the building, the mechanical ventilation system required by 1202.6.1 may be omitted when in the opinion of the building official, the building is equipped with unobstructed openings to the outer air that are sufficient to provide the necessary ventilation.

406.6.4 Floor Surface

SECTION 406.6.4 is amended to read:

406.6.4 Floor surface. Garage floors shall be of concrete or similar noncombustible and nonabsorbant material. In motor vehicle repair garages, the floors shall drain to an approved sand/oil separator discharging to sewers in accordance with the Plumbing Code.

410.6 Automatic Sprinkler System:

SECTION410.6 is amended to read:

410.6 Automatic sprinkler system. Stages shall be equipped with an automatic fire -extinguishing system in accordance with Chapter 9 and the Fire Code. The system shall be installed under the roof and gridiron, and the tie and fly galleries and in places behind the proscenium wall of the stage and in dressing rooms, lounges, workshops and storerooms accessory to such stages.

411.2.1 Movie Theaters

Add a new SECTION 411.2.1 to read:

411.2.1 Movie Theaters. Any building or portion of a building being used as a movie theater, motion picture theater, mini motion picture theater, picture arcade theater, video or live entertainment arcade theater, or multiple arcade theater, or similar uses; or holding itself out as being such a theater, arcade, or similar use, shall be required to have the following:

- 1. A minimum of two exits remotely located from each other, unless occupant loads dictate more than two exits.
- 2. A minimum of two full rest rooms, one for men and one for women, meeting accessibility requirements of Chapter 11.
- 3. An automatic fire extinguishing system and alarm system conforming to the fire code.

412.2.6 Fire Suppression.

SECTION412.2.6 is amended to read:

412.2.6 Fire Suppression. Aircraft hangars shall be provided with fire suppression as required in

412.3.4 Smoke Detection

SECTION412.3.4 is amended to read:

412.3.4 Smoke detection Smoke alarms shall be provided within the hangar in accordance with SECTION 907.2.21.

412.4.5 Fire Suppression.

SECTION412.4.5 is amended to read:

412.4.5 Fire suppression. Aircraft paint hangars shall be provided with fire suppression as required in NFPA 410.

414.2.2 Number

SECTION414.2.2 is amended to read:

414.2.2 Number. The maximum number of control areas within a building shall be in accordance with Table 414.2.2 and shall not exceed 4.

Table 414.2.2 Design and Number of Control Areas

Table 414.2.2 is amended to read:

Table 414.2.2 DESIGN AND NUMBER OF CONTROL AREAS

Floor Leve	el	PERCENTAGE OF THE MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA ^a	NUMBER OF CONTROL AREAS PER FLOOR ^b	FIRE RESISTANCE RATING FOR FIRE BARRIERS IN HOURS
	5 or higher		1	2
	4	5	2	2
Above Grade	3	12.5	2	1
Above Grade	2	25	3	1
	1	50	4	1
		100		
	1	50	3	1
Below Grade	2	25	2	1
	Lower than 2	Not Allowed	Not Allowed	Not Allowed

There shall be a maximum of two control areas per building in Group M occupancies and in buildings or portions of buildings having Group S occupancies with storage conditions and quantities in accordance with SECTION 414.2.4.

Fire barriers shall include walls and floors as necessary to provide separation from other portions of the building.

502.1 Definitions

The definition of Height, Building is amended to read:

b.

HEIGHT, BUILDING. The vertical distance above a reference datum measured to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped ro of. The reference datum shall be selected by either of the following, whichever yields a greater height of building:

- 1. The elevation of the highest adjoining sidewalk or ground surface within a 5-foot (1524 mm) horizontal distance of the exterior wall of the building when such sidewalk or ground surface is not more than 10 feet (3048 mm) above the lowest grade.
- 2. An elevation 10 feet (3048 mm) higher than the lowest grade when the sidewalk or ground surface described in Item 1 is more than 10 feet (3048 mm) above the lowest grade.

The height of a stepped or terraced building is the maximum height of any segment of the building.

507.1 Unsprinklered, one-story

SECTION 507.1 is deleted

507.2 Sprinklered, one-story

SECTION 507.2 is amended by deleting exceptions 2 through 2.1:

507.9 Area and Height

Add a new SECTION 507.9 to read:

507.9 Area and Height. Noncombustible carports open on all sides, not over twelve feet (3658 mm) in height, and located ten feet (3048 mm) from any building or property line may be of unlimited area. **Table 601 Fire Resistance Rating Requirements for Building Elements (hours)**

Amend Table 601 to read:

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

Building Element	Type 1		Type 2		Type III		Type IV	Type V				
Building Element	Α	В	A ^d	В	A^d	В	HT	A^d	В			
Structural Frame a Including columns, girders, trusses	3	2	1	0	1	0	HT	1	0			
Bearing Walls Exterior ^f Interior	4 3	4 2	1	0	2 1	2 0	2 1/HT	1	0			
Nonbearing walls and partitions Exterior Interior					See Table ee SECTIO			1/H1 1 0				
Floor Construction Including supporting beams and joists	2	2	1	0	1	0	HT	1	0			

Roof Construction Including supporting beams	2	1°	1 ^c	0°	1 ^c	0	HT	1°	0	
and joists	_	'	'	U	Į.		• • • • • • • • • • • • • • • • • • • •	'	U	

For SI: 1 foot = 304.8 mm.

- a The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.
 - c. Except in factory-Industrial (F-1), Hazardous (H), Mercantile (M), and Moderate Hazard Storage (S-1) occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the construction is 25 or more above any floor immediately below. Heavy timber shall be allowed to be used for such unprotected members.
 - 2. In all occupancies, heavy timber shall be allowed where a 1-hour or less fire resistance rating is required.
 - In Type I and Type II construction, heavy timber members shall be allowed in buildings not over one story including
 girders and trusses as part of the roof construction, when every part of the roof framing, including the structural
 frame, is 25 feet or more above the floor, balcony or gallery immediately below.
 - d. An approved automatic sprinkler system in accordance with SECTION 903.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with SECTION 506.3 or an allowable height increase in accordance with SECTION 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.
 - e. For interior nonbearing partitions in Type IV construction, also see SECTION 602.4.6.
 - f. Not less than the fire-resistance rating based on fire separation distance (see Table 602.)

602.6 Small Structures

Add a new SECTION 602.6 to read:

602.6 Small Structures. Small structures used for parking lot offices, used car lot offices, shoe shine stands and similar uses can be of Type V-B construction provided that the structures do not exceed 500 square feet (46.5 m^2) in area, and are not of a temporary nature and are separated from other structures a distance to be determined by the building official. The provision for area increased under SECTION 506 shall not apply to such structures. Vehicles or truck trailers shall not be considered as meeting the requirements of this SECTION and shall not be permitted under its terms.

602.7 Combustible Decorative Materials and Architectural Features

Add a new SECTION 602.7 to read:

602.7 Combustible Decorative Materials and Architectural Features. Architectural features of buildings, building components, and decorative structures shall comply with the building code provisions.

Combustible decorative materials and architectural furnishings used in Group A and public areas of Group R, Division 1 occupancies, shall comply with the Fire Code.

603.1 Allowable Uses

Amend sub SECTION to read as follows:

603.1 Allowable uses. Combustible materials are permitted in buildings of Type I and Type II construction in the following applications:

- 1. Heavy-Timber members shall be permitted in:
- 1.1. Nonbearing partitions where the required fire resistance rating is 2 hours or less.
- 1.2. Roof construction as permitted in Table 601, Note c, Item 3.
- 2. Thermal and acoustical insulation, other than foam plastics, having a flame spread index of not more than 25.

704.1.1 Extension Through Attics and Concealed Spaces.

Add a new SECTION 704.1.1 to read:

704.1.1 Extension through attics and concealed spaces. In fire-resistive exterior wall construction, the fire-resistive rating shall be maintained for such walls passing through attic areas or other areas containing concealed spaces.

704.2.1 Types I & II Construction

Amend SECTION 704.2.1 to read:

704.2.1 Types I and II construction. Projections from walls of Type I or II construction shall be of noncombustible materials.

704.5 Fire-Resistive Ratings

Amend SECTION 704.5 to read:

704.5 Fire-resistance ratings. Exterior walls shall be fire-resistance rated in accordance with Tables 601 and 602. The fire-resistance rating of exterior walls with a fire separation distance of greater than 20 feet (6096 mm) shall be rated for exposure to fire from the inside. The fire-resistance rating of exterior walls with a fire separation distance of 20 feet (6096 mm) or less shall be rated for exposure to fire from both sides.

Table 704.8 Maximum Area of Exterior Wall Openings ^a

Table 704.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS^a

	Fire Separation Distance (feet)							
Classification of Opening	0 to 3	>3 to 5	> 5 to 10	>10 to 15	>15 to 20	>20 to 25	>25 to 30	>30
Unprotected	Not Permitted	Not Permitted	10%	15%	25%	45%	70%	No Limit
Protected	Not Permitted	Not Permitted	25%	45%	75%	No Limit	No Limit	No Limit

f. The area of unprotected and protected openings is not limited for occupancies in Group R -3, as applicable in SECTION 101.2, with a fire s eparation distance greater than 3 feet.

704.8.1 Automatic Sprinkler System.

Delete SECTION 704.8.1.

704.12 Opening Protection.

Amend SECTION 704.12 to read:

704.12 Opening protection. Windows required to be protected in accordance with SECTION 704.8, 704.9, or 704.10 shall comply with SECTION 714.3.7. Other openings required to be protected with fire doors or shutters in accordance with SECTIONs 704.8, 704.9 and 704.10 shall comply with SECTION 714.2.

705.6 Vertical Continuity

Amend SECTION 705.6 to read:

705.6 Vertical continuity. Fire walls shall extend from the foundation to a termination point at least 30 inches (762 mm) above both adjacent roofs.

EXCEPTIONS: 1. Any fire wall may terminate at the underside of the roof sheathing, deck or slab, provided the roof-ceiling assembly is of at least two -hour fire-resistive construction.

- 2. Fire walls may terminate at the underside of the roof sheathing, deck or slab, provided:
- 2.1 When the roof-ceiling framing elements are parallel to the walls, such framing and elements supporting such framing shall not be of less than one-hour fire-resistive construction for a width of not less than 5 feet (1524 mm) on each side of the wall.

- 2.2 When roof-ceiling framing elements are not parallel to the wall, the entire span of such framing and elements supporting such framing shall not be of less than one-hour fire-resistive construction.
- 2.3 Openings in the roof shall not be located within 5 feet (1524 mm) of the fire wall.
- 2.4 The entire building shall be provided with not less than a Class B roof assembly as specified in SECTION 1505.
- 3. Fire walls may terminate at the underside of noncombustible roof sheathing, deck or slabs of roofs of noncombustible construction, provided:
- 3.1 Openings in the roof are not located within 5 feet (1524 mm) of the fire wall.
- 3.2 The entire building is provided with not less than a Class B roofing assembly as specified in SECTION 1505.
- 4. Buildings located above a parking garage designed in accordance with SECTION 508.2(1) shall be permitted to have the fire walls for the buildings located above the parking garage extend from the horizontal separation between the parking garage and the buildings.

707.2 Shaft Enclosure Required.

Amend exceptions 707.2 to read:

707.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this SECTION.

Exceptions:

- 1.1 R-3 occupancies, four (4) stories or less.
- 1.2 A shaft enclosure is not required for openings totally within an individual residential dwelling unit and penetrating not more than one floor.
- 2. A shaft enclosure is not required in a building equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 for an escalator opening or stairway which is not a portion of the means of egress protected according to Items 2.1 or 2.2:
- 2.1. Where the area of the floor opening between stories does not exceed twice the horizontal projected area of the escalator or stairway and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four stories.
- 2.2. Where the opening is protected by approved poweroperated automatic shutters at every floor penetrated. The shutters shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with SECTION 907.10 and shall completely shut off the well opening for fire resistive purposes but shall also be equipped to allow for emergency egress. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s) and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release therefrom.
- 3. A shaft enclosure is not required for penetrations by pipe, tube, conduit, wire, cable, and vents protected in accordance with SECTION711.4.
- 4. A shaft enclosure is not required for penetrations by ducts protected in accordance with SECTION

711.4.4. Grease ducts for type I hoods shall be protected with a two-hour shaft in types I, IIA, and one hour shafts in all other types of construction.

707.4 Fire-Resistance Rating

Amend SECTION 707.4 to read:

707.4 Fire-resistance rating. Shaft enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more and 1 hour where connecting less than four stories. Shaft enclosures shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours.

707.6 Exterior Walls

Delete SECTION 707.6

707.13.4 Termination Room

Amend SECTION 707.13.4 to read:

707.13.4 Termination room. Refuse and laundry chutes shall discharge into an enclosed room completely separated from the remainder of building by construction that has a fire resistance rating as required for that of the shaft but not less than one hour and openings into the termination room shall be protected by opening protectives having a fire-protection rating as listed for each commensurate type of shaft assembly in table 714.2 and shall be self-closing or automatic-closing upon the detection of smoke. Refuse chutes shall not terminate in an incinerator room. Refuse and laundry rooms that are not provided with chutes need only comply with Table 302.1.1.

707.14.1 Elevator Lobby

Amend SECTION 707.14.1 by deleting exception 4:

708.3 Fire-Resistance Rating

Amend SECTION 708.3 by deleting exception 2.

708.3 Fire-resistance rating. The fire-resistance rating of the walls shall be 1 hour.

Exception: Corridor walls as permitted by Table 1004.3.2.1.

708.4 Continuity

Delete exceptions #5 and #6 from SECTION 708.4.

709.4 Continuity

Amend SECTION 709.4 by deleting exception.

709.4 Continuity. Smoke barriers shall for an effective membrane continuous floor slab to floor or roof deck above, including continuity through concealed spaces, such as those found above suspended ceilings, and including interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required fire-resistance rating of the wall or floor supported in buildings of other than Type IIB, IIB, or VB construction.

710.3 Fire-Resistance Rating:

Amend SECTION 710.3 by deleting exception:

713.2.1 Individual Protection

Amend SECTION 713.2.1 to read:

713.2.1 Individual protection. Columns, girders, trusses, beams, lintels or other structural members that are required to have a fire-resistance rating and that support more than two floors or one floor and roof, or support a load-bearing wall or a nonload-bearing wall more than one story high, shall be individually protected on all sides for the full length with materials having the required fire-resistance rating. Other structural members required to have a fire-resistance rating shall be protected by individual encasement, by a membrane or ceiling protection as specified in SECTION 710, or by a combination of both. Columns shall also comply with SECTION 713.2.2

713.6 Bottom Flange Protection

Amend 713.6 to read:

713.6 Bottom flange protection. Fire-resistive material may be omitted from the bottom flange of lintels spanning not over 6 feet (1829 mm), shelf angles or plates that are not a part of the structural frame.

714.2.4 Doors in Exit Enclosures

Amend SECTION 714.2.4 by deleting exception:

714.2.4.1 Glazing in Doors

Amend SECTION 714.2.4.1 by deleting exception:

714.2.7 Door Closing

Amend SECTION 714.2.7 to read:

714.2.7 Door closing. Fire doors in fire walls shall be automatic closing in accordance with this SECTION. Fire doors in other than fire walls shall be self-closing or automatic -closing in accordance with this SECTION.

Exception: Fire doors located in common walls separating guestrooms in Group R-1 hotels and motels shall be permitted without automatic-closing or self-closing devices.

715.5.2 Fire Barriers

Amend SECTION 715.5.2 by deleting exceptions 2 & 3.

715.5.2 Fire barriers. Duct and air transfer openings of fire barriers shall be protected with approved fire dampers installed in accordance with their listing.

Exception: Fire dampers are not required at penetrations of fire barriers where penetrations are tested in accordance with ASTM E 119 as part of the fire-resistance rated assembly.

715.5.3.1 Penetrations of Shaft Enclosures

Amend SECTION 715.5.3.1 to read:

715.5.3.1 Penetrations of shaft enclosures. Shaft enclosures that are permitted to be penetrated by ducts and air transfer openings shall be protected with approved fire and smoke dampers installed in accordance with their listing.

Exception 1. Fire dampers are not required at penetrations of shafts where:

- 1.1 Steel exhaust subducts extend at least 22 inches (559 mm) vertically in exhaust shafts provided there is a continuous airflow upward to the outside.
- 1.2 Penetrations are tested in accordance with ASTM E 119 as part of the fire -resistance rated assembly.
- 1.3 Ducts are used as part of an approved smoke -control system in accordance with SECTION 909.
- 1.4 The penetrations are in parking garage exhaust or supply shafts that are separated from other building shafts by not less than 2-hour fire-resistance-rated construction.

Exception 2. Smoke dampers are not required at penetrations of shafts of exhaust-only openings serving continuously operating fans protected using the provisions of SECTION 909.

715.5.4 Fire Partitions

Amend SECTION 715.5.4 exception 1 to read:

715.5.4 Fire partitions. Duct penetrations in fire partitions shall be protected with approved fire dampers installed in accordance with their listing.

Exceptions: In occupancies other than Group H, fire dampers are not required where any of the following apply:

The partitions are tenant separation walls in buildings equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 or 903.3.1.2.

716.3.2 Groups R-1, R-2, R-3 and R-4

Amend SECTION 716.3.2 by deleting exceptions 1 & 2.

716.3.2 Groups R-1, R-2, R-3 and R-4. Draftstopping shall be provided in floor/ceiling spaces in Group R-1 buildings, in Group R-2 buildings as applicable in SECTION 101.2 with three or more dwelling units, in Group R-3 buildings as applicable in SECTION 101.2 with two dwelling units and in Group R-4 buildings. Draftstopping shall be located above and in line with the dwelling unit and tenant separations.

716.3.3 Other Groups

Amend SECTION 716.3.3 by deleting exception.

716.3.3 Other groups. In other groups, draftstopping shall be installed so that horizontal floor areas do not exceed 1,000 square feet (93 m2).

716.3.3.1 Dwelling Units, Hotels, and Shopping Centers

Add a new SECTION 716.3.3.1 to read:

716.3.3.1 Dwelling units, hotels, and shopping centers. Draft stops shall be installed in the floorceiling assemblies of shopping centers, and buildings containing more than one dwelling unit. Such draft stops shall be in line with the walls separating the dwelling units, tenant spaces, and guest rooms from each other and from other areas. Construction plans for new, additions, and alteration construction shall include details that clearly identify the location of all draft stops contained within floor-ceiling assemblies.

EXCEPTION: This SECTION shall not apply to shopping centers that comply with IBC 402 covered mall buildings.

716.3.3.2 Dwelling Units, Hotels, and Shopping Centers

Add a new SECTION 716.3.3.2 to read:

716.3.3.2 Dwelling Units, Hotels, and Shopping Centers. Draft stops shall be installed in the attic, mansards, overhangs, and false fronts set out from walks, and similar concealed spaces of shopping centers, hotels, and buildings containing more than one dwelling unit. Such draft stops shall be above and in line with the walls separating the dwelling units, tenant spaces, and guest rooms from each other and from other uses, Construction plans for new, additions, and alteration construction shall include details that clearly identify the location of all draft stops.

EXCEPTION: This SECTION shall not apply to shopping centers that comply with IBC 402. Covered mall buildings.

716.4.2 Groups R-1 and R-2.

Amend SECTION 716.4.2 to read:

716.4.2 Groups R-1 and R-2. Draftstopping shall be provided in attics, mansards, overhangs or other concealed roof spaces of Group R-2 buildings with three or more dwelling units and in all Group R-1 buildings. Draftstopping shall be installed above, and in line with, tenant and dwelling unit separation walls that do not extend to the underside of the roof sheathing above.

Exception: Where corridor walls provide a tenant or dwelling unit separation, draftstopping shall only be required above one of the corridor walls.

716.4.3 Other Groups

Amend SECTION 716.4.3 by deleting exceptions 2, 3 & 4.

716.4.3 Other groups. Draftstopping shall be installed in attics and concealed roof spaces, such that any horizontal area does not exceed 3,000 square feet (279 m2).

Exception: Where approved automatic sprinklers are installed, the area between draft stops may be 9,000 square feet and the greatest horizontal dimension may be 100 feet.

716.5 Combustibles in Concealed Spaces in Types I and II Construction:

Amend SECTION 716.5 to read:

716.5 Combustibles in concealed spaces in Types I and II construction. Combustibles shall not be permitted in concealed spaces of buildings of Type I or II construction.

Exception: Combustible materials in accordance with SECTION 603.

803.3.4 Materials.

Amend exception 1 to read as follows:

803.3.4 Materials. An interior wall or ceiling finish that is not more than 0.25 inch (6.4mm) thick shall be applied directly against a noncombustible backing.

Exceptions:

- 1. Non-combustible materials.
- 2. Materials where the qualifying tests were made with the material suspended or furred out from the noncombustible backing.

901.3 Modifications.

Amend SECTION 901.3 Modifications to read:

901.3 Modifications. No person shall remove or modify any fire protection system installed or maintained under the provisions of this code or the Fire Code without approval of the building official.

901.5 Acceptance Test.

Amend 901.5 to read:

901.5 Acceptance Test. Fire protection systems shall be tested in accordance with the requirements of this code and the Fire Code. When required, the tests shall be conducted in the presence of the building official. Tests required by this code, the Fire Code and the nationally recognized standards listed in this code shall be conducted at the expense of the owner or the owner's representative.

901.6, 901.6.1, 901.6.2, and 901.6.3

Delete subSECTIONs 901.6, 901.6.1, 901.6.2, and 901.6.3 in their entirety.

901.5 Acceptance Test

Add a new SECTION 903.1.3 to read:

903.1.3 Additional Local Requirements. See the Administrative Code for local requirements of each jurisdiction.

903.2.2 Group E

Amend SECTION 903.2.2 to read:

903.2.2 Group E. An automatic sprinkler system shall be provided throughout all fire areas containing Group E Occupancies where one or more of the following conditions exist:

- 1. An occupant load of 50 or more; or
- 2. Any portion below the level of exit discharge; or
- 3. Rooms used for kindergarten, first or second-grade pupils or for child day care purposes, located above or below the first story.
- 4. Daycare facilities when there is occupancy from 12:00 a.m. to 6:00 a.m.

903.2.5 Group I.

Delete the exception to SECTION 903.2.5.

903.2.6.1 High-Piled Storeage.

Delete SECTION 903.2.6.1.

903.2.7 Group R-1

Amend SECTION 903.2.7 to read:

903.2.7 Group R-1 An automatic sprinkler systems installed in accordance with SECTION 903.3 shall be provided throughout all buildings with a Group R-1 fire area.

903.2.8 Group R-2

Amend 903.2.8 Group R-2 to read:

903.2.8 Group R-2 An automatic sprinkler system installed in accordance with SECTION 903.3 shall be provided throughout all buildings with a Group R-2 fire area where more than two stories in height, including basements, or where having more than 16 dwelling units.

903.2.9 Group R-4

Amend 903.2.9 Group R-4 to read as follows:

903.2.9 Group R-4 An automatic sprinkler system installed pursuant to NAC 449 shall be provided throughout all buildings with a Group R-4 fire area

903.2.10.1 Repair Garages

Amend SECTION 903.2.10.1 to read:

903.2.10.1 Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with SECTION 406.6 as follows:

- 1. Buildings with a fire area containing a repair garage exceeding 10,000 square feet (929 m 2).
- 2. Buildings with a repair garage in the basement.
- 3. Buildings in which repair work such as body and fender work, work where fuel may be released, welding, open flame or other similar activities, with a fire area exceeding 3,000 square feet.(279 m 2)

903.2.10.3 Mini Storage Facilities.

Add SECTION 903.2.10.3 to read:

903.2.10.3 Mini Storage Facilities. An automatic sprinkler system shall be provided throughout all buildings used as mini storage where the Fire Area exceeds 2,500 square feet (232 m^2), which is not separated by firewalls constructed in accordance with SECTION 705.

903.2.12.4 High-piled Storage.

Add a new SECTION 903.2.12.4 to read:

903.2.12.4 High-piled storage. An automatic sprinkler system shall be provided in accordance with the Fire Code in all buildings where storage is in high-piled or rack storage arrays.

903.3 Installation Requirements.

Amend SECTION 903.3 to read:

903.3 Installation Requirements Automatic sprinkler systems shall be designed and installed in accordance with the Fire Code.

903.3.5.2 Secondary Water Supply

Amend SECTION 903.3.5.2 to read:

903.3.5.2 Secondary water supply. A secondary on-site water storage of 15,000 gallons minimum or the equal to the hydraulically calculated most demanding sprinkler system plus 100 gallons per minute (378.5 L/m) additional for the total standpipe-system, whichever is greater, shall be provided for high-rise buildings. The secondary water supply shall have a duration of not less than 30 minutes.

903.6 Fire Pump Rooms.

Add a new SECTION 903.6 to read:

903.6 Fire Pump Rooms. Any equipment or other uses in the room not directly related to the fire pump shall not be placed within this room unless approved by the Fire Department.

905.3.1 Building Height.

Amend SECTION 905.3.1 to read:

905.3.1 Building height. Approved Class I standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of the fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.

Exceptions: Approved Class I standpipes are allowed in freestanding open parking garages where the highest floor is located not more than 30 feet (9144 mm) above the lowest level of fire department vehicle access.

905.3.2 Building Area.

Amend SECTION 905.3.2 to read:

905.3.2 Building area. In buildings exceeding 10,000 square feet (929 m 2) in area per story, Approved Class I standpipes shall be provided where any portion of the building's interior area is more than 200

feet (60 960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access.

905.3.3 Group A.

Delete SECTION 905.3.3.

905.3.4 Covered Mall Buildings

Amend SECTION 905.3.4 to read:

905.3.4 Covered mall buildings. Covered mall buildings and buildings connected thereto shall be equipped throughout with a combined Class I automatic wet standpipe system. Hose connections shall be provided at each of the following locations:

- 1. Within the mall at the entrance to each exit passageway or corridor.
- 2. At each floor-level landing within enclosed stairways opening directly on the mall.
- 3. At exterior public entrances to the mall.

905.3.6 Underground Buildings.

Amend SECTION 905.3.6 to read:

905.3.6 Underground buildings. Underground buildings shall be equipped throughout with an approved Class I standpipe system.

907.2 Where Required.

Amend SECTION 907.2 to read:

907.2 Where required. An approved manual, automatic or manual and automatic fire alarm system shall be provided in accordance with SECTIONs 907.2.1 through SECTION 907.2.23. Where automatic sprinkler protection, installed in accordance with SECTION 903.1.1 or 903.3.1.2, is provided and connected to the building fire alarm system, automatic heat detection required by this SECTION shall not be required. An approved automatic fire detection systems shall be installed in accordance with the provisions of this code and the fire code. Devices, combinations of devices, appliances and equipment shall comply with SECTION 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector. For the purpose of this SECTION, firewalls shall not define separate buildings.

Exception: When approved by the Building Official, a fire alarm system is not required to extend throughout mixed occupancy or multi-tenant structure(s), where each occupancy or tenant is protected as required by SECTION 907.2.

907.2.2 Group B

Amend SECTION 907.2.2 to read:

907.2.2 Group B. A manual fire alarm system shall be installed in Group B occupancies having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.

Exception: Manual fire alarm boxes are not required throughout the building when all of the following conditions are met:

- 1. The building is equipped throughout with an automatic sprinkler system,
- 2. The sprinkler system is interconnected to the fire alarm system to notify all occupants upon sprinkler water-flow, and
- 3. At least one manual fire alarm box is installed at an approved location.

907.2.6.2.3 Smoke Detectors

Amend SECTION 907.2.6.2.3 to read:

907.2.6.2.3 Smoke detectors. An a proved automatic smoke detection system shall be installed throughout resident housing areas, including sleeping areas and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exception: Other approved smoke detection arrangements providing equivalent protection including, but not limited to, placing detectors in exhaust ducts from cells or behind protective guards listed for the purpose are allowed when necessary to prevent damage or tampering.

907.2.8 Group R-1

Amend SECTION 907.2.8 to read:

907.2.8 Group R-1. A fire alarm system and an automatic smoke detection system shall be installed in Group R-1 occupancies.

Exception: An automatic smoke detection system is not required inbuildings that do not have interior corridors serving guestrooms and where guestrooms have a means of egress door opening directly to an exterior exit access that leads directly to the exits. Single and multiple-station smoke alarms shall be installed in accordance with 907.2.10.

907.2.9 Group R-2

Amend SECTION 907.2.9 to read:

907.2.9 Group R-2. A fire alarm system and an automatic smoke detection system shall be installed in Group R-2 occupancies where:

- 1. Any dwelling unit is located three or more stories above the lowest level of exit discharge;
- 2. Any dwelling unit is located more than one story below the highest level of exit discharge of exits

serving the dwelling unit; or

3. The building contains more than 15 dwelling units.

Exception: An automatic smoke detection system is not required in buildings that do not have interior corridors serving dwelling units which, have a means of egress door opening directly to an exterior exit access that leads directly to the exits. Single and Multiple-station smoke alarms shall be installed in accordance with 907.2.10.

907.2.12 High-rise Buildings

Amend SECTION 907.2.12 to read:

907.2.12 High-rise buildings. Buildings having floors used for human occupancy located more than 55feet (16764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communications system in accordance with SECTION 907.2.12.2.

Exceptions:

- 1. Open parking garages in accordance with SECTION 406.3.
- 2 Low-hazard special occupancies in accordance with SECTION 503.1.2.

907.2.12.1 Automatic Fire Detection.

Amend SECTION 907.2.12.1 to read:

- **907.2.12.1 Automatic fire detection.** Smoke detectors shall be provided in accordance with this SECTIONwhen required by the Building Official. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this SECTION shall operate the emergency voice/alarm communication system. Smoke detectors shall be located as follows:
- 1. In each mechanical equipment, electrical, transformer, telephone equipment or similar rooms, elevator machine rooms, top of elevator shafts, and in elevator lobbies and in similar rooms.
- 2. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m³/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
- 3. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies a listed smoke detector is allowed to be used in each return-air riser carrying not more than $5,000 \, \text{cfm} \, (2.4 \, \text{m}^3/\text{s})$ and serving not more than $10 \, \text{air-inlet}$ openings.

907.2.12.2 Emergency Voice/Alarm Communication.

Amend SECTION 907.2.12.2 to read:

907.2.12.2 Emergency voice/alarm communication system. The operation of any automatic fire detector, sprinkler water-flow device or manual fire alarm box shall automatically sound an alert tone

followed by automatic voice instructions giving appropriate information and directions on a general or selective basis all fire areas. Elevators and stairways shall be manually activated only.

Exception: In Group I-2 and I-3 occupancies, the alarm shall sound in a constantly attended area.

907.2.12.3 Fire Department Communication System.

Amend SECTION 907.2.12.3 to read:

907.2.12.3 Fire department communication system. An approved two -way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with SECTION 911 and **the following locations:** each elevator, elevator lobbies, areas of refuge and inside enclosed exit stairways or vestibules at every floor, within each stairwell at the roof level, emergency and standby power rooms, and within 5 feet of entry doors into rooms containing, fire pump(s) or emergency generators(s).

Exception: Fire department radio systems where approved by the fire department. Permanent fire department phone handsets (warden type phones) shall be provided. Each warden's phone shall be permanently identified at the phone as to its location and shall be individually identifiable at the fire command center. Exterior phones shall be located in weatherproof enclosures painted red and labeled as Wardens Phone.

907.2.15 Special Egress-Control Devices.

Amend SECTION 907.2.15 to read:

907.2.15 Special egress-control devices. Where special egress-control devices are installed on means of egress doors in accordance with Chapter 10, an automatic smoke detection system shall be installed as required by Chapter 10.

907.2.19 Underground Buildings.

Amend SECTION 907.2.19 to read:

907.2.19 Underground buildings. A fire alarm system and an automatic smoke detection system shall be installed where the lowest level of a structure is more than 30 feet (9144 mm) below the lowest level of exit discharge. Where the lowest level of a structure is more than 60 feet (18,288 mm) below the lowest level of exit discharge, the structure shall also be equipped throughout with a manual fire alarm system, including an emergency voice/alarm communication system installed in accordance with SECTION 907.2.12.2.

907.3 Manual Fire Alarm Boxes.

Amend SECTION907.3 to read:

907.3 Manual fire alarm boxes . Manual fire alarm boxes shall be installed in accordance with the fire code.

907.3.5 Protective Covers.

Amend SECTION 907.3.1 to read:

907.3.1 Protective covers. The building official is authorized to require the installation of listed manual fire alarm box protective covers to prevent malicious false alarms or provide the manual fire alarm box with protection from physical damage. The protective cover shall be transparent or red in color with a transparent face to permit visibility of the manual fire alarm box. Each cover shall include proper operating instructions. A protective cover that emits a local alarm signal shall not be installed unless approved.

907.3.2 - 907.3.4

Delete SECTIONs 907.3.2, 907.3.3, and 907.3.4.

907.9.1 Visible Alarms.

Amend SECTION 907.9.1 to read:

907.9.1 Visible alarms. Visible alarm notification appliances shall be provided in accordance with SECTIONs 907.9.1.1 through 907.9.1.3.

Exception: Visible alarm notification appliances are not required in alterations, except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.

907.9.2 Audible Alarms

Amend SECTION 907.9.2 to read:

907.9.2 Audible alarms. Audible alarm notification appliances shall be provided and shall sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every space with-in the building. The minimum sound pressure levels shall be 80 decibels. The maximum sound pressure level for audible alarm notification appliances shall be 120 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

Exception: Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.

907.14 Monitoring.

Amend SECTION 907.14 to read:

907.14 Monitoring. Fire alarm systems shall be monitored in accordance with the fire code.

909.4.4 HVAC Systems:

Amend SECTION 909.4.4 to read:

909.4.4 Air-handling systems. The design shall consider the effects of all air-handling components including, but not limited to: kitchen exhaust systems and the heating, ventilating and air-conditioning (HVAC) systems on both smoke and fire transport. The analysis shall include all permutations of systems status. The design shall consider the effects of the fire on the HVAC systems.

909.5.2 Opening Protection

Amend SECTION 909.5.2 by adding exception #6 to read:

- 6. Passive smoke control systems shall be self-closing in the following locations:
 - 6.1 Guest Rooms
 - 6.2 Individual dwelling units
 - 6.3 Mechanical rooms
 - 6.4 Elevator machine rooms
 - 6.5 Electrical rooms used exclusively for that purpose
 - 6.6 Doors typically maintained in a closed position as approved by the code official

909.16.1 Smoke Control Systems

Amend SECTION 909.16.1 to read:

909.16.1 Smoke control systems. Fans that provide smoke-control functions shall be shown on the fire fighter's control panel. A clear indication of the direction of airflow and the relationship of components shall be displayed. Status indicators shall be provided for all smoke control equipment, annunciated by fan and zone, and by pilot-lamp-type indicators in accordance with the Fire Code

909.16.2 Smoke Control Panel

Amend SECTION 909.16.2 to read:

909.16.2 Smoke control panel. The firefighter's smoke control panel shall provide control capability over the complete smoke -control equipment. This includes all fans, dampers and automatic doors which constitute a portion of the smoke -control system. All portions of the normal air handing systems, such as kitchen hoods, and any other building systems, which can adversely impact smoke -control operations shall be in the automatic/manual overrides. A written proposal shall be submitted to the Building Official and the Fire Chief describing the overrides.

909.17 System Response Time

Amend SECTION 909.17 to read:

909.17 System response time. Smoke-control system activation shall be initiated immediately after receipt of an appropriate automatic or manual activation command.

Smoke control systems shall activate individual components (such as dampers and fans) in the sequence necessary to prevent physical damage to the fans, dampers, ducts and other equipment. For purposes of smoke control, the fire-fighter's control panel response time shall be the same for automatic or manual smoke control action initiated from any other building control point. The total response time, including that necessary for detection, shut-down of operating equipment and smoke control system startup, shall allow for full operational mode to be achieved before the conditions in the space exceed the design smoke condition. Upon receipt of an alarm condition at the Fire Alarm Control Panel, the fans, dampers and automatic doors shall have achieved their expected operating state and confirmation of proper operation shall be indicated at the Smoke Control Panel within 60 seconds

909.18.8.3 Reports

Amend SECTION 909.18.8.3 to read:

909.18.8.3 Reports. A complete report of testing shall be prepared by the special inspector or special inspection agency. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values and identification tag or mark. The report shall be reviewed by the responsible registered design professional and, when satisfied that the design intent has been achieved, the responsible registered design professional shall seal, sign and date the report with a statement as follows:

I have reviewed this report and by personal knowledge and on-site observation certify that the smoke-control system is in substantial compliance with the design intent, and to the best of my understanding complies with requirements of the code.

909.18.10 Alternative Testing Method

Add a new SECTION 909.18.10 to read:

909.18.10 Alternative testing method. When required by the building official, theatrical smoke or other approved tracer gases shall be used during final acceptance testing to visually verify air movement.

909.20.4 - 909.20.4.4

Delete SECTIONs 909-20.4 through 909.20.4.4.

909.20.5 Stair Pressurization Alternative:

Amend SECTION 909.20.5 to read:

909.20.5 Stair pressurization alternative. The provisions of SECTION 909.20.5.1 through 909.20.5.4

shall apply to the smokeproof enclosures using stair pressurization.

909.20.5.1 Pressure Difference

Add a new SECTION 909.20.5.1 to read:

909.20.5.1 Pressure difference. The stair enclosure shall be pressurized to a minimum of 0.05 inch of water gage relative to the vestibule with all stairway doors closed under the maximum anticipated stack pressures. The vestibule with doors closed shall have a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the fire floor. The pressure difference across doors shall not exceed 30 lbs (133-N) maximum force to begin opening the door.

909.20.5.2 Vestibule Doors

Add a new SECTION 909.20.5.2 to read:

909.20.5.2 Vestibule doors. The door assembly from the building into the vestibule shall be a fire door complying with SECTION 714.2 and provided with gaskets or other provisions to minimize air leakage. The door assembly from the vestibule to the stairway shall have not less than a 20-minute fire protection rating complying with SECTION 714.2.

Add a new SECTION 909.20.5.3 to read:

909.20.5.3 Dampered relief opening. A controlled relief opening capable of discharge a minimum of 2,500 cfm (1180 L/s) of air at the design pressure difference shall be located at the top of pressurized exit enclosures.

Add a new SECTION 909.20.5.4 to read:

909.20.5.4 Standpipe. Fire department standpipe connections and valve serving the floor shall be within the vestibule and located in such a manner so as not to obstruct egress where hose lines are connected and charged.

909.21 Underground Building Smoke Exhaust System:

Amend SECTION 909.21 to read:

909.21 Underground building smoke exhaust system. Where required in accordance with SECTION 405.5 for underground buildings, an approved smoke exhaust system shall be provided.

909.21.1 -909.21.3

Delete SECTIONs 909.21.1 through 909.21.3.

910.2.3 High-piles Combustible Storage.

Amend SECTION 910.2.3 to read as follows:

910.2.3 High-piled combustible storage. Buildings and portions thereof containin g high-piled combustible stock or rack storage in any occupancy group in accordance with the Fire Code.

910.3.1.2 Sprinklered Buildings

Amend SECTION 910.3.1.2 to read:

910.3.1.2 Sprinklered buildings. Where installed in buildings protected with an approved automatic sprinkler system, smoke and heat vents may operate automatically by actuation of a heat-responsive device rated at a minimum of 350°F (177°C).

910.3.4 Curtain Boards

Amend SECTION 910.3.4 to read:

910.3.4 Curtain boards. Where curtain boards are required by Article 81 of the Fire Code, they shall be provided in accordance with this SECTION.

Table 910.3 Requirements For Curtain Boards and Smoke Venting

Amend Table 910.3 to read as follows:

TABLE 910.3 REQUIREMENTS FOR CURTAIN BOARDS AND SMOKE AND HEAT VENTS^a

			NON-SPRINKLERED				<u>SPRINKLERED</u>			
Occupancy Group and Commodity Classification	Designated Storage Height (feet)	Minimum Curtain Board Depth (feet)	Maximum Area Formed by Curtain Boards (feet)	Vent Area to Floor Area Ratio	Maximum Spacing of Vent Centers (feet)	Maximum Distance to Vents from Wall or Curtain Boards ^C (feet)	Curtain Boards	Vent Area to Floor Area Ratio	Maximum Spacing of Vent Centers (feet)	Maximum Distance to Vents from Wall (feet)
Group F-1	•	0.2 xH but ≥ 4	50,000	1:100	120	60				
Group S-1 I-IV	≤ 20	6	10,000	1:100	100	60				
(Option 1)	> 20 ≤ 40	6	8,000	1:75	100	55				
Group S-1 I-IV	≤ 20	4	3,000	1:75	100	55	Not	4 400	400	50
(Option 2)	> 20 ≤ 40	4	3,000	1:50	100	50	Permitted	1:100	100	50
Group S-1 High Hazard	≤ 20	6	6,000	1:50	100	50				
(Option 1)	> 20 ≤ 30	6	6,000	1:40	90	45				
Group S-1 High Hazard	≤ 20	4	4,000	1:50	100	50				
(Option 1)	> 20 ≤ 30	4	2,000	1:30	75	40				

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m2.

a. Commodity classifications and requirements for rack storage shall be in accordance with the Fire Code For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.

b. The distance specified is the maximum distance from any vent in a particular curtained area to walls or

911.1 Features

Amend SECTION 911.1 to read:

911.1 Features. Where required by other SECTIONs of this code, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be separated from the remainder of the building by not less than a two (2) -hour fire-resistance-rated fire barrier with a door opening directly to the exterior of the building. The room shall be a minimum of 150 square feet (13.9 m2) with a minimum dimension of 10 (93 m2). A layout of the fire command center and all features required by the SECTION to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and shall contain the following features.

- 1. The emergency voice/alarm communication system unit.
- 2. The fire department communications unit.
- 3. Fire detection and alarm system annunciator unit.
- 4. Annunciator visually indicating the location of the elevators and whether they are operational.
- 5. Status indicators and controls for air-handling systems.
- 6. The fire -fighter's control panel required by SECTION 909.16 for smoke control systems installed in the building.
- 7. Controls for unlocking stairway doors simultaneously.
- 8. Sprinkler valve and waterflow detector display panels.
- 9. Emergency and standby power status indicators.
- 10. A telephone for fire department use with direct access to the public telephone system.
- 11. Fire pump status indicators.
- 12. Current building plans, fire protection system(s) plans, the approved Fire & Life Safety Report, fire emergency preplans for said complex, and manufacture's operation manuals for all systems.
- 13. A new work table of a minimum size of three (3) feet by seven (7) feet capable of holding plans in an open position.
- 14. Generator supervision devices, and manual start.
- 15. Public address system, where specifically required by other SECTIONs of this code.
- 16. A new white board of a minimum size of three (3) feet by four (4) feet capable of easy erasure, with a marking device and an erasure attached.
- 17. Separate shunt trip switches for normal and emergency power.

1002.1 Definitions.

Amend SECTION 1002.1 by adding in alphabetic order the following definition:

PUBLIC WAY is any street, alley or similar parcel of land essentially unobstructed from the ground to the sky that is deeded, dedicated or otherwise permanently appropriated to the public for public use and having a clear width of not less than 10 feet. (3048 mm).

Table 1003.2.2.2 Maximum Floor Area Allowances Per Occupant

Amend Table 1003.2.2.2 to include the following:

Showroom

Food Provided 12 net
Only beverage provided 10 net
All others 100 gross

TABLE 1003.2.3 Egress Width Per Occupant Served

Amend Table 1003.2.3 to read:

TABLE 1003.2.3 EGRESS WIDTH PER OCCUPANT SERVED

Occupancies other than those listed below	Stairways (inches per occupant) 0.3	Other egress components (inches per occupant) 0.2
Hazardous: H-1, H-2 H-3, and H-4	0.7	0.4
Institutional: I-2	0.4	0.2

For SI: 1 inch = 25.4 mm.

1003.2.5.1 Headroom:

Amend SECTION 1003.2.5.1 to read:

1003.2.5.1 Headroom. Protruding objects are permitted to extend below the ceiling provided a minimum headroom of 84 inches is maintained, as meas ured vertically from the walking surface to the lowest projection from the ceiling or overhead structure.

Exception: Sloped Ceilings in accordance with SECTION 1207.2

A barrier shall be provided where the vertical clearance is less than 80 inches high. The leading edge of such a barrier shall be located 27 inches maximum above the floor.

1003.2.10 Exit Signs

Amend SECTION 1003.2.10 to read:

1003.2.10 Exit signs . Exit signs shall comply with SECTIONs 1003.2.10.1 through 1003.2.10.6

1003.2.10.6 Floor -level Exit Signs.

Add a new SECTION 1003.2.10.6 to read:

1003.2.10.6 Floor -level exit signs . Where exit signs are required by SECTION 1003.2.10.1, additional approved low-level exit signs that are internally or externally illuminated, photoluminescent or self-luminous, shall be provided in all corridors serving guest rooms in Group R, Division 1 Occupancies.

The bottom of such sign shall not be less than 6 inches (152 mm) nor more than 8 inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be on the door or adjacent to the door with the closest edge of the sign within 4 inches (102 mm) of the door frame.

1003.2.11 Means of Egress Illumination

Amend SECTION 1003.2.11 to read:

1003.2.11 Means of egress illumination. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

Exceptions:

- 1. Occupancies in Group U.
- 2. Guestrooms in Group R-1, dwelling units and sleeping rooms in Groups R-2 and R-3.
- 4. Sleeping rooms of Group I occupancies.

1003.3.1.1 Size of Doors

Amend SECTION 1003.3.1.1 to read:

1003.3.1.1 Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees(1.57 rad). Where this SECTION requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in an occupancy in Group I-2 used for the movement of beds shall provide a clear width not less than 44 inches (1118 mm). The height of doors shall not be less than 80 inches (2032 mm).

Exceptions:

- 1.) The minimum and maximum width shall not apply to door openings that are not part of the Groups R-2 and R-3 as applicable in SECTION 101.2.
- 2. Door openings to resident sleeping rooms in occupancies in Group I-3 shall have a clear width of not less than 32 inches (813 mm).
- 3. Door openings to storage closets less than 10 square feet (0.93 m 2) in area shall not be limited by the minimum width.

- 4. Width of door leafs in revolving doors that comply with SECTION 1003.3.1.3.1 shall not be limited.
- 5. Door openings within a dwelling unit shall not be less than 78 inches (1981 mm) in height.
- 6. Exterior door openings in dwelling units, other than the required exit door, shall not be less than 78 inches (1981 mm) in height.
- 7. Interior egress door within a dwelling unit which is not required to be adaptable or accessible.
- 8. Door openings required to be accessible with-in Type B dwelling units shall have a minimum clear width of 32 inches (813 mm).

1003.3.1.3.1 Revolving Doors:

Amend SECTION 1003.3.1.3.1 to read:

1003.3.1.3.1 Revolving doors . Revolving doors shall comply with the following:

- Approved revolving doors shall have leaves that collapse under opposing pressures. Such
 doors shall have a minimum width of 6 feet 6 inches (1981 mm).
 A revolving door shall not be located within 10 feet of the foot of or top of stairs or
 escalators. A dispersal area shall be provided between the stairs or escalators and the
 revolving doors.
- 2. The revolutions per minute (RPM) for a revolving door shall not exceed those shown in Table 1003.3.1.3.1.
- **3.** Each revolving door shall have a side-hinged swinging door which complies with SECTION 1003.3.1 in the same wall and within 10 feet of the revolving door.

1003.3.1.3.1.1 Egress Component

Amend SECTION 1003.3.1.3.1.1 to read:

- **1003.3.1.3.1.1 Egress component.** A revolving door used as a component of a means of egress shall comply with SECTION 1003.3.1.3.1 and the following three conditions:
 - 1. The revolving door shall not be considered to provide any required width when computing means of egress width in accordance with SECTION 1003.2.3.
 - 2. Each revolving door shall be capable of being collapsed when a force of not more than 130 pounds is applied within 3 inches of the outer edge of a wing.

1003.3.1.3.3 Horizontal Sliding Doors

Add exception #9 to SECTION 1003.3.1.3.3 to read:

9. Each horizontal sliding door shall be credited with no more than a 50-person capacity.

1003.3.1.8.2 Delayed Egress Locks

Amend SECTION 1003.3.1.8.2 to read:

1003.3.1.8.2 Delayed egress locks. When approved by the Building Official, approved, listed, delayed egress locks may be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings which are equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 and an approved automatic smoke detection system installed in accordance with SECTION 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

- 1. The doors unlock upon actuation of the automatic sprinkler system or automatic smoke detection system.
- 2. The doors unlock upon loss of power controlling the lock or lock mechanism
- 3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
- 4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.
- 5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS.
- 6. Emergency lighting shall be provided at the door.

1003.3.1.8 Locks and latches.

Amend sub SECTION exception 2.2 to read as follows:

2.2 A readily visible durable sign is posted on the egress side on or adjacent to the stating: THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS. The sign shall be in letters 1 inch high on a contrasting background.

1003.3.1.3.4 Access -controlled Egress Doors:

Amend sub SECTION to read as follows:

1003.3.1.3.4 Access -controlled egress doors.

The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, M, R-1 and R-2 are permitted to be equipped with an approved entrance and egress access control system, when buildings are protected throughout by an approved automatic sprinkler system or an approved automatic smoke detection system, which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors.

The doors shall be arranged to unlock by a signal from or loss of power to the sensor.

- 2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.
- 3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches (1016 mm) to 48 inches (1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign.

When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.

- 4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
- 5. Activation of the building automatic sprinkler or smoke detection system, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
- 6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.

1003.3.3.3.2 Profile.

Amend the SECTION to read as follows:

1003.3.3.3.2 The radius of curvature at the leading edge of the tread shall be not greater than 0.5. Beveling of nosings shall not exceed 0.5 inch. The leading edge of treads shall project not more than 1.25 inches beyond the tread below and all projections of the leading edges shall be of uniform size, including the leading edge of the floor at the top of a flight.

Delete exceptions 1 and 2.

1003.3.5 Turnstiles:

Amend SECTION 1003.3.5 to read:

1003.3.5 Turnstiles. Turnstiles or similar devices that restrict travel to one direction shall not be placed so as to obstruct any required means of egress.

Exception: Each turnstile or similar device shall be credited with no more than a 50-person capacity where all of the following provisions are met:

- 1. Each device shall turn free in the direction of egress travel when primary power is lost.
- 2. Such devices are not given credit for more than 50 percent of the required egress capacity.
- 3. Each device is not more than 39 inches (991 mm) high.
- 4. Each device has at least 16.5 inches (419 mm) clear width at and below a height of 39 inches (991 mm) and at least 22 inches (559 mm) clear width at heights above 39 inches (991 mm).
- 5. Buildings are protected throughout by an approved automatic sprinkler system or an approved automatic smoke detection system
- 6. Activation of the building automatic sprinkler or fire detection system, shall automatically unlock the turnstile. The turnstile shall remain unlocked until the fire alarm system has been reset.

Where located as part of an accessible route, turnstiles shall have at least 36 inches (914 mm) clear width at and below a height of 34 inches (864 mm), at least 32 inches (813mm) clear width between 34 inches (864 mm) and 80 inches (2032 mm) and shall consist of a mechanism other than a revolving device. No more than 15 lb of pressure shall be required to open this mechanism and it shall meet all the applicable requirements of ANSI A117.1 SECTION 404.

1004.2.2.1 Two Exit or Exit Access Doorways

Amend SECTION 1004.2.2.1 by deleting exception 2.

1004.2.3 Egress through intervening spaces:

Amend SECTION 1004.2.3 to read:

1004.2.3 Egress through intervening spaces. The required access to exits from any portion of a building shall be directly from the space under consideration to an exit or to a corridor that provides direct access to an exit. Exit access shall not be interrupted by intervening rooms. Egress shall not pass through kitchens, store rooms, closets or spaces used for similar purposes. An exit access shall not pass through a room that can be locked to prevent egress. Means of egress from dwellingunits or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

Exceptions:

- 1. Means of egress are not prohibited through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or guestroom.
- 2. Means of egress are not prohibited through rooms or spaces in a high-hazard occupancy where such rooms or spaces are the same occupancy group.
- 3. Where access to only one exit is required from a space under consideration, exit access may occur through an adjoining or intervening room, which in turn provides direct access to an exit or to a corridor that provides direct access to an exit.
- 4. Rooms with a cumulative occupant load of less than 10 may access exits through more than one intervening room.
- 5. Where access to mo re than one exit is required from a space under consideration, such space may access one required exit through an adjoining or intervening room, which in turn provides direct access to an exit or to a corridor that provides direct access to an exit. All other required access to exits shall be directly from the space under consideration to an exit or to a corridor that provides direct access to an exit. Exception: R-3 occupancies. A non-rated corridor shall be considered as an intervening room.

1004.2.4 Exit Access Travel Distance

Add SECTION 1004.2.4.3 to read:

1004.2.4.3 Corridor increases. The travel distances specified in Table 1004.2.4 may be increased up to an additional 100 feet (30,480 mm) provided that the last portion of exit access leading to the exit occurs

within a rated corridor. The length of such corridor shall not be less than the amount of the increase taken, in feet (mm).

Table 1004.2.4 EXIT ACCESS TRAVEL DISTANCE^a

Amend Table 1004.2.4 to read:

TABLE 1004.2.4 EXIT ACCESS TRAVEL DISTANCE^a

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (FEET)	WITH SPRINKLER SYSTEM (FEET)
A, F-1, I-1, M, R, S-1	200	250 ^b
Е	150	225
В	200	250°
F-2, S-2, U	300	400 ^b
H-1	Not Permitted	75°
H-2	Not Permitted	75°
H-3	Not Permitted	75°
H-4	Not Permitted	100°
H-5	Not Permitted	100°
I-2, I-3, I-4	150	200°

For SI: 1 foot = 304.8 mm. a. See the following SECTIONs for modifications to exit access travel distance requirements:

SECTION 402: For the distance limitation in malls.

SECTION 404: For the distance limitation through an atrium space. SECTION 1004.2.4.1: For increased limitation in Groups F-1 and S-1.

SECTION 1008.6: For increased limitation in assembly seating.

SECTION 1005.2.2: For the limitation in temporary structures.

b. Buildings equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 or 903.3.1.2. See SECTION 903 for occupancies where sprinkler systems according to SECTION 903.3.1.2 are permitted.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1.

1004.3.1.4 Hallways.

Add SECTION 1004.3.1.4

1004.3.1.4.1 General

Add SECTION 1004.3.1.4.1 to read:

1004.3.1.4.1 General. Hallways serving as a portion of the exit access in the means of egress system shall comply with the requirements of SECTION 1004.3.3. Hallways may be used as an exit-access component unless specifically prohibited based on requirements specified elsewhere in this chapter. For exit-access design purposes, hallways shall be considered as intervening rooms.

1004.3.1.4.2 Width

Add SECTION 1004.3.1.4.2 to read:

1004.3.1.4.2 Width. The width of hallways shall be determined as specified in SECTION 1003.2.3, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Hallways serving an occupant load of less than 50 shall not be less than 36 inches (914 mm) in width. The required width of hallways shall be unobstructed.

EXCEPTION: Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in a ny position shall not reduce the required width by more than one half. Other nonstructural projections such as trim and similar decorative features may project into the required width 11/2 inches (38 mm) from each side.

1004.3.1.4.3 Construction

Add SECTION 1004.3.1.4.3 to read:

1004.3.1.4.3 Construction. Hallways are not required to be of fire-resistive construction unless a building element of the hallway is required to be of fire-resistive construction by some other provision of this code. Hallways in buildings of Types I or II construction shall be of noncombustible construction, except where combustible materials are permitted in applicable building elements by other provisions of this code. Hallways in buildings of Types III, IV or V construction may be of combustible or noncombustible construction. Hallways may have walls of any height. Partitions, rails, counters and similar space dividers not over 6 feet (1829 mm) in height above the floor shall not be construed to form a hallway.

1004.3.1.4.4 Openings

Add SECTION 1004.3.1.4.4 to read:

1004.3.1.4.4 Openings. There is no restriction as to the amount and type of openings permitted in hallways, unless protection of openings is required by some other provision of this code.

1004.3.1.4.5 Elevator Lobbies

Add SECTION 1004.3.1.4.5 to read:

1004.3.1.4.5 Elevator lobbies. Elevators opening into hallways need not be provided with elevator lobbies unless smoke - and draft - control assemblies are required for the protection of elevator door openings by some other provision of this code.

1004.3.1.4.6 Group R Occupancies

Add SECTION 1004.3.1.4.6 to read:

1004.3.1.4.6 Group R Occupancies. Hallways in Group R, 1 and 2 Occupancies which serve an occupant load of 10 or more shall comply with the requirements of SECTION 1004.3.2 for corridors.

Table 1004.3.2.1

Amend Table 1004.3.2.1 to read:

TABLE 1004.3.2.1 CORRIDOR FIRE-RESISTANCE RATING^d

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRI RATING Without sprinkler system	
H-1, H-2, H-3	All	1	1
H-4, H-5	Greater than 30	1	1
E	All	1	1
A(e), B(e), F, M, S, U	Greater than 30	1	1
R	Greater than 10	1	1
I-2 ^a , I-4	All	Not Permitted	1
I- 1, I-3	All	Not Permitted	1 ^b

- For requirements for occupancies in Group I-2, see SECTION 407.3.
- For a reduction in the fire-resistance rating for occupancies in Group I-3, see SECTION 408.7. Buildings equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 or 903.3.1.2. See exceptions to SECTION 1004.2.3.
- d.
- If A & B occupancies are used for educational purposes, one-hour fire-resistive corridor is required.

1004.3.2.1 Construction

Amend SECTION 1004.3.2.1 to read:

1004.3.2.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1004.3.2.1. The corridor walls required to be fire-resistance-rated shall comply with SECTION 708 for fire partitions.

Exceptions:

- 1. A fire-resistance rating is not required for corridors contained within a dwelling unit or a guestroom in an occupancy in Group R.
- 2. A fire-resistance rating is not required for corridors in open parking garages.
- 3.4. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with SECTION 1004.2.1.
- 4. Corridor walls and ceiling within single tenant spaces in Group B occupancies of any construction type with an occupant load of 100 or less when the building in which the space is located is equipped with an automatic sprinkler system throughout.
- 5. Corridor walls and ceiling within single tenant spaces in Group B occupancies of Type I and Type IIA construction when the building in which the space is located is equipped with an automatic sprinkler system throughout and an automatic smoke-detection system is installed within the corridor. The actuation of any detector shall activate alarms audible in all areas served by the corridor.
- 6. Corridors more than 30 feet (9144 mm) in width where occupancies served by such corridors have at least one exit independent from the corridor.

1004.3.2.3 Dead Ends

Amend SECTION 1004.3.2.3 by deleting exceptions 1 & 2.

1004.3.2.3 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors and hallways more than 20 feet (6096 mm) in length.

1004.3.2.4 Air Movement in Corridors

Amend SECTION 1004.3.2.4 by deleting exceptions 1 through 4.

1004.3.2.4 Air movement in corridors. Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts or plenums.

1005.2.2 Buildings With One Exit:

Amend SECTION 1005.2.2 to read:

1005.2.2 Buildings with one exit. Only one exit shall be required in buildings as described below:

- 1. Buildings described in Table 1005.2.2.
- 2. Buildings of Group R-3 occupancy.
- 3. Single-level buildings with the occupied space at the level of exit discharge provided that the story or space complies with SECTION 1004.2.1 as a space with one means of egress.

TABLE 1005.2.2 Buildings With One Exit.

Amend Table 1005.2.2 to read:

TABLE 1005.2.2 BUILDINGS WITH ONE EXIT

OCCUPANCY	MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE	
A, E, M, U	1 Story	50 occupants and 75 feet travel distance	
H-2, H-3	1 Story	3 occupants and 25 feet travel distance	
H-4, H-5, I, R	1 Story	10 occupants and 75 feet travel distance	
S(a), B(d), F	1 Story	30 occupants and 100 feet travel distance	Deleted:
B (b), F, M, S (a)	2 Stories	10 occupants and 75 feet travel distance (second floor only)	
R-2	2 Stories (c)	4 dwelling units and 50 feet traveling distance (second floor only)	

- a) For the required number of exits for open parking structures, see SECTION 1005.2.1.1.
- b) For the required number of exits for air traffic control towers, see SECTION 412.1.
- c) Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.2 and provided with emergency escape and rescue openings in accordance with SECTION 1009 shall have a maximum height of three stories above grade.
- d) Buildings equipped throughout with an automatic sprinkler system in accordance with SECTION 903.3.1.1 with an occupancy in Group B shall have a maximum travel distance of 100 feet.

1005.3.2 Vertical Exit Enclosures

Amend SECTION 1005.3.2 to read:

1005.3.2 Vertical exit enclosures. Interior exit stairways shall be enclosed. Vertical exit enclosures in buildings of Type IA and IB construction of any height, and buildings of any other type of construction of four stories or more shall be 2-hour fire –resistance rated. Other vertical exit enclosures may be 1-hour fire-resistance rated. The number of stories shall be computed as all floor levels, including basements but excluding mezzanines. An exit enclosure shall not be used for any purpose other than means of egress. Vertical exit enclosures shall be constructed as fire barriers in accordance with SECTION706. The enclosure requirements for interior exit ramps shall be the same as for interior exit stairways.

1005.3.2.4 Stairway Floor Number Signs

Amend SECTION 1005.3.2.4 to read:

1005.3.2.4 Stairway floor number signs. A sign shall be provided at each floor landing in interior vertical exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure, and the identification of the stair. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the stairway for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position which is readily visible when the doors are in the open and closed positions. Signs shall be in accordance with the fire code.

1005.3.2.5 Smokeproof Enclosures

Amend SECTION 1005.3.2.5 to read:

1005.3.2.5 Smokeproof enclosures. In buildings required to comply with SECTION 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 55 feet (16,764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with SECTION 909.20.

1005.3.6.1 Use in a Means of Egress

Amend SECTION 1005.3.6.1 to read:

1005.3.6.1 Use in a means of egress. Exterior exit stairways shall not be used as an element of a required means of egress for occupancies in Group I-2. For occupancies in other than Group I-2, exterior exit stairways shall be permitted as an element of a required means of egress for buildings not exceeding four stories or 55_feet (16,764 mm) in height.

1005.3.6.2: Open Side:

Amend SECTION 1005.3.6.2 to read:

1005.3.6.2: Open Sides. Exterior exit stairways serving as an element of a required means of egress shall be open on not less than two adjacent sides, except for required structural columns and open-type handrails and guardrails.

1006.1 General

Amend SECTION 1006.1 to read:

1006.1 General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not re-enter a building. **Exceptions:**

- 1. For office buildings and Group I, Division 2 Occupancies, hospitals and nursing homes, a maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through areas on the level of discharge provided all of the following are met:
- 1.1. Such exit enclosures egress to a free and unobstructed way to the exterior of the building, which way is readily visible and identifiable from the point of termination of the exit enclosure.
- 1.2. The entire area of the level of discharge is separated from areas below by construction conforming to the fire -resistance rating for the exit enclosure.
- 1.3. The level of discharge is protected throughout by an approved automatic sprinkler system and any other portion of the level of discharge with access to the discharge area is protected throughout with an automatic sprinkler system installed in accordance with SECTION 903.3.1.1 or 903.3.1.2 or separated from the other portions of the building in accordance with the requirements for the enclosure of exits.
- 2. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through a vestibule provided all of the following are met:
- 2.1. The entire area of the vestibule is separated from areas below by construction con-forming to the fire-resistance rating for the exit enclosure.
- 2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144mm).
- 2.3. The area is separated from the remainder of the level of exit discharge by construction providing protection at least the equivalent of approved wired glass in steel frames.
- 2.4. The area is used only for means of egress and exits directly to the outside.

1006.2.2 Exit discharge location

Amend SECTION 1006.2.2 to read:

1006.2.2 Exit discharge location. Exterior balconies, stairways and ramps shall be located at least 10 feet (3048 mm) from adjacent lot lines and from other buildings on the same lot.

1008.5.2.1 Smoke control

Amend SECTION 1008.5.2.1 to read:

1008.5.2.1 Smoke control. Means of egress serving a smoke-protected assembly seating area shall be provided with a smoke control system complying with SECTION 909 or natural ventilation designed to maintain the smoke level at least 10 feet (1829 mm) above the floor of the means of egress.

1008.5.2.3 Automatic sprinklers

Amend SECTION 1008.5.2.3 to read:

1008.5.2.3 Automatic sprinklers. Enclosed areas with walls and ceilings in buildings or structures containing smoke -protected assembly seating shall be protected with an approved automatic sprinkler system in accordance with SECTION 903.3.1.1.

Exceptions: Outdoor seating facilities where seating and the means of egress in the seating area are essentially open to the outside.

1009.1 General

Amend SECTION 1009.1 by deleting exceptions 1, 2 and 4.

1009.1 General. In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue in Group R as applicable in SECTION 101.2 and Group I-1 occupancies. Basements and sleeping rooms below the fourth story shall have at least one exterior emergency escape and rescue opening in accordance with this SECTION. Such opening shall open directly into a public street, public alley, yard or court.

Exception: The emergency escape and rescue opening is permitted to open onto a balcony within an atrium in accordance with the requirements of SECTION 404 provided the balcony provides access to an exit and the dwelling unit or sleeping room has a means of egress that is not open to the atrium.

1009.2 Minimum size

Amend SECTION 1009.2 by deleting exception.

1009.2 Minimum size. Emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.53 m2).

Chapter 11

Amend Chapter 11, encompassing SECTIONs 1101 through 1110.3 to read:

SECTION 1101

GENERAL

1101.1 Scope. The provisions of this chapter shall control the design and construction of facilities for accessibility to physically disabled persons.

1101.2 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code and ICC/ANSI A117.1.

SECTION 1102 DEFINITIONS 1102.1 General **1102.1 General.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ACCESSIBLE. A site, building, facility or portion thereof that complies with this chapter.

ACCESSIBLE ROUTE. A continuous, unobstructed path that complies with this chapter.

ACCESSIBLE UNIT. A dwelling unit or sleeping unit that complies with this code and Chapters 1-9 of ICC/ANSI A117.1.

CIRCULATION PATH. An exterior or interior way of passage from one place to another for pedestrians.

DETECTABLE WARNING. A standardized surface feature built in or applied to walking surfaces or other elements to warn visually impaired persons of hazards on a circulation path.

DWELLING UNIT OR SLEEPING UNIT, TYPE A. A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with ICC/ANSI A117.1.

DWELLING UNIT OR SLEEPING UNIT, TYPEB. A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with ICC/ANSI A117.1, consistent with the design and construction requirements of the federal Fair Housing Act.

DWELLING UNIT OR SLEEPING UNIT, MULTISTORY. A dwelling unit or sleeping unit with habitable space on more than one story.

FACILITY. The entire building or any portion of a building, structure or area, including the site on which such building, structure or area is located, wherein specific services are provided or activities are performed.

INTENDED TO BE OCCUPIED AS A RESIDENCE. This refers to a dwelling unit or sleeping unit that can or will be used all or part of the time as the occupant's place of abode.

PUBLIC ENTRANCE. An entrance that is not a service entrance.

PUBLIC-USE AREAS. Interior or exterior rooms or spaces that are made available to the general public.

SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to custome rs for the purpose of storing and removing personal property on a self-service basis.

SERVICE ENTRANCE. An entrance intended primarily for delivery of goods or services.

SITE. A parcel of land bounded by a property line or a designated portion of a public right-of-way.

WHEELCHAIR SPACE. Space for a single wheelchair and its occupant.

WHEELCHAIR SPACE CLUSTER. Locations of two or more adjacent wheelchair spaces along with companion seating in assembly areas.

SECTION 1103i SCOPING REQUIREMENTS

- **1103.1** Where required. Buildings and structures, temporary or permanent, including their associated sites and facilities, shall be accessible to persons with physical disabilities.
- **1103.2** General exceptions. Sites, buildings, facilities and elements shall be exempt from this chapter to the extent specified in this SECTION.
- **1103.2.1 Specific requirements.** Accessibility is not required in buildings and facilities, or portions thereof, to the extent permitted by SECTIONs 1104 through 1109.
- **1103.2.2 Existing buildings.** Existing buildings shall comply with SECTION 3408.
- **1103.2.3 Work areas.** Individual employee work stations are not required to be accessible but shall be located on an accessible route.
- **1103.2.4 Detached dwellings.** Detached one- and two-family dwellings and accessory structures, and their associated sites and facilities as applicable in SECTION 101.2, are not required to be accessible.
- **1103.2.5 Utility buildings.** Occupancies in Group U are exempt from the requirements of this chapter other than the following:
- 1. In agricultural buildings, access is required to paved work areas and areas open to the general public.
- 2. Private garages or carports that contain required accessible parking.
- **1103.2.6 Construction sites.** Structures, sites and equipment directly associated with the actual processes of construction including, but not limited to, scaffolding, bridging, materials hoists, materials storage, or construction trailers are not required to be accessible.
- **1103.2.7 Raised areas.** Raised areas used primarily for purposes of security, life safety, or fire safety including, but not limited to, observation galleries, prison guard towers, fire towers, or life guard stands are not required to be accessible or to be served by an accessible route.
- **1103.2.8 Limited access spaces.** Nonoccupiable spaces accessed only by ladders, catwalks, crawl spaces, freight elevators, very narrow passageways, or tunnels are not required to be accessible.
- **1103.2.9** Equipment spaces. Spaces frequented only by personnel for maintenance, repair, or monitoring of equipment are not required to be accessible. Such spaces include, but are not limited to,

elevator pits, elevator penthouses, mechanical, electrical, or communications equipment rooms, piping or equipment catwalks, water or

sewage treatment pump rooms and stations, electric substations and transformer vaults, and highway and tunnel utility facilities.

1103.2.10 Single occupant structures. Single occupant structures accessed only by passageways below grade or elevated above grade including, but not limited to, toll booths that are accessed only by underground tunnels, are not required to be accessible.

1103.2.11 Residential Group R-1. Buildings of Group R-1 containing not more than five sleeping units for rent or hire that are also occupied as the residence of the proprietor, are not required to be accessible.

1103.2.12 Day Care Facilities. Where a day care facility (Groups A3, E, I-4 and R-3) is part of a dwelling unit, only the portion of the structure utilized for the day care facility is required to be accessible.

SECTION 1104 ACCESSIBLE ROUTE

1104.1 Site arrival points. Accessible routes within the site shall be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.

1104.2 Within a site. At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.

Exception: An accessible route is not required between accessible facilities that have, as the only means of access between them a vehicular way not providing for pedestrian access.

1104.3 Connected spaces. When a building, or portion of a building, is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances, connecting accessible pedestrian walkways and the public way. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets or similar spaces.

Exception: A single accessible route is permitted to pass through a kitchen or storage room in an accessible dwelling unit.

1104.4 Multilevel buildings and facilities. At least one accessible route shall connect each accessible level, including mezzanines, in multistory buildings and facilities.

Exceptions:

- 1. An accessible route is not required to floors above and below accessible levels that have an aggregate area of not more than 3,000 square feet (278.7 m2). This exception shall not apply to:
 - 1.1. Multiple tenant facilities of Group M occupancies containing five or more tenant spaces;
 - 1.2. Levels containing offices of health care providers (Group B or Group I); or

- 1.3. Passenger transportation facilities and airports (Group A -3 or B).
- 2. 2. In Groups A, I, R and S occupancies and care facilities in accordance with SECTION 1107.4, levels that do not contain accessible elements or other spaces required by SECTION 1107 are not required to be served by an accessible route from an accessible level.

1104.5 Location. Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall also be interior.

Exception: Accessible routes from parking garages contained within and serving Type B dwelling units are not required to be interior.

SECTION 1105 ACCESSIBLE ENTRANCES

1105.1 Required. At least 50 percent but not less than one entrance to each building and structure, and each separate tenant space within the building or structure, shall comply with the accessible route provisions of this chapter.

Exceptions:

Entrances to spaces not required to be accessible as provided for in SECTION 1107 and 1108. Loading and service entrances that are not the only entrance to a building or to a tenant space.

1105.2 Multiple accessible entrances. Where a building or facility has entrances that normally serve accessible parking facilities, transportation facilities, passenger loading zones, taxi stands, public streets and sidewalks, tunnels or elevated walkways, or accessible interior vertical access, then at least one of the entrances serving each such function shall comply with the accessible route provisions of this chapter.

SECTION 1106 PARKING AND PASSENGER LOADING FACILITIES

1106.1 Required. Where parking is provided, accessible parking spaces shall be provided in compliance with Table 1106.1 except as required by SECTIONs 1106.2 and 1106.3.

1106.2 Groups R-2 and R-3. Two percent but not less than one, of each type of parking space provided for occupancies in Groups R-2 and R-3, which are required to have Type A or Type B dwelling or sleeping units, shall be accessible. Where parking is provided within or beneath a building, accessible parking spaces shall also be provided within or beneath the building.

1106.3 Rehabilitation facilities and outpatient physical therapy facilities. Twenty percent of patient and visitor parking spaces provided at rehabilitation facilities and outpatient physical therapy facilities shall be accessible.

1106.4 Van spaces. For every eight or fraction of eight accessible parking spaces, at least one shall be a van-accessible parking space.

TABLE 1106.1

ACCESSIBLE PARKING SPACES

TOTAL				
PARKING SPACES PROVIDED	REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES			
1 to 25	1			
26 to 50	2			
51 to 75	3			
76 to 100	4			
101 to 150	5			
151 to 200	6			
201 to 300	7			
301 to 400	8			
401 to 500	9			
501 to 1,000	2% of total			
More than 1,000	20 plus one for each 100 over 1,000			

1106.5 Location. Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance. In parking facilities that do not serve a particular building, accessible parking spaces shall be located on the shortest route to an accessible pedestrian entrance to the parking facility. Where buildings have multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located near the accessible entrances.

Exception: In multilevel parking structures, van-accessible parking spaces are permitted on one level.

1106.6 Passenger loading zones. Passenger loading zones shall be designed and constructed in accordance with ICC/ANSI A117.1.

1106.6.1 Medical facilities. A passenger loading zone shall be provided at an accessible entrance to licensed medical and long-term care facilities where people receive physical or medical treatment or care and where the period of stay exceeds 24 hours.

1106.6.2 Valet parking. A passenger loading zone shall be provided at valet parking services.

SECTION 1107 DWELLING UNITS AND SLEEPING UNITS

1107.1 General. In addition to the other requirements of this chapter, occupancies having dwelling units or sleeping units shall be provided with accessible features in accordance with SECTIONs 1107.2 through 1107.7.7.5.

1107.2 Design. Dwelling units and sleeping units which are required to be accessible units shall comply with this code and the applicable portions of Chapters 1-9 of the ICC/ANSI A117.1. Type A and Type B units shall comply with the applicable portions of Chapter 10 of the ICC/ANSI A117.1. Units required to be Type A units are permitted to be designed and constructed as accessible units. Units required to be Type B units are permitted to be designed and constructed as accessible units or as

Type A units.

1107.3 Accessible spaces. Rooms and spaces available to the general public or available for use by residents and serving accessible units, Type A units or Type B units shall be accessible. Accessible spaces shall include toilet and bathing rooms, kitchen, living and dining areas and any exterior spaces, including patios, terraces and balconies.

Exception: Recreational facilities in accordance with SECTION 1109.14.

1107.4 Accessible route. At least one accessible route shall connect accessible building or facility entrances with the primary entrance of each accessible unit, Type A and Type B unit within the building or facility and with those exterior and interior spaces and facilities that serve the units.

Exceptions:

If the slope of the finished ground level between the accessible facilities and buildings exceeds one unit vertical in 12 units horizontal (1:12), or where physical barriers prevent the installation of an accessible route, a vehicular route with parking that complies with SECTION 1106 at each public or common use facility or building is permitted in place of accessible route.

Exterior deck, patios or balconies that are part of Type B units and have impervious surfaces, and are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the unit.

1107.5 Group I. Occupancies in Group I shall be provided with accessible features in accordance with 1107.5.1 through 1107.5.2.

1107.5.1 Group I-1. Group I-1 occupancies shall be provided with accessible features in accordance with SECTIONs 1107.5.1.1 and 1107.5.1.2.

1107.5.1.1 Accessible units. At least 4 percent, but not less than one, of the dwelling units and sleeping units shall be accessible.

1107.5.1.2 Type B units. In structures with four or more dwelling or sleeping units intended to be occupied as a residence, every dwelling and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

1107.5.2 Group I-2 Nursing homes. Nursing homes of Group I-2 shall be provided with accessible features in accordance with SECTIONs 1007.5.2.1 and 1107.5.2.2.

1107.5.2.1 Accessible units. At least 50 percent, but not less than one, of the dwelling units and sleeping units shall be accessible units.

1107.5.2.2 Type B units. In structures with four or more dwelling or sleeping units intended to be occupied as a residence, every dwelling and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

1107.5.3 through 1107.5.3.2 Add new SECTIONs to read as follows:

- **1107.5.3 Group F2 Hospitals.** In general purpose hospitals, psychiatric facilities, detoxification facilities and residential care/assisted living facilities of Group I-2, shall be provided with accessible features in accordance with SECTION 1107.5.3.1 and 1107.5.3.2.
- **1107.5.3.1** Accessible units. At least 10 percent, but not less than one, of the dwelling units and sleeping units shall be accessible units.
- **1107.5.3.2 Type B units.** In structures with four or more dwelling or sleeping units intended to be occupied as a residence, every dwelling and sleepingunit shall be a Type B unit

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

- **1107.5.4 Rehabilitation facilities.** In hospitals and rehabilitation facilities in Group I-2 which specialize in treating conditions that affect mobility, or units within either which specialize in treating conditions that affect mobility, 100 percent of the dwelling units and sleeping units shall be accessible.
- **1107.5.5 Group F3.** In occupancies in Group I-3, at least 5 percent, but not less than one, of the dwelling units and sleeping units shall be accessible units.
- **1107.6 Group R.** Occupancies in Group R shall be provided with accessible features in accordance with SECTIONs 1107.6.1 through 1107.6.4.
- **1107.6.1 Group R-1.** Group R-1 occupancies shall provided with accessible features in accordance with SECTION 1107.6.1.1 and 1107.6.1.2.
- 1107.6.1.1 Accessible units. In occupancies in Group R-1, accessible dwelling units and sleeping units shall be provided in accordance with Table 1107.6.1.1. All facilities on a site shall be considered to determine the total number of accessible units. Accessible units shall be dispersed among the various classes of units. Roll-in showers provided in accessible units shall include a permanently mounted folding shower seat.

TABLE 1107.6.1.1 ACCESSIBLE DWELLING AND					
;	SLEEPING U	NITS			
TOTAL NUMBER OF UNITS PROVIDED	TOTAL NUMBER OF RQUIRED ACCESSIBLE UNITS				
1 to 25	0	1			
26 to 50	0	2			
51 to75	1	4			

76 to 100	1	5
101 to 150	2	7
151 to 200	2	8
210 to 300	3	10
301 to 400	4	12
401 to 500	4	13
501 to 1,000	1% of total	3% of total
Over 1,001	10 plus 1 for each 100 over 1,000	30 plus 2 for each 100 over 1,000

1107.6.1.2 Type B units. In structures with four or more dwelling or sleeping units intended to occupied as a residence, every dwelling and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

1107.6.2 Group R-2. Type A and Type B units shall be provided in occupancies in Group R-2 in accordance with SECTIONs 1107.6.2.1 and 1107.6.2.2.

1107.6.2.1 Type A units. In buildings containing more than 20 dwelling units or sleeping units, at least 2 percent, but not less than one, of the units shall be Type A units.

Exception: The number of Type A units is permitted to be reduced in accordance with 1107.7

1107.6.2.2 Type B units. Where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

1107.6.3 Group R-3. In occupancies in Group R-3 where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

1107.6.4 Group R-4. Group R-4 occupancies shall be provided with accessible features in accordance with 1107.6.4.1 and 1107.6.4.2

1107.6.4.1 Accessible units. At least one of the accessible or sleeping units shall be an accessible unit.

1107.6.4.2 Type B units. In structures with four or more dwelling or sleeping units intended to occupied as a residence, every dwelling or sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with 1107.7

- **1107.7 General exceptions.** Where specifically permitted by SECTIONs 1107.5 or 1107.6, the required number Type A and Type B units is permitted to be reduced in accordance with SECTION 1107.7.1 through 1107.7.5.
- **1107.7.1 Buildings without elevator service.** Where no elevator service is provided in a building, only the dwelling 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 and Type B units. The number of Type A units shall be determined in accordance with SECTION 1107.6.2.
- **1107.7.1.1** One story with Type B units required. At least one story containing dwelling units or sleeping units intended to be occupied as a residence shall be provided with an accessible entrance from the exterior of the building and all units intended to be occupied as a residence on that s tory shall be Type B units.
- **1107.7.1.2** Additional stories with Type B units. On all other stories that have a building entrance in proximity to arrival points intended to serve units on that story, as indicated in 2.1 and 2.2, all dwelling units and sleeping units intended to be occupied as a residence served by that entrance on that story shall be Type B units.
 - 2.1 Where the slopes of the undisturbed site measured between the planned entrance and all vehicular and pedestrian arrival points within 50 feet of the planned entrance are 10% or less, and
 - 2.2 Where the slopes of the planned finish grade measured between the entrance and all vehicular and pedestrian arrival points within 50 feet of the planned entrance are 10% or less.

Where no such arrival points are within 50 feet (15,240 mm) of the entrance, the closest arrival point shall be used unless that arrival point serves the story required by SECTION 1107.7.1.1.

- **1107.7.2 Multistory units.** A multistory dwelling or sleeping unit which is not provided with elevator service is not required to be a Type B unit. Where a multistory unit is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B unit, and a toilet facility shall be provided on that floor.
- **1107.7.3** Elevator service to lowest story with units. Where the elevator service in the building provides an accessible route only to the lowest story containing dwelling or skeping units intended to be occupied as a residence, only the units on that story which are intended to be occupied as a residence are required to be Type B units.
- **1107.7.4 Site impracticality.** On a site with multiple non-elevator buildings, the number of units required by SECTION 1107.7.1 to be Type B units is permitted to be reduced to a percentage which is equal to the percentage of the entire site having grades, prior to development, which are less than 10 percent, provided that all of the following conditions are met:
- 1. Not less than 20 percent of the units required by SECTION1107.7.1 on the site are Type B units,

- and
- 2. Units required by SECTION1107.7.1, where the slope between the building entrance serving the units on that story and a pedestrian or vehicular arrival point is no greater than 8.33 percent, are Type B units, and
- 3. Units required by SECTION 1107.7.1, where an elevated walkway is planned between a building entrance serving the units on that story and a pedestrian or vehicular arrival point and the slope between them is 10 percent or less are Type B units, and
- 4. Units served by an elevator in accordance with SECTION 1107.7.3 are Type B units.

1107.7.5 Base flood elevation. The required number of Type A and Type B units shall not apply to a site where the lowest floor or the lowest structural building members of the non-elevator buildings are required to at or above the base flood elevation resulting in:

- 1. A difference in elevation between the minimum required floor elevation at the primary entrances and vehicular and pedestrian arrival points within 50 feet (15,240mm) exceeding 30 inches (762 mm), and
- 2. A slope exceeding 10 percent between the minimum required floor elevation at the primary entrances and the vehicular and pedestrian arrival points within 50 feet (15,240mm).

Where no such arrival points are within 50 feet (15,240 mm) of the primary entrances, the closest arrival point shall be used.

SECTION 1108 SPECIAL OCCUPANCIES

1108.1 General. In addition to theother requirements of this chapter, the requirements of SECTIONs 1108.2 through 1108.3.1 shall apply to specific occupancies.

1108.2 Assembly area seating. Assembly areas with fixed seating shall comply with SECTIONs 1108.2.1 through 1108.2.4.1. Dining a reas shall comply with SECTIONs 1108.2.5 through 1108.2.5.2.

1108.2.1 Services. Services and facilities provided in areas not required to be accessible shall be provided on an accessible level and shall be accessible.

1108.2.2 Wheelchair spaces. In theaters, bleachers, grandstands and other fixed seating assembly areas, accessible wheelchair spaces shall be provided in accordance with Table 1108.2.2. At least one seat for a companion shall be provided beside each wheelchair space.

TABLE 1108.2.2
ACCESSIBLE WHEELCHAIR SPACES

CAPACITY OF SEATING IN ASSEMBLY AREAS	MINIMUM NUMBER OF WHEELCHAIR SPACES
4 to 25	1
26 to 50	2
51 to 100	4
101 to 300	5
301 to 500	6
Over 500	6, plus 1 additional space for each total seating capacity increase of 200

1108.2.2.1 Wheelchair space clusters. Accessible wheelchair spaces shall be grouped in wheelchair space clusters in accordance with Table 1108.2.2.1.

Exception: In fixed seating assembly areas where sight lines require more than one step for a rise in elevation between rows, the minimum required number of wheelchair space clusters in that area shall be one half that required by Table 1108.2.2.1.

TABLE 1108.2.2.1 WHEELCHAIR SPACE CLUSTERS

CAPACITY OF SEATING IN	MINIMUM REQUIRED NUMBER OF WHEELCHAIR
ASSEMBLY AREAS	SPACE CLUSTERS
Up to 300	1
301 to 600	2
601 to 900	3
901 to 1,500	4
1,501 to 2,100	5
2,101 to 3,000	6
	6, plus 1 additional cluster for
Over 3,000	each 1,000 seats or portion
	thereof

1108.2.3 Dispersion of wheelchair space clusters. Dispersion of wheelchair space clusters shall be based on the availability of accessible routes to various seating areas including seating at various levels in multilevel facilities.

1108.2.3.1 Multilevel assembly seating areas. In multilevel assembly seating areas, wheelchair space clusters shall be provided on the main floor level and on one of each two additional floor or mezzanine levels.

Exceptions:

- 1. In multilevel assembly spaces utilized for worship services, where the second floor or mezzanine level contains 25 p ercent or less of the total seating capacity, wheelchair space clusters shall be permitted to all be located on the main level.
- 2. In multilevel assembly seating where the second floor or mezzanine level provides 25 percent or less of the total seating capacity and 300 or fewer seats, wheelchair space clusters shall be permitted to all be located on the main level.

1108.2.3.2 Separation between clusters. Wheelchair space clusters shall be separated by a minimum of five intervening rows or by a minimum of ten intervening seats. Wheelchair spaces within any one wheelchair space cluster shall not be separated by an intervening row, nor by more than two intervening seats, nor by more than a 7-inch (178 mm) vertical level change.

Exception: A vertical level change exceeding 7 inches (178 mm) is permitted in a wheelchair space cluster where necessary to maintain sightlines.

1108.2.4 Assistive listening systems. Stadiums, theaters, auditoriums, lecture halls and similar fixed seating assembly areas where audible communications are integral to the use of the space shall have an assistive listening system if the area is equipped with an audio amplification system or the area has a capacity of 50 or more persons.

1108.2.4.1 Receivers. Receivers shall be provided for assistive listening systems in accordance with Table 1108.2.4.1. Twenty-five percent of receivers, but not less than two, shall be hearing aid compatible.

TABLE 1108.2.4.1 RECEIVERS FOR ASSISTIVE LISTENING SYSTEMS				
CAPACITY OF SEATING IN ASSEMBLY AREAS	MINIMUM REQUIRED NUMBER OF RECEIVERS			
Less than 50	2			
50 to 500	2, plus 4 for each total seating capacity increase of 100 above 51			
501 to 1,000	20, plus 3 for each total seating increase of 100 above 501			
1,001 to 2,000	35, plus 2 for each total seating increase of 100 above 1,001			
Over 2,000	55, plus 1 for each seating capacity increase of 100 above 2,000			

1108.2.5 Dining areas. In dining areas, the total floor area allotted for seating and tables shall be accessible.

Exception: In buildings without elevators, an accessible route to a mezzanine seating area is not required, provided that the mezzanine contains less than 25 percent of the total area and the same services are provided in the accessible area.

1108.2.5.1 Fixed or built-in seating or tables. Where fixed or built-in seating or tables are provided in dining areas, at least 5 percent, but not less than one such seat or table, shall be accessible and be distributed throughout the facility.

1108.2.5.2 Dining counters. In establishments serving food or drink for consumption where the only seating is at counters exceeding 34 inches (864 mm) in height, a 60-inch (1524 mm) minimum length

portion of the counter shall be accessible.

1108.3 Self-service storage facilities. Self-service storage facilities shall provide accessible individual self-storage spaces in accordance with Table 1108.3.

TABLE 1108.3 ACCESSIBLE SELF-SERVICE STORAGE FACILITIES				
TOTAL SPACES MINIMUM NUMBER OF REQUESTION ACCESSIBLE SPACES				
1 to 200	5%, but not less than 1			
Over 200	10, plus 2% of the total number of units over 200			

1108.3.1 Dispersion. Accessible individual self- service storage spaces shall be dispersed throughout the various classes of spaces provided. Where more classes of spaces are provided than the number of required accessible spaces, the number of accessible spaces shall not be required to exceed that required by Table 1108.3. Accessible spaces are permitted to be dispersed in a single building of a multibuilding facility.

SECTION 1109 OTHER FEATURES AND FACILITIES

1109.1 General. Accessible building features and facilities shall be provided in accordance with SECTIONs 1108.2 through 1109.14.2.

Exception: Type A and Type B dwelling units shall comply with ICC/ANSI A117.1.

1109.2 Toilet and bathing facilities. Toilet rooms and bathing facilities shall be accessible. Where a floor level is not required to be connected by an accessible route, the only toilet rooms or bathing facilities provided within the facility shall not be located on the inaccessible floor. At least one of each type of fixture, element, control or dispenser in each accessible toilet room and bathing facility shall be accessible.

Exceptions:

- 1. In toilet rooms or bathing facilities accessed only through a private office, not for commonor public use, and intended for use by a single occupant, any of the following alternatives are allowed:
 - 1.1. Doors are permitted to swing into the clear floor space provided the door swing can be reversed to meet the requirements in ICC/ANSI A117.1,
 - 1.2. The height requirements for the water closet in ICC/ANSI A117.1 are not applicable,
 - 1.3. Grab bars are not required to be installed in a toilet room, provided that the reinforcement has been installed in the walls and located so as to permit the installation of such grab bars,
 - 1.4. The requirement for height, knee and toe clearance shall not apply to a lavatory.
- 2. This SECTION is not applicable to toilet and bathing facilities that serve dwelling units or sleeping units, that are not required to be accessible by SECTION 1107.
- 3. Where multiple single -user toilet rooms or bathing facilities are clustered at a single location and contain fixtures in excess of the minimum required number of plumbing fixtures, at least 5 percent, but not less than one room for each use at each cluster, shall be accessible.
- 4. Toilet room fixtures that are in excess of those required by the plumbing code and that are

designated for use by children in day care and primary school occupancies.

1109.2.1 Unisex toilet and bathing rooms . In assembly and mercantile occupancies, an accessible unisex toilet room shall be provided where an aggregate of six or more male and female water closets are required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the unisex toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible unisex bathing room shall be provided. Fixtures located within unisex toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

Exception: Where each separate-sex bathing room has only one shower or bathtub fixture, a unisex bathing room is not required.

- **1109.2.1.1 Standard.** Unisex toilet and bathing rooms shall comply with this SECTION and ICC/ANSI A117.1.
- **1109.2.1.2 Unisex toilet rooms.** Unisex toilet rooms shall include only one water closet and only one lavatory. A unisex bathing room in accordance with SECTION 1109.2.1.3 shall be considered a unisex toilet room.

Exception: A separate-sex toilet room containing not more than two water closets without urinals, or containing only one water closet and one urinal shall be considered a unisex toilet room.

- **1109.2.1.3** Unisex bathing rooms. Unisex bathing rooms shall include only one shower or bathtub fixture. Unisex bathing rooms shall also include one water closet and one lavatory. Where storage facilities are provided for separate-sex bathing rooms, accessible storage facilities shall be provided for unisex bathing rooms.
- **1109.2.1.4 Location.** Unisex toilet and bathing rooms shall be located on an accessible route. Unisex toilet rooms shall be located not more than one story above or below separate -sex toilet rooms. The accessible route from any separate -sex toilet room to a unisex toilet room shall not exceed 500 feet (152 m).
- **1109.2.1.5 Prohibited location.** In passenger transportation facilities and airports, the accessible route from separate-sex toilet rooms to a unisex toilet room shall not pass through security checkpoints.
- **1109.2.1.6** Clear floor space. Where doors swing into a unisex toilet or bathing room, a clear floor space not less than 30 inches by 48 inches (762 mm by 1219 mm) shall be provided, within the room, beyond the area of the door swing.
- 1109.2.1.7 Privacy. Doors to unisex toilet and bathing rooms shall be securable from within the room.
- 1109.2.2 Water closet compartment. Where water closet compartments are provided in a toilet room or bathing facility, at least one wheelchair-accessible compartment shall be provided. Where the combined total water closet compartments and urinals provided in a toilet room or bathing facility is six or more, at least one ambulatory accessible water closet compartment shall be provided in addition to

the wheelchair-accessible compartment. Wheelchair-accessible and ambulatory -accessible compartments shall comply with ICC/ANSI A117.1.

1109.3 Sinks. Where sinks are provided, at least 5 percent, but not less than one, provided in accessible spaces shall comply with ICC/ANSI A117.1.

Exceptions:

- 1. Mop or service sinks are not required to be accessible.
- 2. Sinks designated for use by children in day care and primary school occupancies.
- **1109.4 Kitchens, kitchenettes and wet bars.** Where kitchen, kitchenettes and wet bars are provided in accessible spaces or rooms, they shall be accessible in accordance with ICC/ANSI A117.1.
- **1109.5 Drinking fountains.** On floors where drinking fountains are provided, at least 50 percent, but not less than one fountain, shall be accessible.
- **1109.6 Elevators.** Passenger elevators on an accessible route shall be accessible and comply with SECTION 3001.3.
- **1109.7** Lifts. Platform (wheelchair) lifts shall not be a part of a required accessible route in new construction.

Exceptions: Platform (wheelchair) lifts are permitted for:

- 1. An accessible route to a performing area in occupancies in Group A.
- 2. An accessible route to wheelchair spaces required by SECTION 1107.2.2.
- 3. An accessible route to spaces that are not open to the general public with an occupant load of not more than five.
- 4. An accessible route within a dwelling or sleeping unit.
- 5. An accessible route to wheelchair seating spaces located in outdoor dining terraces in A-5 occupancies where the means of egress from the dining terraces to a public way is open to the outdoors.
- **1109.8 Storage.** Where fixed or built-in storage elements such as cabinets, shelves, medicine cabinets, closets, and drawers are provided in required accessible spaces, at least one of each type shall contain storage space complying with ICC/ANSI A117.1.
- **1109.8.1 Lockers.** Where lockers are provided in accessible spaces, at least five percent, but not less than one, of each type shall be accessible.
- **1109.8.2 Shelving and display units.** Self-service shelves and display units in mercantile occupancies and shelving in stack areas of libraries shall be located on an accessible route. Such shelving and display units shall not be required to comply with reach-range provisions.
- 1109.8.3 Coat hooks and folding shelves. Where coat hooks or folding shelves are provided in inaccessible toilet rooms, toilet compartments, or in dressing, fitting or locker rooms, at least one of each type shall be provided in accessible toilet rooms, toilet compartments, and dressing, fitting and locker

moms.

1109.9 Detectable warnings. Passenger transit platform edges bordering a drop-off and not protected by platform screens or guards shall have a detectable warning.

Exception: Detectable warnings are not required at bus stops.

1109.10 Assembly area seating. Assembly areas with fixed seating in every occupancy shall comply with SECTION 1107.2 for accessible seating and assistive listening devices.

1109.11 Seating at tables, counters and work surfaces. Where seating at fixed or built-in tables, counters or work surfaces is provided in accessible spaces, at least 5 percent of the seating, but not less than one, shall be accessible.

1109.11.1 Dispersion. Accessible fixed or built-in seating at tables, counters or work surfaces shall be distributed throughout the space or facility containing such elements.

1109.12 Customer service facilities. Customer service facilities shall provide for accessible features in accordance with SECTIONs 1108.12.1 through 1108.12.5.

1109.12.1 Dressing, fitting and locker r ooms. Where dressing rooms, fitting rooms, or locker rooms are provided, at least 5 percent, but not less than one, of each type of use in each cluster provided shall be accessible.

1109.12.2 Check -out aisles. Where check-out aisles are provided, accessible check-out aisles shall be provided in accordance with Table 1108.12.2. Where check-out aisles serve different functions, at least one accessible check-out aisle shall be provided for each function. Where check-out aisles are dispersed throughout the building or facility, accessible check-out aisles shall also be dispersed. Traffic control devices, security devices and turnstiles located in accessible check-out aisles or lanes shall be accessible.

Exception: Where the area of the selling space is less than 5,000 square feet (465 m2), only one check-out aisle is required to be accessible.

TABLE 1109.12.2 ACCESSIBLE CHECK-OUT AISLES

Total Check-Out Aisles of Each	Minimum Number of Accessible	
Function	Check-Out Aisles Each Function	
1 to 4	1	
5 to 8	2	
9 to 15	3	
Over 15	3, plus 20% of additional aisles	

- **1109.12.3 Point of sales and service counters.** Where counters are provided for sales or distribution of goods or services, at least one of each type provided shall be accessible. Where such counters are dispersed throughout the building or facility, the accessible counters shall also be dispersed.
- **1109.12.4 Food service lines.** Food service lines shall be accessible. Where self-service shelves are provided, at least 50 percent, but not less than one, of each type provided shall be accessible.
- **1109.12.5 Queue and waiting lines.** Queue and waiting lines servicing accessible counters or check-out aisles shall be accessible.
- **1109.13** Controls, operating mechanisms and hardware. Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation, and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible.
- **1109.13.1 Operable windows.** Where operable windows are provided in rooms that are required to be accessible in accordance with SECTIONs 1107.3.1, 1107.3.2 and 1107.5.1, at least one window in each room shall be accessibleand each required operable window shall be accessible.

Exception: Accessible windows are not required in bathrooms or kitchens.

- **1109.14 Recreational facilities.** Recreational facilities shall be provided with accessible features in accordance with SECTIONs 1109.14.1 and 1109.14.2.
- **1109.14.1 Facilities serving a single building.** In Group R-2 and R-3 occupancies where recreational facilities are provided serving a single building containing Type A or Type B units, 25 percent, but not less than one, of each type of recreational facility shall be accessible. Every recreational facility of each type on a site shall be considered to determine the total number of each type that are required to be accessible.
- **SECTION 1109.14.2 Facilities serving multiple buildings.** In Group R-2 and R-3 occupancies on a single site where multiple containing Type A or Type B units are served by recreational facilities, 25 percent, but not less than one, of each type of recreational facility serving each building shall be accessible. Every recreational facility of each type on a site shall be considered to determine the total number of each type that are required to be accessible.

SECTION 1109.14.3 Other occupancies. All recreational facilities not falling under the purview of SECTIONs 1109.14.1 and 1109.14.2 shall be accessible.

1109.15 Stairways. Stairways located along accessible routes connecting floor levels that are not connected by an elevator shall be designed and constructed to comply with ICC/ANSI A117.1 and Chapter 10.

SECTION 1110 SIGNAGE **1110.1 Signs.** Required accessible elements shall be identified by the International Symbol of Accessibility at the following locations:

- 1. Accessible parking spaces required by SECTION 1106.1 except where the total number of parking spaces provided is five or less.
- 2. Accessible passenger loading zones.
- 3. Accessible areas of refuge required by SECTION 1103.2.13.5.
- 4. Accessible rooms where multiple single -user toilet or bathing rooms are clustered at a single location.
- 5. Accessible entrances where not all entrances are accessible.
- 6. Accessible check-out aisles where not all aisles are accessible. The sign, where provided, shall be above the check-out aisle in the same location as the checkout aisle number or type of check-out identification.
- 7. Unisex toilet and bathing rooms.
- 8. Accessible dressing, fitting, and locker rooms where not all such rooms are accessible.

1110.2 Directional signage. Directional signage indicating the route to the nearest like accessible element shall be provided at the following locations. These directional signs shall include the International Symbol of Accessibility:

- 1. Inaccessible building entrances.
- 2. Inaccessible public toilets and bathing facilities.
- 3. Elevators n ot serving an accessible route.
- 4. At each separate -sex toilet and bathing room indicating the location of the nearest unisex toilet or bathing room where provided in accordance with SECTION 1109.2.1.
- **5.** At exits and elevators serving an accessible space, but not providing an approved accessible means of egress, signage shall be provided in accordance with SECTION 1003.2.13.6.

1110.3 Other signs. Signage indicating special accessibility provisions shall be provided as follows:

- 1. In assembly areas required to comply with SECTION 1108.2.4, a sign notifying the general public of the availability of assistive listening systems shall be provided at ticket offices or similar locations.
- At each door to an exit stairway, signage shall be provided in accordance with SECTION 1003.2.10.3.
- 3. At areas of refuge, signage shall be provided in accordance with SECTION 1003.2.13.5.3 through 1003.2.13.5.5.
- 4. At areas for assisted rescue, signage shall be provided in accordance with SECTION 1003.2.13.7.3.

1202.1 General

Amend SECTION 1202.1 to read:

1202.1 General. Buildings shall be provided with natural ventilation in accordance with SECTION 1202.4 or shall be provided with mechanical ventilation in accordance with SECTION 1202.6 and the *Mechanical Code*.

1202.2 Attic Spaces.

Amend SECTION 1202.2 to read as follows.

1202.2 Attic Spaces. Where determined necessary by the building official due to atmospheric or climatic conditions, enclosed attics and enclosed rafter space formed where ceiling are applied directly to the underside of roof framing member shall have cross ventilation opening protected against the entrance of rain and snow. A minimum of 1 inch (25 mm) of air space shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/150 of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated a t least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Exception: The minimum required net free ventilating area shall be 1/300 of the area of the space ventilated, provided a vapor retarder having a transmission rate not exceeding 1 perm in accordance with ASTM E 96 is installed on the warm side of the attic insulation and provided 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914) above eave or cornice vents, with the balance of the required ventilation provided by eave or cornice vents.

1202.4.1.3 Guest Rooms and Habitable Rooms

Add a new SECTION 1202.4.1.3 to read:

1202.4.1.3 Guest rooms and habitable rooms. Guest rooms and habitable rooms within a dwelling unit or congregate residence in R occupancies, when provided with natural ventilation by means of openable exterior openings, shall be provided with a minimum of 5 square feet (0.46 m2).

1202.4.1.4 Bathrooms, Water Closets, Laundry Rooms and Similar Rooms in R Occupancies

Add a new SECTION 1202.4.1.4 to read:

1202.4.1.4 Bathrooms, Water Closets, Laundry Rooms and Similar Rooms in R Occupancies. Bathrooms, water closet compartments, laundry rooms and similar rooms in R Occupancies, when provided with natural ventilation by means of openable exterior openings, shall have a minimum of $1\frac{1}{2}$ square feet (0.14 m2).

Exception: Laundry rooms in Group R, Division 3 Occupancies

1202.4.1.5 Toilet Rooms

Add a new SECTION 1202.4.1.5 to read:

1202.4.1.5 Toilet Rooms. Toilet rooms, when provided with natural ventilation by means of openable exterior openings, shall have a minimum area not less than 3 square feet (0.279 m2), or a vertical duct not less than 100 square inches (64 516 mm2) in area for the first water closet plus 50 square inches (32 258 mm2) additional of area for each additional water closet.

1202.4.2.1 Bathrooms

Delete SECTION 1202.4.2.1.

1202.6 Mechanical Ventilations.

Add new SECTIONs 1202.6 through 1202.6.5.2 to read:

1202.6 MECHANICAL VENTILATIONS. Mechanically operated ventilation systems shall be in accordance with this subSECTION.

1202.6.1 General. In all enclosed portions of Groups A, B, E, F, H, I, M and S Occupancies customarily occupied by human beings, when mechanical operated ventilation systems are provided in lieu of required exterior openings for natural ventilation, such system shall be capable of supplying a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant in all portions of the building during such time as the building is occupied. If the velocity of the air at a register exceeds 10 feet per second (3 m/s), the register shall be placed more than 8 feet (2438 mm) above the floor directly beneath. Such exterior openings shall open directly onto a public way or a yard or court as set forth in SECTION 1205.

In toilet rooms, if mechanical operated systems are to be utilized for required ventilation, such systems shall be capable of providing a complete change of air every 15 minutes. Such mechanically operated exhaust systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from any opening that allows air entry into occupied portions of the building.

1202.6.2 Groups B, F, M and S Occupancies. In all buildings classified as Groups B, F, M and S Occupancies or portions thereof where Class I, II or III-A liquids are used, a mechanically operated exhaust ventilation shall be provided sufficient to produce six air changes per hour. Such exhaust ventilation shall be taken from a point at or near the floor level.

1202.6.3 Group H Occupancies. All Group H Occupancies shall comply with the Fire Code, Mechanical Code and SECTION 415. In Group H, Division 5 Occupancies, mechanical exhaust ventilation shall be provided in accordance with 415.9.2.6, 415.9.4.3, 415.9.5.7, 415.9.10.2 and other appropriate SECTIONs of this code. Rooms, areas or spaces of Group H Occupancies in which explosive, corrosive, combustible, flammable or highly toxic dusts, mists, fumes, vapors or gases are or may be emitted due to the processing, use, handling or storage of materials shall be mechanically ventilated as required by the Fire Code, the Mechanical Code and SECTION 414.3 of this code.

1202.6.4 Group R Occupancies. In Group R Occupancies, in lieu of required exterior openings for natural ventilation, a mechanical ventilating system may be provided. Such system shall be capable of providing two air changes per hour in guest rooms, dormitories, habitable rooms and in public corridors with a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant during such time as the building is occupied.

In lieu of required exterior openings for natural ventilation in bathrooms containing a bathtub, shower or combination thereof; laundry rooms; and similar rooms, a mechanical ventilation system connected

directly to the outside capable of providing five air changes per hour shall be provided. Such systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from any opening that allows air entry into occupied portions of the building. Bathrooms that contain only a water closet, lavatory or combination thereof and similar rooms may be ventilated with an approved mechanical re-circulating fan or similar device designed to remove odors from the air.

1202.6.5 Motor Vehicle Related Occupancies

1202.6.5.1 Repair Garage. Ventilation in the repair garage shall be in accordance with SECTION 406.6.3 in this amendment.

1202.6.5.2 Enclosed parking garages. Ventilation in the enclosed parking garage shall be in accordance with SECTION 406.4.2 in this amendment.

1207.2 Minimum Ceiling Heights.

Delete the second exception.

1208.2 Attic Spaces.

Amend SECTION 1208.2 to read:

1208.2 Attic space. A rough opening not less than 22 inches by 30 inches (559 mm by 762 mm) shall be provided to any attic area having a clear height of over 30 inches (762 mm). A 30 inch (762 mm) minimum clear headroom in the attic space shall be provided at or above the access opening.

Exception: When approved by the building official, attic access openings are not required to attics when no electrical, plumbing or mechanical fixtures or equipment are installed within the attic space.

1406.3 Balconies and Similar Projections

Amend SECTION 1406.3 by deleting exceptions 1,2 & 3.

1406.3 Balconies and similar projections. Balconies and similar projections of combustible construction, other than fire -retardant-treated wood, shall afford the fire-resistance rating required by Table 601 for floor construction or shall be of Type IV construction as described in SECTION 602.4, and the aggregate length shall not exceed 50 percent of the building perimeter on each floor.

1406.4 Bay Windows and Oriel Windows

Amend SECTION 1406.4 by deleting exception.

1406.4 Bay windows and oriel windows. Bay and oriel windows shall conform to the type of construction required for the building to which they are attached.

1503.4 Roof Drainage

Delete SECTION 1503.4 and replace with SECTIONs 1503.4.1, 1503.4.2, 1503.4.3, 1503.4.4, and 1503.4.5 to read:

1503.4.1Gener al. Roofs shall be sloped a minimum of 1 unit vertical in 48 units horizontal (2% slope) for drainage unless designed for water accumulation in accordance with SECTION 1611 and approved by the building official.

1503.4.2 Roof drains . Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof.

Roof drains shall be sized and discharged in accordance with the Plumbing Code.

1503.4.3 Overflow drains and scuppers. Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) may be installed in the adjacent parapet walls with the inlet flow line located 2 inches (51 mm) above the low point of the adjacent roof.

Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.

1503.4.4 Concealed piping. Roof drains and overflow drains, where concealed within the construction of the building, shall be installed in accordance with the Plumbing Code.

1503.4.5 Over public property. Roof drainage water from a building shall not be permitted to flow over public property.

1604.8.2 Concrete and Masonry Walls

SECTION 1604.8.2 is amended to read as follows:

1604.8.2 Concrete and masonry wall. Concrete and masonry walls shall be anchored to floors, roofs, and other structural elements that provide lateral support for the wall. Such anchorage shall provide a positive direct connection capable of resisting the horizontal forces specified in this chapter but not less than a minimum horizontal force of 280 pounds per linear foot (4.09 kN/m) of wall, substituted for "E". Walls shall be designed to resist bending between anchors where the anchor spacing exceeds 4 feet (1219 mm). Required anchors in masonry walls of hollow units or cavity walls shall be embedded in a reinforced grouted structural element of the wall. See SECTIONs 1609.6.5 and 1620 for wind and earthquake design requirements.

Table 1607.1 Minimum Uniformly Distributed Live Loads And Minimum Concentrated Live Loads

Item #27 of Table 1607.1 is amended to read:

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs)	
27. Residential Group R-3 as applicable in SECTION 101.2 Uninhabitable attics without	10		
storage Uninhabitable attics with storage Habitable attics and sleeping areas All other areas except balconies	20 40 40		
and decks Hotels and multifamily dwellings Private rooms Public rooms and corridors serving them	40 100		

1612.3 Establishment of Flood Hazard Areas

SECTION 1612.3 is amended to read:

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for Clark County, Nevada and Incorporated Areas," dated August 16, 1995, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this SECTION.

1704.1.2 Report Requirements

SECTION 1704.1.2 is amended to read:

1704.1.2 Report requirement. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge.

Reports shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. Reports of inspections and corrections of any discrepancies shall be submitted periodically at a frequency agreed upon by the permit applicant and the building official prior to the start of work. A final report of inspections documenting the required special inspections and corrections to any discrepancies noted in the inspections shall be submitted to the building official prior to the final inspection.

1704.4 Concrete Construction

SECTION 1704.4 is amended to read:

1704.4 Concrete construction. The special inspections and verifications for concrete construction shall be as required by this SECTION and Table 1704.4.

Exception: Special inspections shall not be required for:

- 1. Isolated spread and/or continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where:
- 1.1. The footings are designed in accordance with Table 1805.4.2; or
- 1.2. The structural design is based on a f'c no greater than 2,500 pounds per square inch (17.2 MPa).
- 2. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 pounds per square inch (1.03 MPa).
- 3. Concrete patios, driveways and sidewalks, on grade.

1704.5 Masonry Construction.

SECTION 1704.5 is amended to read:

1704.5 Masonry construction. Masonry construction shall be inspected and evaluated in accordance with the requirements of this SECTION, depending on the classification of the building or structure or nature of occupancy, as defined by this code (see Tables 1604.5 and 1617.6).

Exception: Special inspections shall not be required for empirically designed masonry, glass unit masonry, or masonry veneer designed by SECTION 2109, 2110, or ACI 530/ASCE 5/TMS 402 Chapters 5, 6 or 7 when they are part of nonessential buildings (see Tables 1604.5 and 1617.6).

1704.7 Soils

SECTION 1704.7 is amended to read:

1704.7 Soils. The special inspections for existing site soil conditions, fill placement and load-bearing requirements shall follow SECTIONs 1704.7.1 through 1704.7.4. The approved soils report, required by SECTION1802.2, shall be used to determine compliance.

Exception: Where a geotechnical investigation is not required and compacted fill of less than 12 inches in depth placed, a special inspection is not required.

1704.7.4 Excavation

A new SECTION 1704.7.4 is added to read:

1704.7.4 Excavation When required by the registered design professional or the building official, the special inspector shall verify the exposed soils at the completion of the foundation excavation are in compliance with the recommendations of the approved soils report.

1704.15 Amusement and Transportation Systems Special Cases

A new SECTION 1704.15 is added to read:

1704.15 Amusement and transportation systems special cases. Testing or verification as required by the manufacturer and/or the building official during installation, operational testing, and annual renewal of the certificate of operation.

1802.1 General

SECTION 1802.1 is amended to read:

1802.1 General. Foundation and soils investigations shall be conducted in conformance with SECTIONs 1802.2 through 1802.6. Where required by the building official, the classification and investigation of the soil shall be made by a registered design professional.

All projects exempt from a geotechnical report shall comply with Tables 1804.2 and 1904.3. Design values based on a Class 5 material and a very severe sulfate exposure level may be selected as default values.

1802.2 Where Required

SECTION 1802.2 is amended to read:

1802.2 Where required. The owner or applicant shall submit a foundation and soils investigation to the building official where required in SECTIONs 1802.2.1 through 1802.2.7.

Geotechnical reports shall be prepared by a registered design professional. Recommendations included in the report and approved by the Building Official shall be incorporated in the construction documents. Geotechnical reports shall be required for all projects that require new foundations.

Exemptions. At the option of the Building Official, the following projects may be exempted from submitting a geotechnical report:

- Habitable remodels or additions to a dwelling unit with a footprint less than 600 square feet.
- 2) Storage, garage, agricultural, and similar use buildings associated with a dwelling unit with a footprint less than 600 square feet.
- 3) Single story commercial structures less than 600 square feet.
- 4) Fences.
- 5) Mobile homes, trailers, modular buildings, and pre-engineered carports.
- 6) Signs less than 50 feet in height.

1802.2.3 Groundwater Table

SECTION 1802.2.3 is amended to read:

1802.2.3 Groundwater table. A subsurface soil investigation shall be performed to determine whether the existing groundwater table is above or within 5 feet (1524mm) below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation.

1802.3.2 Expansive Soils

SECTION 1802.3.2 is amended to read:

1802.3.2 Expansive soils. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1, 2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

- 1. Plasticity Index (PI) of 15 or greater, determined in accordance with ASTM D 4318.
- 2. More than 10 percent of the soil particles pass a No. 200 sieve (75 μ m), determined in accordance with ASTM D 422
- 3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.
- 4. Expansion Index greater than 20, determined in accordance with UBC Standard 18-2 or

SBCCI SSTD 7.

Soils may be determined to be expansive or non-expansive by the preceding methods or the standard 60 pounds per square foot swell test. When the standard 60 pounds per square foot swell test is performed on any soil with a swell greater than 4 percent, it shall be considered expansive. When soils are determined to be expansive, special design consideration is required. In the event that expansive soil properties vary with depth, the variation shall be included in the engineering analysis of the expansive soil effect on the structure. The foundation design and special inspection for grading/foundations shall be based upon results obtained from the standard 60 pounds per square foot swell test. Refer to SECTION 1805.8 and Table 1805.8 for additional requirements.

1802.3.3 Standard 60 Pounds Per Square Foot Swell Test

Add a new SECTION 1802.3.3 to read:

1802.3.3 Standard 60 pounds per square foot swell test. The swell test samples may be remolded to the in-place density required for the particular soil type as called for in the Geotechnical Report, or it may be an in-situ undisturbed sample. The test samples shall be one inch thick and laterally confined by placing them in a retaining ring constructed in accordance with ASTM D-2435. The swell test sample shall be oven dried at 60° C, and the sample shall be dried a minimum of eight (8) hours. The test sample shall be inundated with water and kept in a saturated moisture condition until measurable swelling or vertical movement ceases. The swell test shall use a 60 pounds per square foot surcharge load. The balance of the swell test will be per ASTM D-2435. Swell test results shall be interpreted using Table 1805.8 or as permitted in SECTION 1805.8

1802.4.2 Minimum Exploration Requirements

Add a new SECTION 1802.4.2 to read:

1802.4.2 Minimum exploration requirements The minimum exploration requirements are as follows:

- 1. For areas less than or equal to one acre, a minimum of two explorations.
- 2. For areas greater than one acre, but less than five acres, a minimum of one exploration for the first acre and one for each additional two acres, or portion thereof.
- 3. For areas greater than or equal to five acres, but less than twenty acres, a minimum of three explorations plus one additional exploration for each three acres above five.
- 4. For areas greater than or equal to twenty acres, a minimum of eight explorations plus one additional exploration for each five acres or fraction thereof above twenty.
- 5. Building additions of less than 2,000 square feet shall require a minimum of one exploration.
- 6. For signs, towers, and monopoles whose locations are known and only that area of the site is to be developed, a minimum of one exploration at the location is required.
- 7. The minimum depth of the exploration shall be ten feet. Exploration depth shall be increased as necessary to evaluate the suitability of the material within the foundation's depth of influence as determined by the registered design professional. Should refusal be encountered the exploration can be terminated. However, at least three-fourths of the

required explorations shall be to the minimum depth. The geotechnical report shall clearly state the criteria used to determine that refusal was met. When information regarding the final grades is made available, the registered design professional shall determine if the explorations originally documented in the geotechnical report meet the depth requirements.

1802.6 Reports

SECTION 1802.6 is amended to read:

1802.6 Reports. The soil classification and design load-bearing capacity shall be shown on the construction document. Where required by the building official, a written report of the investigation shall be submitted that shall include, but need not be limited to, the following information:

- 1. A plot showing the location of test borings and/or excavations. The plot shall be dimensioned and shall show the approximate location of all existing structures.
- 2. A complete record of the soil samples.
- 3. A record of the soil profile.
- 4. Depth of the water table, if encountered.
- 5. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement, and varying soil strength; and the effects of adjacent loads. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils.
- 6. Expected total and differential settlement.
- 7. Pile and pier foundation information in accordance with SECTION 1807.2.1.
- 8. Special design and construction provisions for footings or foundations founded on expansive soils, as necessary.
- 9. Compacted fill material properties and testing in accordance with SECTION 1803.4. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils.
- 10. Soil classification by the Unified Soil Classification System. Backup data on tests performed in the soil classification shall be included.
- 11. Address, if applicable, the possible impacts on adjoining properties and mitigating measures to be undertaken.
- 12. Suitability of onsite soils for use as fill material.
- 13. Provide grading requirements for onsite and import soils (where applicable) including, but not limited to, swell, solubility, and sulfates.
- 14. Geotechnical design considerations for drainage structures, as applicable.
- 15. Trenching or other special procedures for determining fault and fissure(s) locations. The potential for differential movement across a fault and fissuring should be evaluated.
- 16. Procedures for mitigation for geological hazards
- 17. Erosion control requirements, as applicable.
- 18. Anticipated structural loads and type of proposed structure.
- 19. Site class per Table 1615.1.1

1803.4 Compacted Fill Material.

SECTION 1803.4 is amended to read:

1803.4 Compacted fill material. Where footings will bear on compacted fill material, the compacted fill shall comply with the provisions of an approved report. The report shall contain the following:

- 1. Specifications for the preparation of the site prior to placement of compacted fill material.
- 2. Specifications for material to be used as compacted fill.
- 3. Test method to be used to determine the maximum dry density and optimum moisture content of the material to be used as compacted fill
- 4. Maximum allowable thickness of each lift of compacted fill material.
- 5. Field test method for determining the in-place dry density of the compacted fill.
- 6. Minimum acceptable in -place dry density expressed as a percentage of the maximum dry density determined in accordance with Item 3.
- 7. Number and frequency of field tests required to determine compliance with Item 6.
- 8. Placement procedure for oversized material. No rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills within five feet, measured vertically, from the bottom of the footing or lowest finished floor elevation, whichever is lower, within the building pad. Oversized fill material shall be placed so as to assure the filling of all voids with well-graded soil. Specific placement and inspection criteria shall be stated in the soils report. Continuous special inspections will be required during the placement of any oversized fill material.

Exception: Fill material less than 12 inches (305 mm) in depth shall be compacted to a minimum of 90 percent Modified Proctor in accordance with ASTM D1557. The compaction shall be verified by a qualified inspector approved by the building official.

1805.1.1 Minimum Distances to Ground Faulting

A new SECTION 1805.1.1 is added to read:

- **1805.1.1 Minimum Distances to Ground Faulting** (1) The minimum set back for an occupied structure from a Holocene active fault shall be fifty (50) feet. The minimum set back for an essential facility or an R3 occupancy shall not be less than five (5) feet to any Quaternary active fault.
 - (2) When the Geotechnical Report establishes that neither a fault nor a fault zone exists on the project, no fault zone set back requirements will be imposed.
 - (3) If through exploration, the fault location is defined, the fault and/or the no build zone shall be clearly shown to scale on the grading, plot plan(s), and final map.
 - (4) When the fault location is not fully defined by explorations but a no build zone of potential fault impact is established by the soils report, no portion of the foundation system shall be constructed within that zone. The no build zone shall be clearly shown to scale on the grading, plot plan(s), and final map.

(5) For single lot, single family residences, the fault location may be approximated by historical research as indicated in the soils report. A no build zone of at least fifty (50) feet each side of the historically approximated fault edge shall be established. A no build zone shall be clearly shown to scale on the grading, plot plan(s), and final map.

1805.5.2 Foundation Wall Materials

SECTION 1805.5.2 is amended to read:

1805.5.2 Foundation wall materials. Foundation walls constructed in accordance with Tables 1805.5(1), 1805.5(2), 1805.5(3) or 1805.5(4) shall comply with the following:

- 1. Vertical reinforcement shall have a minimum yield strength of 60,000 psi (414 MPa).
- 2. The specified location of the reinforcement shall equal or exceed the effective depth distance, d, noted in Tables 1805.5(2), 1805.5(3) and 1805.5(4) and shall be measured from the face of the soil side of the wall to the center of vertical reinforcement. The reinforcement shall be placed within the tolerances specified in ACI 530.1/ASCE 6/TMS 402, Article 3.4E1 of the specified location. All cells containing reinforcement shall be grouted, and masonry joint reinforcement shall be placed in a mortar joint.
- 3. Concrete shall have a specified compressive strength of not less than 2,500 psi (17.2 MPa) at 28 days.
- 4. Grout shall have a specified compressive strength of not less than 2,000 psi (13.8 MPa) at 28 days.
- 5. Hollow masonry units shall comply with ASTM C 90 and shall be installed with Type M or S mortar
- 6. Horizontal reinforcement shall be evenly distributed throughout the height of the wall, and be not less than one third for concrete and one sixth for masonry of that required for the vertical reinforcement. Masonry joint reinforcement may be used to meet this requirement.

1805.8.2 Slab- on- Ground Foundations

SECTION 1805.8.2 is amended to read:

1805.8.2 Slab-On-Ground Foundations. Slab-on-ground, mat or raft foundations on expansive soils shall be designed and constructed in accordance with WRI/CRSI Design of Slab-on-Ground Foundations or PTI Design and Construction of Post-Tensioned Slabs -On-Ground.

Exception: Slab-on-ground systems that have performed adequately in soil conditions similar to those encountered at the building site are permitted subject to the approval of the building official.

The criteria for determining the expansive nature of soils are given in SECTION 1802.3.2. The minimum design criteria for post-tensioned slabs are defined in Table 1805.8. Where conventional slabs and foundations are used on expansive soils the footing depth shall be equal to or greater than the

thickened edge depth listed in Table 1805.8.

Table 1805.8 Post Tensioned Slab Criteria

A new Table 1805.8 is added to read:

Table 1805.8 Post Tensioned Slab Criteria

Expansion	Percent Swell	Minimum Design Values Ym		Minimum
	under 60 psf	(inches) for PT slabs		thickened edge
	Surcharge	Edge Lift	Center Lift	or footing depth
		_		(inches)
Low	> 0 to <4	1/8 to 1/4		12
Moderate	$\geq 4 \text{ to} < 8$	1/4 to 1/2	1/8 to 3/8	12
High	$\geq 8 \text{ to} < 12$	½ to 1	3/8 to 1	18
Critical 12	$\geq 12 \text{ to} < 16$	See Note No. 12		24
Critical 16	$\geq 16 \text{ to} < 20$	See Note No. 12		30
Critical 20+	20 or greater	See Note No. 12		36

Notes:

- This chart is intended to address expansive soil. The presence of collapsible soil or other geologic conditions may require different design criteria.
- Foundations shall be designed to meet design criteria of the Post-Tensioning Institute manual "Design and Construction of Post-Tensioned Slabson-Ground, Second Edition." Both edge lift and center lift conditions need to be evaluated.
- Edge moisture variation distance (Em) shall be a minimum of 2.5 feet for edge lift and 4.75 feet for center lift.
- 4. $C\Delta$ for prefabricated roof truss clear spans shall be 360 for center lift and 800 for edge lift.
- 5. Typical systems using stiffener beams may be equated to a flat slab of equivalent stiffness. Stiffening beams in post-tension designs shall be spaced no more than 15 feet apart or closer than 6 feet. Stiffener beam width shall not be less than 9 inches. Conventionally reinforced designs may also be used.
- 6. Modulus of elasticity of the soil (Es) shall be taken as 1000 psi unless tests indicate otherwise.
- 7. All concrete in the foundation system must be a minimum of 2500 psi and shall comply with IBC Table 1904.3. Lean concrete shall not be permitted in slabs or beams
- 8. The calculated differential deflection of the foundation slab shall not exceed the limitations of "Design and Construction of Post-Tensioned Slabson-Ground, Second Edition" nor 1/2 inch for edge lift.
- 9. Perimeter loading of slab (P) shall be limited to dead load.
- 10. Expansion (swell) test shall be performed in accordance with SECTION 1802.3.3.
- 11. Thickened edge embedment depth shall be measured from the top of the lowest adjacent final compacted subgrade to the bottom of the footing.
- Specific recommendations from Geotechnical engineer required. Design value (Ym) shall be a minimum of 1 inch.

1911.2 Post Tension Slab Provisions

Add a new SECTION 1911.2 to read:

1911.2 Post Tension Slab Provisions. Where post tension slabs on ground are utilized, design shall be in accordance with PTI Design and Construction of Post Tensioned Slabs-On-Ground. Design for expansive soils is specified in SECTION 1805.8.

2101.2.6 New Fireplaces in Construction

Add a new SECTION 2101.2.6 to read:

2101.2.6 New Fireplaces in Construction. No fireplace shall be constructed in any residential dwelling in Boulder City or the Las Vegas Valley Hydrographic Basis at an elevation of less than 4000 feet (1220 m) above sea level unless it is one of the following:

- a) A fireplace equipped with gas logs with a nationally recognized listing approved by the Building Official:
- b) A dedicated natural gas burning factory-built with a nationally recognized listing approved by the Building Official;
- c) A dedicated wood-burning factory built enclosed fireplace or heater that conforms to the "Phase II Environmental Protection Agency, Standards of Performance for New Stationary Sources; New Residential Wood Heaters" as prescribed in 40 CFR Part 60, Subpart AAA, as verified by a nationally recognized listing approved by the Building Official;
- d) A masonry fireplace; that included the installation of a wood-burning insert which meets the standards described in Paragraph (c) of this SubSECTION and which is installed in accordance with the insert manufacturers' instructions; or
- e) A decorative electrical appliance with a nationally recognized listing approved by the Building Official.

2106.2.7 Fireplace Within a Dwelling Unit

Add a new SECTION 2106.2.7 to read:

2106.2.7 Fireplace within a dwelling unit. A gas or wood-burning fireplace installed within a dwelling unit shall comply with the following requirements:

- a) The fireplace opening shall be provided with solid doors such as glass, solid steel or cast iron.
- b) If the fireplace is located in a sleeping room or an adjacent bathroom, then a permanent, unobstructed fresh air supply shall be provided directly from the exterior of the structure to the fire box.
- c) When gas is piped to the fireplace, a caution sign shall be installed that states "Caution: Damper must be permanently blocked open if gas is supplied to this fireplace". The letters on this sign shall be a minimum three-eights inches in height.

2305.3.3 Shear Wall Aspect Ratios

Table 2305.3.3 is amended to read:

TABLE 2305.3.3 MAXIMUM SHEAR WALL ASPECT RATIOS

TYPE	MAXIMUM HEIGHT- WIDTH RATIO
Wood structural panels or particleboard, nailed edges	2:1 ^a
Diagonal sheathing, single	2:1
Fiberboard	1 ½ :1
Gypsum board, gypsum lath, gypsum sheathing, gypsum veneer base and portland cement plaster	1 ½ :1

a. In Seismic Design Categories A through C, the height to width ratio is permitted to be 3 ½:1.

2305.3.8 Summing Shear Capacities

SECTION2305.3.8 is amended to read:

2305.3.8 Summing shear capacities. The shear values for shear panels of different materials applied to the same side of the wall are not cumulative except as allowed in Table 2306.4.1.

The shear values for the materials of the same type, grade, thickness and attachment schedule applied to opposite faces of the same wall are cumulative. Where the grade, thickness, or attachment schedule are not equal on opposite faces, the shear capacity shall be determined for both sides, and the wall shall be assigned an overall capacity equal to the side of greater capacity or two times the capacity of the lesser side, whichever is greater.

Summing shear capacities of dissimilar materials applied to opposite faces or to the same wall line are not allowed.

Table 2902.1 Minimum Number of Plumbing Fixtures

Amend Table 2902.1 to read:

TABLE 2902.1 MINIMUM NUMBER OF PLUMBING FACILITIES

MINIMUM NUMBER OF PLUMBING FACILITIES 1,2

	WATER CLOSE (fixtures per per	son)	LAVATORIES ⁵ (fixtures per person)	BATHTUB OR SHOWER
TYPE OF BUILDING OR OCCUPANCY ³	MALE	FEMALE	MALE FEMALE	(fixtures per person
For the occupancies listed below, use 30 square fe	et (2.78 m²) per occupant i	or the minimun	number of plumbing fixtures.	
Group A Conference rooms, dining rooms, drinking establishments, exhibit rooms, gymnasiums, lounges, stages and similar uses including restaurants classified as Group B Occupancies	1: 1-25 2:26-75 3:76-125 4:126-200 5:201-300 6:301-400 Over 400, add one fixtur		one for each water closet up to four; then one for each two additional water closets	
T 1	additional 200 males or			(100 2)
For the assembly occupancies listed below, use the	e number of fixed seating of	or, where no fixe	ed seating is provided, use 15 square feet	(1.39 m ²) per occupant for the
minimum number of plumbing fixtures.			T	
Assembly places-Group #1 Auditoriums, convention halls, dance floors, lodge rooms, and casinos	1:1-50 2:51-100 3:101-150 4:151-300 Over 300 males, add one each additional 200, and females add one for each	over 400	1:1-200 1:1-200 2:201-400 2:201-400 3:401-750 3:401-750 Over 750, add one fixture for each additional 500 persons.	
Assembly places-Group #2				
Motion picture house, theater, concert hall, sports arena, stadiums, exhibition-public use and entertaining-public use	1: 1-100 2:101-200 3:201-400 Over 400, add one fixtur	3:1-50 4:51-100 8:101-200 11:201-400	1:1-200 1:1-200 2:201-400 2:201-400 3:401-750 3:401-750 Over 750, add one fixture for each additional 500 persons.	
	additional 500 males and additional 125 females. MALE URINALS 1: 1-100 2:101-200 3:201-400 4:401-600 Over 600, add one fixtur additional 300 males.	re for each		
For the assembly occupancies listed below, use the minimum number of plumbing fixtures.	number of fixed seating of	or, where no fixe	ed seating is provided, use 50 square feet	(2.29 m²) per occupant for the
Worship Places Principal assembly area Worship places	one per 150	one per 75	one per two water closets	
Educational and activity unit	one per 125	one per 75	one per two water closets	
For the occupancies listed below, use 200 square			um number of plumbing fixtures.	
Group B Offices or public buildings	1:1-15 2:16-35 3:36-55 Over 55, add one for each	1:1-15 2:16-35 3:36-55 ch 50 persons.	one per two water closets	
For the occupancies listed below, use 50 square fe			number of plumbing fixtures.	
Group E Schools-for staff use All schools	1:1-15 2:16-35	1:1-15 2:16-35	one per 40 one per 40	
Schools-for student use Day care	3:36-55 Over 55, add one fixture	3:36-55 for each	1:1-25 1:1-25 2:26-50 2:26-50	
	additional 40 persons. 1:1-20 2:21-50 Over 50, add one fixture	1:1-20 2:21-50 for each	Over 50, add one fixture for each additional 50 persons.	
Flomenter	additional 50 persons.	one non IF	one per 35 one per 35	
Elementary Secondary	one per 30 one per 40	one per 25 one per 30	one per 40 one per 40	
			n number of plumbing fiveness	
For the occupancies listed below, use 50 square feet (4.65 m ²) per occupant for the minimum number of plumbing fixtures.				
Education Facilities other than Group E Others (colleges, universities, adult centers, etc.)	one per 40	one per 30	one per 40 one per 40	

For the occupancies listed below, use 2,000 square	e feet (185.8 m ²) per occupa	ant for the mini	mum number of plumbing fixtures.	
Group F	1:1-10	1:1-10	1	one shower for each 15
Workshop, foundries and similar establishments,	2:11-25	2:11-25	one for each two water closets	persons exposed to excessive
and Group H Occupancies	3:26-50	3:26-50		heat or to skin contamination
	4:51-75	4:51-75		with irritating materials
	5:76-100	5:76-100		with firtuing materials
	Over 100, add one fixture			
	additional 300 persons.	Tor cacii		
For the occupancies listed below, use the designate		re feet (18.58 t	m ²) ner occupant of the general use area:	for the minimum number of
plumbing fixtures.	ed application and 200 squa	ic ice (10.50 i	ii) per occupant of the general use area	for the minimum number of
Group I				
Hospital waiting rooms	one per room (usable by	either sex)	one per room	
Hospital general use areas	1:1-15	1:1-15	one per each two water closets	
1 0	2:16-35	3:16-35	•	
	3:36-55	4:36-55		
	Over 55, add one fixture			
	additional 40 persons.	ioi cacii		
Hospitals				
Patient room	one per room		one per room	
Ward room	one per eight patients		one per 10 patients	one per room
T 1 1 C			· · · · · · · · · · · · · · · · · · ·	one per 20 patients
Jails and reformatories Cell	one nor cell		one mar call	
	one per cell		one per cell	
Exercise room	one per exercise room		one per exercise room	
Other institutions (on each occupied floor)	one per 25 one per 25		one per 10 one per 10	one per eight
For the occupancies listed below, use 200 square	teet (18.58 m²) per occupan	t for the minim	um number of plumbing fixtures.	
Group M				
Retail or wholesale stores	1:1-50	1:1-50	one for each two water closets	
	2:51-100	2:51-100	one for each two water closets	
	3:101-400	3:101-200		
		4:201-300		
		5:301-400		
	Over 400, add one fixture	for each		
	additional 500 males and	one for each		
	150 females			
For Group R Occupancies, dwelling units and hot				m2) for Group R, Division 1
Occupancies and 300 square feet (27.87 m ²) for G	roup R, Division 3 Occupar	ncies for the mi	nimum plumbing fixtures.	
Group R				
Dwelling units	one per dwelling unit		one per dwelling unit	one per dwelling unit
Hotel guest rooms	one per guest room		one per guest room	one per guest room
Congregate residences	one per 10	one per 8	one per 12 one per 12	one per eight
Congregate residences	Add one fixture for each		Over 12, add one fixture for each	For females, add one bathtub
	males and one for each ac		additional 20 males and one for each	per 30. Over 150 add one per
	females.	iditional 20	additional 15 females.	20.
For the occupancies listed below, use 5,000 square feet (464.5 m²) per occupant for the minimum number of plumbing fixtures.				
Group S	1:1-10	1:1-10	one per 40 occupants of each sex	one shower for each 15
Warehouses	2:11-25	2:11-25	one per 40 occupants of each sex	persons exposed to excessive
m dictionses	3:26-50			heat or to skin contamination
	3:26-50 4:51-75	3:26-50 4:51-75		
				with poisonous, infectious or
	5:76-100	5:76-100		irritating materials
	Over 100, add one for ea	cn 300 males		
	and females.			I

- And females.

 Note: Occupant loads over 30 shall have one drinking fountain for each 150 occupants.

 1. The figures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction thereof.
- Drinking fountains shall not be installed in toilet rooms.
- Any category not mentioned specifically or about which there are any questions shall be classified by the building official and included in the category which it most nearly resembles, based on the expected use of the plumbing facilities.
 Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed, except the number of water
- closets in such cases shall not be reduced to less than one half of the minimum specified.

 Twenty-four inches (610 mm) of wash sink or 18 inches (457 mm) of a circular basin, when provided with water outlets for such space, shall be considered equivalent to one lavatory.

2902.2 Separate Facilities

Amend SECTION 2902.2 to read:

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

- 1. Separate facilities shall not be required for dwelling units and guestrooms.
- 2. Separate employee facilities shall not be required in occupancies in which 15 or less people are employed.
- 3. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or less.

3003.2 Fire-fighters' Emergency Operation

Amend SECTION 3003.2 to read:

3003.2 Fire-fighters' emergency operation. Elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation when the elevator vertical travel is 25 feet (7260mm) or more and there are fewer than three (3) landings

3109 Swimming Pool Enclosures

Delete SECTION 3109, encompassing SECTIONS 3109 through 3109.4.3.

Chapter 34 Existing Structures.

Delete Chapter 34 in its entirety.

Chapter 35 - Reference Standards

Chapter 35 is amended to read:

CHAPTER 35 REFERENCED STANDARDS

This chapter lists the standards that are referenced in various SECTIONs of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the SECTION or SECTIONs of this document that reference the standard. The application of the referenced standards shall be as specified in SECTION 102.4. The current editions of codes and standards referenced in this code may be used based on compliance to SECTION 102.4

Appendix A Employee Qualifications.

Delete Appendix A.

Appendix B Board of Appeals.

Delete Appendix B.

Appendix D Fire Distircts.

Delete Appendix D.

Appendix E Supplementary Accessibility Requirements.

Delete Appendix E.

Appendix F Rodent Proofing.

Delete Appendix F.

Appendix G Flood Resistant Construction.

Delete Appendix G.

Appendix H Signs.

Delete Appendix H.

$\label{lem:appendix J Supplementary Accessibility Requirements for Qualified Historic Buildings and Facilities.$

Delete Appendix J.

Appendix K - Grading

A new Appendix K is added to read:

APPENDIX K GRADING

1.1 GENERAL

- **1.1.1 Scope.** The provisions of this appendix apply to grading, excavation and earthwork construction, including fills and embankments.
- **1.1.2 Standards.** The following standards of quality shall apply:
 - 1. ASTM D1557. Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft -lb/ft)
 - 2. ASTM D1556. In Place Density of Soils by the Sand-Cone Method
 - 3. ASTM D 2922 and D 3017. Density of Soils by Nuclear Methods and In Place Moisture Contact

1.2 DEFINITIONS

1.2.1 Definitions. For the purposes of this appendix, the terms, phrases and words listed in this SECTION and their derivatives shall have the indicated meanings.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

BUILDING PAD. The soil, cut or fill site, outlined by the area of the footprint of the building plus a minimum of 5 additional feet (1529 mm) to the exterior. This includes any type of foundation system for the structure.

CALICHE. A generally hard, rock-like crust of highly carbonated soil material formed at or near the ground surface. This material can exist in thin laminations or can be several feet in thickness. Materials classified as medium hard, hard, or very hard caliche shall be treated as "rock."

CHEMICAL ANALYSIS. The use of chemical methods in soils analysis to determine the specific content of soluble salt.

COMPACTION REPORT. A report which provides the in place density of soil.

COMPACTION. The densification of a fill by mechanical means.

CUT. See Excavation.

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FAULT. A fracture or zone of fracturing in geologic materials (soil or rock) along which there has been displacement of the sides relative to one another parallel to the fracture.

FAULT, HOLOCENE ACTIVE A fault with recognized activity within Holocene time (within the past 11,000 years).

FAULT, QUATERNARY ACTIVE. A fault with recognized activity within Quaternary time (within the past 1.6 million years).

FAULT INACTIVE. A fault without recognized activity within Quaternary time (within the past 1.6 million years).

FILL. Deposition of e arth materials by artificial means.

FINAL GRADING REPORT. A grading report stamped and signed by a registered design professional certifying that the building pad was constructed in conformance with the recommendations set forth in the geotechnical report. This report contains explicit information and data that verifies

compliance with the geotechnical report of record including any approved supplements or addendums.

GEOLOGICAL ENGINEER. A professional engineer registered in the State of Nevada to practice Geological Engineering.

GEOTECHNICAL REPORT (**SOILS REPORT**). Data and engineering recommendations resulting from site exploration which evaluates the soil conditions and general site characteristics and suitability of the site for the proposed construction. A registered design professional shall prepare the report.

GRADE. The vertical location of the ground surface.

GRADE, **EXISTING**. The grade prior to grading

GRADE, **FINISHED**. The final grade of the site that conforms to the approved plan.

GRADIN G. An excavation or fill or combination thereof.

GRADING PERMIT. The permit required by SECTIONs 33, 34, and 35 of the "Uniform Regulations for the Control of Drainage" (revised November 12, 1990)(URCD) and includes all building or grading permits required for grading by the International Building Code and other standards as adopted by the Building Official. If there is a conflict as to which permit or permit process applies to a specific case, the procedures that are most stringent apply.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

PAD CERTIFICATION REPORT. An interim grading report stamped and signed by a registered design professional certifying that the building pad was constructed in conformance with the recommendations set forth in the geotechnical report of record.

PAD RECERTIFICATION REPORT. A report stamped and signed by a registered design professional certifying that the building pad currently is in conformance with the recommendations set forth in the geotechnical report of record. This report contains explicit information and data that verifies complies to the geotechnical report of record including any approved supplements or addendums.

REFUSAL. Refusal while advancing an exploration is recognized as a Standard Penetration blow count, as defined by ASTM 1586-99, exceeding 100 blows per full lineal foot.

SLOPE An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SPECIAL GEOTECHNICAL CONSIDERATION AREA. A portion of Clark County where additional geotechnical investigation requirements may apply. These areas are identified on the most recent edition of the "Clark County Soil Guidelines Reference Map(s)" as published by Clark County.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

1.3 PERMITS REQUIRED

- **1.3.1 Permits required.** Except as exempted in SECTION 1.3.2, no grading shall be performed without first having obtained a permit therefore from the Building Official. A grading permit does not include the construction of retaining walls or other structures.
- **1.3.2 Exemptions.** A grading permit shall not be required for the following:
 - 1. Cemetery graves
 - 2. Refuse disposal sites controlled by other regulations
 - 3. Excavations for wells, or trenches for utilities
 - 4. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties
 - 5. Exploratory excavations performed under the direction of a registered design professional for the sole purpose of preparing a geotechnical report

Exemption from the permit requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

1.3.3 Hazards. Whenever the building official determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the Building Official, shall within the period specified therein repair or eliminate such excavation or embankment to eliminate the hazard and to be in conformance with the requirements of this code.

1.4 PERMIT APPLICATION AND SUBMITTALS

- **1.4.1 Submittal requirements.** The applicant shall submit all documentation required by the local Building Administrative Code.
- **1.4.2 Grading plan requirements.** All grading plans shall be prepared, stamped, and signed by a registered design professional. The following items must be included on all grading plan submittals:
 - 1. General vicinity of the proposed site
 - 2. Property limits and accurate contours of existing ground and details of terrain and area drainage
 - 3. Limiting dimensions, elevations or finish contours to be achieved by the grading, proposed drainage channels and related construction
 - 4. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners that are within 50 feet of the property or that may be affected by the proposed grading operations
 - 5. Provide the locations and dimensions of all terrace drains for all slopes steeper than 3H:1V, as required
 - 6. Recommendations included in the geotechnical and the engineering geology report shall be incorporated in the grading plans or specifications as follows:

- a. Locations and dimensions of all cut and fill slopes,
- b. Locations of all cross SECTIONs presented in the geotechnical report,
- c. Locations and sizes of all recommended remedial measures such as buttress fills, stability fills, deep foundation systems, reinforced earth, retaining walls, etc.,
- d. Location and layout of proposed subdrainage system.
- 7. Dates of the geotechnical and engineering geology reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the report
- 8. Locations of other existing topographic features either natural or man-made such as streets, drainage structures, pavements, walls, mining pits, etc
- 9. The cut to fill transition line
- 10. Details and cross SECTIONs of typical fill slopes and cut slopes
- 11. Typical details of fill-over-natural slopes and fill-over-cut slopes where fill is to be placed on natural or cut slopes steeper than 5H:1V
- 12. Elevation datum and benchmarks (NAVD 88)
- 13. Existing contours at least 50 feet beyond the property lines
- 14. Proposed finish contours or spot elevations at the property corners and at swale flow lines
- 15. Elevations of curbs or centerlines of roads or streets
- 16. Earthwork quantities in cubic yards and scope of work
- 17. Finish floor elevations
- 18. Setback dimensions of cut and fill slopes from site boundaries
- 19. The placement of buildings and structures on and or adjacent to slopes steeper than 3H:1V (33.3% slope) shall be in accordance with IBC 1805.3
- 20. Registered design professional original seal (wet seal), signature and date or a Public Works stamp and signature stating, "This is a true and exact copy of the original document on file in this office."
- **1.4.3 Geotechnical report.** A report prepared by a registered design professional which shall identify the nature and distribution of existing soils, conclusions and recommendations for grading procedures, soil design criteria for any structures or embankments required to accomplish the proposed grading, and where necessary, slope stability studies, and recommendations and conclusions regarding site geology. (Chapter 18)
- **1.4.4 Liquefaction study.** For sites with mapped maximum considered earthquake spectral response accelerations at short period (S_s) greater than 0.5g as determined by SECTION 1615, a study of the liquefaction potential of the site shall be provided, and the recommendations incorporated in the plans.

1.5 INSPECTIONS

- **1.5.1 General.** Inspection of grading operations shall comply with the provisions of this SECTION. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code. The permittee shall engage an approved agency, if required by the Building Official.
- **1.5.1.1 Completion of work and final reports** . Report submittal shall be in compliance with SECTION 1704.1.2.

1.5.1.1.1 Final Grading report. Upon completion of pad grading (or foundation construction) and prior to a footing or foundation inspection, a Final Grading report shall be provided by an approved agency. Grading (or foundation construction) shall be observed and tested by an approved agency. The approved agency shall prepare the report, signed by a registered design professional certifying that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of record including any approved supplements or addenda. At the option of the Building Official, a Pad Certification report submitted in accordance with SECTION 1.5.1.1.2 may be accepted as an interim report prior to a footing or foundation inspection. A Final Grading report will then be required prior to receiving a Final Inspection.

The Final Grading Report itself will contain all applicable test data and analysis of the data. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading. The report shall also include the following information:

- Compaction test results, requirements, locations, depth of backfill at test locations and names of technicians conducting the tests
- Moisture Density values and curves that include classifications for all soils used in the grading operation
- 3. Description of structure or pad including the proposed use
- 4. Grading plan showing approximate locations of tests, dates and depths of over-excavation observations, original contours and finish pad elevations.
- 5. Swell and solubility test requirements and results. This information shall be provided if required by the geotechnical report of record, elsewhere in the code, or if imported soils were utilized
- 6. Type of foundation system applicable to work being certified (i.e. spread footings, strip footings, combination footings, drilled shafts etc.)
- 7. Import material used, source of import, and tests indicating compliance with the geotechnical report of record recommendations, and classification in relation to IBC Table 1904.3
- 8. A statement describing the process of pad grading. Where applicable, this shall include, but not be limited to the minimum depth of over-excavation, blending operations, the use of import soils, nested aggregate, organics encountered, and removal of unsuitable soils
- 9. The preceding requirements shall be presented for each pad or structure being certified

The Final Grading report remains valid for a maximum of six months after the completion of grading. The six month period begins at the first test date of the final test of the final lift of the structural pad. Once expired, a Pad Recertification report is required.

1.5.1.1.2 Pad Certification report. This letter/report is used as an interim document until a Final Grading report is completed (i.e., a Final Grading report for the entire project or a particular phase(s) of a project). The approved agency shall prepare this report signed by a registered design professional and certifying that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of record including any approved supplements or addenda. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading.

This report shall include the following information for each pad or structure:

- 1. The first test date of the final test of the final lift
- 2. Permit number and pad or structure description
- 3. Classification of foundation soils in relation to IBC Table 1904.3
- 4. Classification of foundation soil for expansive properties (i.e. non-expansive or results from standard 60 pounds per square foot swell test)

1.5.1.1.3 Pad Recertification report. This report is required when a Final Grading report or Pad Certification report has expired or if required by the Building Official. The approved agency shall prepare this report signed by a registered design professional certifying the current suitability of the pad(s). The condition of the pad(s) is discussed, tests performed and their results are presented and discussed, and any additional grading or reworking is discussed. The conclusions are stated and based upon the current condition of the pad(s) compared to completion at original grading and a statement that the current condition of the pad(s) substantially complies with the requirements of the geotechnical report of record including any approved supplements or addenda.

As a minimum, pad moisture data and standard sixty pounds per square foot swell test results, if applicable, are included in this report. The tests shall be conducted on a representative number of pads.

The report remains valid for no longer than six months after the latest test date. Once expired, the pad(s) recertification will require an evaluation by a registered design profess ional to confirm the applicability of current site conditions.

- **1.5.1.1.4** Finished Floor Elevation Certificate. A Nevada Professional Land Surveyor shall certify the lowest habitable finished floor elevation to the elevation on the approved plans upon completion of the slab inspection and placement or the placement of the final construction form for the finished floor. All certifications required by this SECTIONshall be provided to and accepted by the Building Official prior to performance of any additional inspections. The minimum finished floor elevation shall comply with the approved plans and the allowable tolerance shall be minus (-) 0.0 feet to plus (+) 0.3 feet of the finished floor elevation detailed on the approved plans.
- **1.5.1.1.5 Drainage Compliance Report.** Upon completion of final grading, and prior to the final building inspection, a statement of compliance for drainage shall be provided by the register design professional of record or the developer when approved by the building official.

This report shall state that site conditions at the time of final construction provide positive drainage in compliance with the approved drainage plan or the plot and grading plan.

When engineered drainage features, facilities, or structures are required by the approved plans, the register design professional of record shall verify that installed and constructed elements are in compliance with the approved plans. This includes site detention, lot to lot drainage, and drainage conveyance devices.

1.5.1.1.6 Notification of Noncompliance. If in the course of fulfilling their respective duties under this appendix, the registered design professional or the approved agency finds that the work is not being

done in conformance with this appendix or the approved plans the discrepancies shall be immediately reported in writing to the contractor, the permittee, and to the Building Official.

1.5.2 Special Inspections. The special inspection requirements of SECTION 1704 shall apply to work performed under a grading permit where required by the Building Official.

1.6 EXCAVATIONS

- **1.6.1 Maximum slope.** The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be no steeper than 2H:1V (50% slope) unless the applicant furnishes a geotechnical report justifying a steeper slope.
- **1.6.2 Excess Excavation.** A disposal area must be designated prior to the issuance of a grading permit if off-site disposal of waste or excess excavation is anticipated. A grading permit and fill control may be required for the disposal area. Written permission from the owner of the designated disposal area shall be required.

1.7 FILLS

- 1.7.1 General. Fills shall conform to provisions of this SECTION. Fill slopes shall not be constructed on natural or cut slopes steeper than 2H:1V (50% slope), unless otherwise recommended in the approved geotechnical report. The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than 2H:1V (50% slope) shall be justified by the approved geotechnical report.
- **1.7.2 Surface preparation.** The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide bond with the fill material.
- **1.7.3 Benching.** Where existing grade is at a slope steeper than 5H:1V (20%) and the depth of the fill exceeds 5 feet (1524 mm), benching shall be provided in accordance with Figure 1.7.3. A key shall be provided that is at least 10 feet (3048 mm) in width and two feet (610 mm) in depth, when the slope height exceeds 20 feet. The maximum bench height shall be three feet.
- **1.7.4 Compaction.** All fill material shall be compacted to a minimum 90% of maximum density as determined by ASTM D1557, Modified Proctor, in loose lifts not exceeding 12 inches (305 mm) in depth, unless otherwise justified in the approved geotechnical report.

1.8 SETBACKS

- **1.8.1 General.** Cut and fill slopes shall be set back from the property lines in accordance with this SECTION. Setback dimensions shall be measured perpendicular to the property lines and shall be as shown in Figure 1.8.1, unless substantiating data is submitted justifying reduced setbacks.
- **1.8.2 Top of slope.** The setback at the top of a cut slope shall not be less than that shown in Figure 1.8.1, or than is required to accommodate any required interceptor drains, whichever is greater.

Slope protection. Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the Building Official, shall be included. Such protection may include, but shall not be limited to:

- 1. Setbacks greater than those required by Figure 1.8.1
- 2. Provisions for retaining walls or similar construction
- 3. Erosion protection of the fill slopes
- 4. Provision for the control of surface waters

1.9 DRAINAGE AND TERRACING

1.9.1 General. Drainage facilities and terracing shall be provided in accordance with the requirements of this SECTION.

Exception: Drainage facilities and terracing need not be provided where the ground slope is not steeper than 3H:1V (33%).

1.9.2 Terraces. Terraces at least 6 feet (1829 mm) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (3658 mm) in width.

Swales or ditches shall be provided on terraces. They shall have a minimum gradient of 20H:1V (5%) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a minimum depth of 12 inches (305 mm) and a minimum width of 5 feet (1524 mm).

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m^2) (projected) without discharging into a down drain.

- **1.9.3** Interceptor drains. Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet, measured horizontally. They shall have a minimum depth of 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the Designated Official, but shall not be less than 50H:1V (2%). The drain shall be paved with concrete not less than 3 inches (76 mm) in thickness, or by other materials suitable to the application. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the Building Official.
- **1.9.4 Drainage across property lines.** Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices.

1.10 EROSION CONTROL

1.10.1 General. The faces of cut and fill slopes shall be prepared and maintained to control erosion.

This control shall be permitted to consist of effective planting.

Exception: Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials.

Erosion control for the slopes shall be installed as soon as practicable and prior to calling for final inspection.

1.10.2 Other devices . Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

FIGURE 1.7.3 BENCHING DETAILS

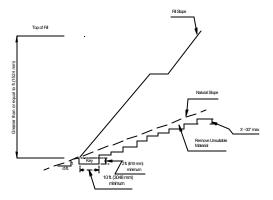
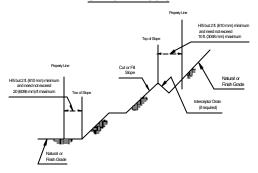


FIGURE 1.8.1 SETBACK DIMENSIONS



Appendix L - Fences, Walls and Retaining Walls

A new Appendix L is added to read:

APPENDIX L FENCES, WALLS AND RETAINING WALLS

- **1.1 General.** It shall be unlawful for any person, contractor, firm or corporation to erect, install, construct or replace any fence, wall or retaining wall contrary to the provisions of this code.
- **1.2 Applicable regulations.** All regulations and requirements of the Building Code and any amendments, deletions and additions thereto shall apply to the erection, installation or construction of any fence, wall and/or retaining wall except that which may be inconsistent with this chapter.

2.0 DEFINITIONS

For the purpose of this chapter, certain terms are defined as follows:

CUT. See Excavation.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FENCE. A structure of temporary or semi-permanent material such as wrought iron, wire, wood, screen, vinyl, plastic, etc... erected for purposes of enclosure, division of property or decoration.

FILL. The deposition of earth materials by artificial means.

RETAINING WALL. Any wall that is used to resist the lateral displacement of earth or any other material with a difference in elevation of the material from one side to the other exceeding 24 inches (610 mm) in height.

WALL. A structure of stone, brick, masonry, concrete or other similar permanent material, raised to some height and erected for purposes of enclosure, division of property or decoration.

3.0 - PERMITS

- **3.1 Permits required.** No fence, wall or retaining wall regulated by this code shall be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted or demolished unless a separate permit for each fence, wall or retaining wall is obtained from the Building Official.
- **3.2 Separate permits required.** A separate permit is required for each parcel of land upon which a fence, wall or retaining wall is to be located.

EXCEPTION: Only one permit is required for multiple fence(s), wall(s) and/or retaining wall(s) constructed along property lines in connection with the development of a subdivision, provided that a

legal description of the property is submitted together with a dimensioned plot plan showing the exact location of the fence, wall and/or retaining wall and all other recorded lot and easement lines.

- **3.3 Application for a fence, wall or retaining wall permit.** To obtain a permit, the applicant shall first file an application on a form furnished by the jurisdiction for that purpose. The application shall include the following:
- 1. The name and address of the owner of the real property upon which the fence, wall and/or retaining wall is to be located.
- 2. The type of material to be used for construction of the fence, wall, and/or retaining wall.
- 3. The total length, height and square footage of each fence, wall and/or retaining wall.
- 4. The authorized agent to perform construction.
- 5. A dimensioned drawing that identifies the location of each fence, wall and/or retaining wall with respect to the property or lot lines, easements, streets, other rights-of-way. Existing construction and drainage features shall be clearly identified on the drawings.
- 6. The location of all light standards, gas and water meters, and fire hydrants.
- 7. Other information deemed pertinent by the Building Official.
- **3.4 Drawings and specifications.** Drawings and specifications required for retaining walls shall be prepared by a registered design professional. The design shall be in accordance with the applicable chapters of the IBC.

Drawings or specifications for fences and walls need not be submitted unless required by the Building Official. Drawings and specifications shall be submitted for retaining walls showing that the retaining wall is designed in accordance with this code.

4.0 - GENERAL REQUIREMENTS AND LIMITATIONS

- **4.1 General.** General requirements and limitations shall be as follows:
 - 1. No fence, wall and/or retaining wall shall be placed within a right-of-way unless granted permission by the authority having jurisdiction.
 - 2. The height and location of a fence, wall and/or retaining wall shall comply with all zoning ordinances and regulations of the authority having jurisdiction.
 - 3. Fences, walls and/or retaining walls shall not be constructed closer than 18 inches (457.2 mm) from any light standard, gas meter or water meter, and shall be in accordance with published standards of the department or agency having authority of utility easements, when located within a utility easement. Fences, walls and/or retaining walls shall not be constructed closer than 30

inches (762 mm) from the back or 36 inches (914.4 mm) from either side of a fire hydrant.

4. Special inspection, if required, shall be in accordance with Chapter 17.

4.2 Required inspections

- 1. All footings shall be inspected to verify location to property line, structures, and compliance to the approved plans and permit.
- Concrete foundations shall not be poured until footings have been inspected and approved by the Building Official.
- 3. No wall and/or retaining wall shall be grouted until the reinforcing required has been inspected and approved by the Building Official.
- 4. No retaining wall shall be backfilled until verification of the required damp-proofing and drainage has been inspected and approved by the Building Official.
- **4.3 Natural drainage.** No permits shall be issued for fences, walls and/or retaining walls, which would block any natural drainage channel.
- **4.4 Prohibited materials.** Walls, fences and retaining walls shall not be constructed of materials which impose a direct safety hazard, such as pointed posts, stakes or pickets, components intended for electrocution, embedded glass, nails, barbed or razor type wire, or other sharp, cutting objects.

EXCEPTION: Manufactured barbed or razor wire may be used when its detailed use, location, and construction requirements are approved by the authority having jurisdiction.

5.0 - IMPLEMENTATION

5.1 Implementation. The Building Official is empowered to formulate procedural guidelines to be used in implementing this chapter.