Memphis
and
Shelby County

LOCAL AMENDMENTS 2012 EXISTING BUILDING CODE

ADOPTED BY

SHELBY COUNTY COMMISSION - Ordinance # 424 (10/8/12)

MEMPHIS CITY COUNCIL – Ordinance # 5479 (12/18/12)

AMEND SECTION 101.1 AS FOLLOWS:

Section 101.1 Title. – These regulations shall be known as the 2012 MSC Existing Building Code, as part of the 2012 Technical Codes for Memphis and Shelby County, hereinafter referred to as this code.

DELETE REFERENCE TO *INTERNATIONAL PROPERTY MAINTENANCE CODE* IN SECTION 101.4 .2 AS FOLLOWS:

101.4.2 Buildings previously occupied. – The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code or the International Fire Code or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public.

ADD SECTION 101.7.1 AS FOLLOWS:

101.7.1 Appendices adopted. **Appendix A** -Guidelines for the Seismic Retrofit of Existing Buildings and **Appendix B** - Supplemental Accessibility Requirements for Existing Buildings and Facilities of the 2012 Edition of the *ICC International Existing Building Code* and, locally drafted **Appendix C -**Repair, Alteration, Rehabilitation and Changing Occupancies of Existing Structures for an R-2 Use, are adopted.

ADD A NEW SECTION 101.8 AS FOLLOWS:

101.8 Maintenance. – Buildings and parts thereof shall be maintained in a safe and sanitary condition. The provisions of this code and the MSC Building Code shall apply to the maintenance of existing buildings and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators, and occupants; and occupancy of existing buildings. The owner or owner's designated agent shall be responsible for the maintenance of the building. To determine compliance with this subsection, the Building Official shall have the authority to require a building to be reinspected. Except where specifically permitted by this code, the code shall not provide the basis for removal or abrogation of the fire protection and safety systems and devices in the existing buildings

AMEND SECTION 103 AS FOLLOWS:

Section 103. Memphis And Shelby County Office Of Construction Code Enforcement

AMEND SECTION 103.1 AS FOLLOWS:

103.1 Creation Of Enforcement Agency. – Joint Resolution/Ordinance #3333 was adopted and approved by the City and County legislative bodies, to create the Memphis and Shelby County Office of Construction Code Enforcement (MSCCE). This joint agency is charged with the enforcement of the Memphis and Shelby County (MSC) Building, MSC Existing Building, MSC Residential, MSC Energy Conservation, MSC Electrical, MSC Fuel Gas, MSC Mechanical and MSC Plumbing Code, which are to be known collectively as MSC 2012 Technical Codes.

AMEND SECTION 103.2 AS FOLLOWS:

103.2 Appointment. - See Section 103.2.1 in the MSC Building Code.

AMEND SECTION 103.3 AS FOLLOWS:

103.3 Deputies. – See Section 103.2.4 on the MSC Building Code

AMEND SECTION 104.10 AS FOLLOWS:

104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the Building Official shall have the authority to grant modifications for individual cases upon application of the owner or owner's representative, provided the Building Official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code, and such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modification shall be recorded and entered into the files of Memphis and Shelby County Office of Construction Code Enforcement.

AMEND SECTION 105.2 AS FOLLOWS:

105.2 Work Exempt From Permits Exemptions from permit requirements of this code 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. Permits shall not be required for the following:

1.Sidewalks and driveways not more than 30 inches (762 MM) above grade and not over any basement or story below and that are not part of an accessible route.
2. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
3. Temporary motion picture, television, and theater stage sets and scenery.
4. Reserved
5. Window awnings, supported by an exterior wall of Group R-3 or Group U occupancies.
6. Movable cases, counters, and partitions not over 69 inches (1753 mm) in height.

AMEND SECTION 105.3 AS FOLLOWS:

105.3 Application For A Permit. – To obtain a permit, the applicant shall first file an application therefor, in writing, on a form furnished by MSCCE for that purpose along with the required fee. Such application shall:

ADD SECTION 105.4.1 AS FOLLOWS:

105.4.1 Permitting And Inspection. – The inspection and permitting of any building, system or plans by any jurisdiction, under the requirements of the Technical Codes shall not be construed in any court as a warranty of the physical condition of such building, system or plans or their adequacy. No jurisdiction or any employee thereof shall be liable in tort for damages for any defect or hazardous or illegal condition or inadequacy in such building, system or plans, or for any failure of any component of such, which may occur subsequent to such inspection or permitting.

ADD SECTION 106.1.1 AS FOLLOWS:

106.1.1 Additional Data. –The Building Official may require details, computations, stress diagrams and other data necessary to describe the construction or installation and the basis of calculations. All drawings, specifications, and accompanying data required by the Building Official are to be prepared by the architect or engineer who shall affix their official seal.

ADD SECTION 106.2.6 AS FOLLOWS:

106.2.6 Structural And Fire Resistance Integrity. – Construction documents for all buildings shall indicate how required structural and fire resistant integrity will be maintained. Where a penetration of a required fire restraint wall, floor or partition will be made for electrical, gas, mechanical, plumbing or communication conduits, pipes, and systems the plans shall indicate in sufficient detail how the fire integrity will be maintained.

AMEND SECTION 106.3.1 AS FOLLOWS:

106.3.1 Review Of Construction Documents. – When the Building Official issues a permit, the construction documents shall be stamped as "Reviewed". One set of construction documents so reviewed and stamped shall be retained by the Building Official. Another set shall be returned to the applicant, shall be kept at the site of work, and shall be open to inspection by the Building Official or a duly authorized representative.

AMEND SECTION 106.5 AS FOLLOWS

106.5 Retention Of Construction Documents. - One set of reviewed construction documents shall be retained by the Building Official for a period of not less than 180 days after the final inspection of the work allowed by the permit issued.

AMEND SECTION 107.1 AS FOLLOWS:

107.1 General. - The Building Official is authorized to issue permits for temporary structures and temporary uses such as construction sheds, seats, canopies, tents, and fences used for construction work or for temporary purposes. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The Building Official is authorized to grant extensions for demonstrated cases.

AMEND SECTION 107.3 AS FOLLOWS:

107.3 Temporary Power. - The Building Official is authorized to give permission to temporarily supply and use power in part of an electrical installation before such installation is fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in the *MSC Electrical Code.*

AMEND SECTION 109.3.7 AS FOLLOWS:

109.3.7 Other Inspections. - In addition to the inspections specified above the Building Official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the MSCCE.

AMEND SECTION 110.2 AS FOLLOWS:

110.2 Certificate Issued. – After the Building Official inspects the building and finds no violations of the provisions of this code or other laws that are enforced by MSCCE, the Building Official shall issue a certificate of occupancy that shall contain the following:
1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. Any special stipulations and conditions of the building permit.

AMEND SECTION 112 AS FOLLOWS:

Section 112
MSC Board Of Appeals.
See Section 112 *et seq*. of the MSC Building Code concerning the MSC Joint Board of Appeals

ADD THE FOLLOWING TO THE END OF SECTION 114.2:

Where an emergency exists, the Building Official shall not be required to give written notice prior to stopping work.

AMEND SECTION 116 AS FOLLOWS:

Section 116
116.1 Imminent Danger. – When, in the opinion of the Building Official, there is imminent danger of failure or collapse of a building that endangers life, or when any building or part of a building has fallen and life is endangered by the occupation of the building, or when there is actual or potential danger to the building occupants or those in proximity of any structure because of explosives, explosive fumes or vapors, or the presence of toxic fumes, gases or materials, or operation of defective or dangerous equipment, the Building Official is hereby authorized and empowered to order and require the occupants to vacate the premises forthwith. The Building Official shall cause to be posted at each entrance to such structure a notice reading as follows, “THIS STRUCTURE IS UNSAFE AND ITS OCCUPANCY HAS BEEN PROHIBITED BY THE BUILDING OFFICIAL.” It shall be unlawful for any person to enter such structure except for the purpose of securing the structure, making required repairs, removing the hazardous condition or of demolishing same.

ADD SECTION 117.1 AS FOLLOWS:

Section 117.1 General. – The Building Official shall order the owner of any premises upon which is located any structure that in the Building Official's judgment is so old, dilapidated, or has become so out of repair as to be dangerous, unsafe, unsanitary or otherwise unfit for human habitation or occupancy; and such that it is unreasonable to repair the structure, to demolish and remove the structure; or if such structure is capable of being made safe by repair, to repair and make safe and sanitary or to demolish and remove at the owner's option; or where there has been a cessation of normal construction of any structure for a period of more than two years, to demolish and remove such structure. Such demolition shall be incompliance with Section 1309 of this code and Section 3303 of the MSC Building Code.

ADD TO SECTION 202 AS FOLLOWS:

International Building Code – Whenever the word "International Building Code (IBC)" is used in this code as adopted, it shall mean Chapters 1-13, Chapters 27-33 and Chapter 35 of the 2009 Edition of the *ICC International Building Code* and Chapters 14-26 and Chapter 34 of the 2012 Edition of the *ICC International Building Code* with all local amendments thereto and will be known as the 2012 Memphis and Shelby County Building Code (MSCBC)

International Electrical Code – Whenever the word "International Electrical Code (IEC)" is used in this code as adopted, it shall mean all the *2008 Edition of the National Electric Code (NEC)* with local amendments thereto, and will be known as the 2012 Memphis and Shelby County Electrical Code (MSCEC)

International Existing Building Code – Whenever the word "International Existing Building Code (IEBC)" is used in this code as adopted, it shall mean all the 2012 Edition of the *ICC International Existing Building Code* with local amendments and will be known as the 2012 Memphis and Shelby County Building Code (MSCEBC)

International Fuel Gas Code – Whenever the word "International Fuel Gas Code (IFGC)" is used in this code as adopted, it shall mean all the 2009 Edition of the *ICC International Fuel Gas Code* with local amendments and will be known as the 2012 Memphis and Shelby County Fuel Gas Code (MSCFGC)

International Mechanical Code – Whenever the word "International Mechanical Code (IMC)" is used in this code as adopted, it shall mean all the 2009 Edition of the *ICC International Mechanical Code* with local amendments and will be known as the 2012 Memphis and Shelby County Mechanical Code (MSCMC)

International Plumbing Code – Whenever the word "International Plumbing Code (IPC)" is used in this code as adopted, it shall mean all the 2009 Edition of the *ICC International Plumbing Code* with local amendments and will be known as the 2012 Memphis and Shelby County Plumbing Code (MSCPC)

AMEND SECTION 410.8.5 AS FOLLOWS:

410.8.5 Ramps. Where slopes steeper than allowed by Section 1010.2of the International Building Code are necessitated by space limitations, the slope of ramps in or providing access to existing facilities shall comply with Table 410.8.5.

AMEND SECTION 705.1.4 AS FOLLOWS:

705.1.4 Ramps. Where steeper slopes than allowed by Section1010.2 of the International Building Code are necessitated by space limitations, the slope of ramps in or providing access to existing facilities shall comply with Table 705.1.4.

AMEND SECTION 807.3 AS FOLLOWS:

807.3 Seismic Load. – Existing buildings with a change of occupancy shall comply with the seismic provisions of Section 807.5 and 807.6 or Section 102.4.2 of this code.

AMEND SECTION 1012.5.1.1 AS FOLLOWS:

1012.5.1.1 Fire wall alternative. In other than Groups H, F-1 and S-1, fire barriers and horizontal assemblies constructed in accordance with Sections 707 and 712, respectively, of the International Building Code shall be permitted to be used in lieu of fire walls to subdivide the building into separate buildings for the purpose of complying with the area limitations required for the new occupancy where all of the following conditions are met:

AMEND SECTION 1301.2 AS FOLLOWS

1301.2 Conformance. - The building shall be safe for human occupancy as determined by the *International Fire Code*. Any *repair*, *alteration*, or *change of occupancy* undertaken within the moved structure shall comply with the requirements of this code applicable to the work being performed. Any field-fabricated elements shall comply with the requirements of the *International Building Code* or the *International Residential Code* as applicable.

AMEND SECTION 1401.2 AS FOLLOWS:

1401.2 Applicability. – Structures existing prior to 1949, in which there is work involving additions, alterations or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 5 through 13. The provisions of Sections 1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R and S. These provisions shall not apply to buildings with occupancies in Group H or I.

AMEND SECTION1401.3.2 AS FOLLOWS:

1401.3.2 Compliance With Other Codes. – Buildings that are evaluated in accordance with this section shall comply with the *International Fire Code*.

AMEND SECTION 1401.6.3.2 AS FOLLOWS:

1401.6.3.2 Floor/ceiling construction. A floor/ceiling assembly used to create compartments shall conform to Section 712 of the International Building Code and shall have a fire-resistance rating of not less than 2 hours.

AMEND SECTION 1401.6.4.1 CATEGORY b, CATEGORY d, and CATEGORY e AS FOLLOWS:

1401.6.4.1 Categories. The categories for tenant and dwelling unit separations are:
1. Category a—No fire partitions; incomplete fire partitions; no doors; doors not self-closing or automatic-closing.
2. Category b—Fire partitions or floor assemblies with less than 1-hour fire-resistance ratings or not constructed in accordance with Section 708 or 712 of the International Building Code, respectively.
3. Category c—Fire partitions with 1-hour or greater fire-resistance ratings constructed in accordance with Section 708 of the International Building Code and floor assemblies with 1-hour but less than 2-hour fire-resistance ratings con structed in accordance with Section 711 of the International Building Code or with only one tenant within the floor area.
4. Category d—Fire barriers with 1-hour but less than 2-hour fire-resistance ratings constructed in accordance with Section 707 of the International Building Code and floor assemblies with 2-hour or greater fire-resistance ratings constructed in accordance with Section 712 of the International Building Code.
5. Category e—Fire barriers and floor assemblies with 2-hour or greater fire-resistance ratings and constructed in accordance with Sections 707 and 712 of the International Building Code, respectively.

AMEND SECTION 1401.6.5.1 Category b, Category c, and Category d AS FOLLOWS:

1401.6.5.1 Categories. The categories for corridor walls are:
1. Category a—No fire partitions; incomplete fire partitions; no doors; or doors not self-closing.
2. Category b—Less than 1-hour fire-resistance rating or not constructed in accordance with Section 708.5 of the International Building Code.
3. Category c—1-hour to less than 2-hour fire-resistance rating, with doors conforming to Section 715 of the International Building Code or without corridors as permitted by Section 1018 of the International Building Code.
4. Category d—2-hour or greater fire-resistance rating, with doors conforming to Section 715 of the International Building Code.

AMEND SECTION 1401.6.6 AS FOLLOWS:

[B] 1401.6.6 Vertical openings. Evaluate the fire resistance ratings of exit enclosure, hoistways, escalator openings and other shaft enclosures within the building, and openings between two or more floors. Table 1401.6.6(1) contains the appropriate protection values. Multiply that value by the construction type factor found in Table.

1401.6.6(2). Enter the vertical opening value and its sign (positive or negative) in Table 1401.7 under Safety Parameter 1401.6.6, Vertical Openings, for fire safety, means of egress, and general safety. If the structure is a one-story building or if all the unenclosed vertical openings within the building conform to the requirements of Section 708 of the International Building Code, enter a value of 2. The maximum positive value for this requirement shall be 2.

AMEND SECTION 1401.6.10.1 CATEGORIES BY AMENDING ITEM 6 SO WHEN AMENDED THE SECTION SHALL READ AS FOLLOWS:

1401.6.10.1 Categories. The categories for smoke control are:

1. Category a—None.
2. Category b—The building is equipped throughout with an automatic sprinkler system. Openings are provided in exterior walls at the rate of 20 square feet (1.86 m2) per 50 linear feet (15,240 mm) of exterior wall in each story and distributed around the building perimeter at intervals not exceeding 50 feet (15 240 mm). Such openings shall be readily openable from the inside without a key or separate tool and shall be provided with ready access thereto. In lieu of operable openings, clearly and permanently marked tempered glass panels shall be used.
3. Category c—One enclosed exit stairway, with ready access thereto, from each occupied floor of the building. The stairway has operable exterior windows, and the building has openings in accordance with Category b.
4. Category d—One smokeproof enclosure and the building has openings in accordance with Category b.
5. Category e—The building is equipped throughout with an automatic sprinkler system. Each floor area is provided with a mechanical air-handling system designed to accomplish smoke containment. Return and exhaust air shall be moved directly to the outside without recirculation to other floor areas of the building under fire conditions. The system shall exhaust not less than six air changes per hour from the floor area. Supply air by mechanical means to the floor area is not required. Containment of smoke shall be considered as confining smoke to the floor area involved without migration to other floor areas. Any other tested and approved design that will adequately accomplish smoke containment is permitted.
6. Category f—Each stairway shall be one of the following: a smokeproof enclosure in accordance with Section 1022.9 of the International Building Code; pressurized in accordance with Section 909.20.5 of the International Building Code; or shall have operable exterior windows.

AMEND SECTION 1401.6.11 SO WHEN AMENDED IT SHALL READ AS FOLLOWS:

1401.6.11 Means of egress capacity and number. Evaluate the means of egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to the following sections of the International Building Code: 1003.7, 1004, 1005.1, 1014.2, 1014.3, 1015.2, 1021, 1025.1, 1027.2, 1027.6, 1028.2, 1028.3, 1028.4 and 1029 [except that the minimum width required by this section shall be determined solely by the width for the required

capacity in accordance with Table 1401.6.11(1)]. The number of exits credited is the number that is available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 405. Under the categories and occupancies in Table 1401.6.11(2), determine the appropriate value and enter that value into Table 1401.7 under Safety Parameter 1401.6.11, Means-of-Egress Capacity, for means of egress and general safety.

ADD TABLE 1401.6.11(1) AS FOLLOWS:

TABLE 1401.6.11(1)
EGRESS WIDTH PER OCCUPANT SERVED

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM[a]	
OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM[a]	
	Stairways (inches per occupancy)	Other egress components (inches per occupant)	Other egress components (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than those listed below	0.3	0.2	0.2	0.15
Hazardous: H-1, H-2, H-3, H-4	Not permitted	Not permitted	0.3	0.2
Institutional: I-2	Not permitted	Not permitted	0.3	0.2

For SI: 1 inch = 25.4 mm.
a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.1.1 or 903.3.1.2.

RELABEL TABLE 1401.6.11 AS 1401.6.11(2)

AMEND SECTION 1401.6.19 AS FOLLOWS:

1401.6.19 Incidental uses. Evaluate the protection of incidental uses in accordance with Section 509.4.1 of the International Building Code. Do not include those where this code requires automatic sprinkler systems throughout the building including covered and open mall buildings, high-rise buildings, public garages and unlimited area buildings. Assign the lowest score from Table 1401.6.19 for the building or floor area being evaluated and enter that value into Table 1401.7 under Safety Parameter 1401.6.19, Incidental Uses, for fire safety, means of egress and general safety. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

ADD SECTION 1510 AS FOLLOWS:

1510 Demolition. See Section 3303.7 of the MSC Building Code

DELETE CHAPTER 16 IN ITS ENTIRIY AND REPLACE IT WITH FOLLOWING:

CHAPTER 16
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.

ASCE/SEI

American Society of Civil Engineers
Structural Engineering Institute
1801 Alexander Bell Drive
Reston, VA 20191-4400

Standard Reference number	Title	Referenced in code section number
7-10	Minimum Design Loads for Buildings and Other Structures.....	301.1.4.1, A104, A506.1, A507.1
31-03	Seismic Evaluation of Existing Buildings.....	301.1.4, Table 301.1.4.2, 301.1.4.2
41-06	Seismic Rehabilitation of Existing Buildings.....	301.1.4, 301.1.4.1, Table 301.1.4.1, 301.1.4.2, Table 301.1.4.2

ASHRAE

American Society of Heating, Refrigerating and Air Conditioning Engineers
1791 Tullie Circle, NE
Atlanta, GA 30329

Standard Reference number	Title	Referenced in code section number
62.1-2010	Ventilation for Acceptable Indoor Air Quality.....	.809.2

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Standard Reference number	Title	Referenced in code section number
C 90-08	Specification for Loadbearing Concrete Masonry Units.....	A505.2.3
C 496—96	Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens.....	.....A104, A106.3.3.2
E 519—00e1	Standard Test Method for Diagonal Tension (Shear) in Masonry Assemblages.....	.....A104, A106.3.3.2

ASME

American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

Standard Reference number	Title	Referenced in code section number
ASME/A17.1 2007/CSA B44-07	Safety Code for Elevators and Escalators – with A17.1a/CSA B44a-08 Addenda…….....	410.8.2, 705.1.2, 902.1.2
A17.3-2008	Safety Code for Existing Elevators and Escalators…….....…	9 02.1.2
A18.1-2008	Safety Standard for Platform Lifts and Stairway Chair Lifts.....…….....….	.....410.8.3, 705.1.3

DOC

U.S. Department of Commerce
National Institute of Standards and Technology
1401 Constitution Avenue NW
Washington, DC 20230

Standard Reference number	Title	Referenced in code section number
PS-1—09	Structural Plywood	A302
PS-2—10	Performance Standard for Wood-based Structural-use Panels	A302

ICC

International Code Council, Inc.
500 New Jersey Ave, NW
6th Floor
Washington, DC 20001

Standard Reference number	Title	Referenced in code section number
IBC—09 with Local Amendments (2012MSC BC)	International Building Code®	101, 106, 109, 110, 202, 301, 403,403.1, 404, 407, 407.1, 408, 410, 410.4.2, 410.6, 410.8, 410.9, 501,601,602,606, 701, 702, 705, 706, 801, 802, 803, 804, 805, 806, 807, 904, 905, 906, 907, 1001, 1002, 1007, 1011, 1012, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1205, 1301, 1302, 1401, 1501, 1506
ICC A117.1—2009	Accessible and Usable Buildings and Facilities	410.6, 410.8.2, 705.1, 705.1.2, 705.1.3
IECC—09	International Energy Conservation Code®	702.4, 707.1, 811.1, 908.1
IFC-09	International Fire Code®	101.4.2, 301.1.1, 803.2.1, 803.2.3, 804.4.1.1, 804.4.1.2, 804.4.1.3, 804.4.1.4, 804.4.1.5, 804.4.1.6, 804.4.1.7, 804.4.3, 1301.2, 1401.3.2, 1401.6.8.1, 1401.6.14, 1401.6.14.1, 1504.1, 1504.2
IFGC-09	International Fuel Gas Code	407.7, 702.4.1
IMC-09	International Mechanical Code	407.8, 702.4, 809.1, 902.1.1, 1002.2.1, 1009.1, 1401.6.7.1, 1401.6.8, 1401.6.8.1
IPC-09	International Plumbing Code®	407.9, 609.1, 702.4, 810.1, 1010.2, 1010.3, 1010.5, 1501.5
IPMC-09	International Property Maintenance Code®	101.4.2, 1301.2, 1401.3.2
IRC—12	International Residential Code®	101.4.1, 602.3, 606, 706.2.1, 707.1, 807.4, 808.3, 811.1, 907.4, 907.4.2, 908.1, 1103.2, 1103.3, 1103.4, 1104.1, 1302.1, 1302.2, 1302.2.1, 1302.3, 1302.4, 1302.5, 1401.2.2, 1401.2.3

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

Standard Reference number	Title	Referenced in code section number
NFPA13R-07	Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height	804.2.5
NFPA70-08	National Electrical Code	607.1.1, 607.1.2, 607.1.3, 607.1.4, 607.1.5
NFPA72-07	National Fire Alarm Code	804.2.5, 804.4
NFPA99-05	Health Care Facilities	607.1.4
NFPA101-06	Life Safety Code	805.2

Appendix C
Repair, Alteration, Rehabilitation and Changing Occupancies of Existing Structures for an R-2 Use

CHAPTER 1
GENERAL

SECTION 101 - TITLE

Section 101.1. Title - These regulations shall be known as Appendix C of the Memphis and Shelby County Existing Building Code, and may be cited as such, and will be referred to herein as "this Appendix."

SECTION 102 - PURPOSE

Section 102.1. Purpose of Rules - The purpose of this Appendix is to encourage the continued use or reuse of existing R-2 buildings and structures and to allow the change in use of existing buildings for this purpose.

SECTION 103 – SCOPE

Section 103.1. Scope of Rules - The provisions of this Appendix shall constitute the minimum requirements for alteration or repair of existing R-2 buildings and structures and the requirements when a change in use to R-2 occurs in a building or structure not previous in this use classification.

SECTION 104 - ADDITIONS, ALTERATIONS AND REPAIRS

104.1. Additions, Alterations and Repairs - Buildings and structures to which additions, a1terations.or repairs are made shall comply with all the requirements of the Building Code for new construction except as the Existing Building Code as locally amended or in this Appendix allows. Additions, alterations or repairs may be made to any building or structure without requiring the existing building or structure to comply with all the requirements of the Building Code provided:

1. Additions shall conform to requirements for a new building or structure.
2. Any new additions shall not exceed the height, number of stories and area permitted for new building except as permitted in this Appendix.
3. Additions or alterations shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any of the provisions of this Appendix, or cause an unsafe condition.
4. Alterations or repairs to an existing building or structure that are nonstructural and do not adversely affect any structura1 member or any part of the building or structure having required fire resistance may be made with the same materials of which the building or structure is constructed, except as required by the individual chapters of this Appendix. See Chapter 4 of this Appendix for requirements for the installation or replacement of glass.

104.2. Added Lateral–Force-Resisting Elements - Alterations of existing structural elements or additions of new structural elements which are not required by other sections of this Appendix and are initiated for the purpose of increasing the lateral force resisting strength or stiffness of an existing structure need not be designed for forces conforming to these regulations provided that an engineering analysis is submitted to show that:

1. The capacity of existing structural elements required to resist forces is not reduced;
2. The lateral loading to required existing structural elements is not increased beyond their capacity
3. New structural elements are detailed and connected to the existing structural elements as required by the Building Code
4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the Building Code.

Section 105 - MAINTENANCE

Section 105.1. Duty Of Maintainance - All buildings and structures, and all parts thereof, shall be maintained in a safe and sanitary condition. All systems, devices or safeguards that were required by the code under which the building was constructed shall be maintained in conformance with the requirements of that code. The owner or the owner’s designated agent shall be responsible for the maintenance of buildings and structures.

Section 105.2. Standard For Fire Protection Systems - Fire protection systems or fire extinguishing systems shall be extended, altered, or augmented as necessary to

maintain and continue protection whenever any building so equipped is altered, remodeled or added to. Additions, repairs, alterations, and service shall be in accordance with approved standards and shall be perform by NICET II Tennessee Licensed Fire Protection Contractor or a locally and Tennessee Licensed Fire Alarm Contractor. To determine compliance with this section, the Building Official may cause any structure to be re-inspected.

SECTION 106 – ALTERNATIVE MATERIALS, ALTERNATIVE DESIGN AND METHODS OF CONSTRUCTION.

Section 106.1. Intent - The provisions of this Appendix are not intended to prevent the use of any material, alternative design or method of construction not specifically prescribed by this Appendix, provided an alternate has been approved and the Building Official authorizes its use.

Section 106.2. Building Official Approval -The Building Official may approve any such alternate provided the Building Official finds that the proposed design is satisfactory and complies with the provisions of this Appendix and that the material, method or work offered is, for the purposed intend, at least the equivalent of that proscribed in this Appendix in suitability, strength, effectiveness, fire resistance, durability, safety and sanitation.

Section 106.3. Approval Process - The Building Official shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternative shall be recorded and entered in the files of the code enforcement office.

SECTION 107 – MODIFICATION OF APPENDIX PROVISIONS

Section 107.1. Authority Of Building Official - When there are practical difficulties involved in carrying out the provisions of this Appendix, the Building Official may accept compliance alternatives or grant modifications for individual cases. The Building Official shall, however, first find that:

1. A special, individual reason makes the strict letter of the Appendix impractical, and
2. The compliance alternative or modification conforms with the intent and purpose of this Appendix, and
3. Such compliance alterative or modification does not lessen any health, life safety and the intent of any fire safety element required or any degree of structural integrity.

The details of any action granting modifications or acceptance of a compliance alterative shall be recorded and entered in the files of the Code Enforcement Official.

SECTION 108 - TESTS

Section 108.1. When Required - Whenever there is insufficient evidence of compliance with any of the provisions, of this Appendix or evidence that any material or construction does not conform to the requirements of this Appendix, the Building Official may require tests as proof of compliance to be made at no expense to this jurisdiction.

Section 108.2. Methods - Test methods shall be as specified by this Appendix, the Building Code or by other recognized test standards. If there are no recognized and accepted test methods for the proposed alternate, the Building Official shall determine test procedures.

Section 108.3. Approved Agency Only - All tests shall be made by an approved agency. Reports of such tests shall be retained by the building official for the period required for the retention of public records. All tests involving fire protection systems or fire extinguishing systems shall be performed by a NICET II Tennessee or Locally and state Licensed Fire Protection or Fire Alarm Contractor. The Fire Department shall witness these tests.

CHAPTER 2
ENFORCEMENT AND PERMITS

SECTION 201 - ADMINISTRATION

Section 201.1. Duty Of The Building Official -The Building Official is hereby authorized to enforce the provisions of this Appendix. The Building Official shall have the power to render interpretations of this Appendix and to adopt and enforce rules and regulations supplemental to this Appendix as deemed necessary in order to c1arify the application of the provisions of this Appendix. Such interpretations, rules and regulations shall be in conformity with the intent and purpose of this Appendix

SECTION 202 - PERMITS REQUIRED

Section 202.1. When Required - Buildings or structures regulated by this Appendix shall not be enlarged, altered, repaired, improved, moved, converted or demolished unless a separate permit for each building or structure has first been obtained from the Building Official in accordance with and in the manner prescribed in the applicable Building Code for the jurisdiction and the fee paid according to the applicable provisions of the locally adopted Fee Ordinance.

SECTION 203 - INSPECTION OF WORK

Section 203.1. When Required - All buildings or structures within the scope of this Appendix and all construction or work for which a permit is required shal1 be subject to inspection by the Building Official in accordance with and in the manner proscribed in this Appendix and the Memphis and Shelby County Technical Code.

SECTION 204 – UNSAFE BUILDINGS, STRUCTURES OR BUILDNG SYSTEMS

Section 204.1. Structural Requirements - All buildings or structures regulated by this Appendix that are structurally unsafe or not provided with adequate egress, or which constitute a fire hazard, or are otherwise dangerous to human life are, for the purpose of this section, unsafe.

Section 204.2. Systems Requirements - Building service equipment regulated by this Appendix adopted by Memphis and Shelby County, which constitute a fire, electrical or health hazard, or unsanitary condition, or is otherwise dangerous to human life is, for the purpose of this section, unsafe.

Section 204.3. Unsafe Use - Any use of buildings, structures or building service equipment constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is, for the purpose of this section, an unsafe use

Section 204.4. Unsafe Building Appendages -Parapet walls, cornices, spires, towers, tanks, statuary and other appendages or structural members that are supported by, attached to, or a part of a building, and that are in deteriorated condition or otherwise unable to sustain the design loads that are specified in this Appendix, are hereby designated as unsafe building appendages

Section 204.5. Public Nuisance - All such unsafe buildings, structures or appendages, unsafe uses, and unsafe building service equipment are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in the Memphis and Shelby County Building Code. As an alternative, the Building Official or other employee may institute any other appropriate action to prevent, restrain, correct or abate the violation.

CHAPTER 3
DEFINITIONS

SECTION 301 --DEFINITIONS

For the purpose of this Appendix, certain terms, phrase, word and their derivatives shal1 be construed as specified in this chapter. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine. Any term not defined herein which is defined in any other code applicable to these provisions shall have the meaning as defined in that code. Where a term is defined in these provisions and is also defined in another code, then the term shall have the meaning as defined herein whenever it is used in these provisions. Words used in the present tense include the future.

Where terms are not defined, they shall have their ordinary accepted meaning within the context in which they are used. W*ebster's Third New International Dictionary of the English Language Unabridged*· copyright. 1986, shal1 be considered as providing ordinarily accepted meanings

ACCESSIBILITY is the design and construction of facilities governed by Section A.117.1 ANSI 2009 Edition.

ADDITION is an extension or increase in floor area, number of stories, or height of a building or structure.

ALTER or ALTERATION is any construction or renovation to an existing structure other than repair or addition

APPROVED AGENCY is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services when such agency has been, approved by the Building Officia1.

BUILDING CODE is the currently adopted applicable code of this jurisdiction.

BUILDING OFFICIAL is the officer or other designated authority charged with, the administration and enforcement of this Appendix as applicable to buildings, or a duly authorized representative.

BUILDING SERVICE EQUIPMENT refers to the plumbing, mechanical, electrical and elevator equipment, including piping, wiring, fixtures and other accessories that provide sanitation, lighting, heating, ventilation, cooling, refrigeration, fire fighting and transportation facilities essential for the habitable occupancy of the building or structure for its designated use and occupancy.

COMPLIANCE ALTERATIVE is conformance with the intent of this Appendix, using means, materials or design features that can be demonstrated to the satisfaction of the Building Official to perform in a manner equivalent to those specifically required by this Appendix.

ELECTRICAL CODE is the 2012 Memphis and Shelby County Joint Electrical Code and NFPA 70-2002 (2008 edition of the National Electric Code (NEC)).

ELEVATOR CODE for the City of Memphis is as adopted by City Ordinance Chapter 14-16 and the provisions of the Memphis and Shelby County Building Code including Chapter 30 and any later amendments to that Code.

EQUIPMENT OR FIXTURE is any plumbing, heating, electrical, ventilating, air conditioning, refrigerating and fire protection equipment, and elevators, dumb waiters, escalators, boilers, pressure vessels and other mechanical facilities or installations essential for the habitable occupancy of the building or structure for its designated use and occupancy. Equipment or fixture shall not include manufacturing or process equipment, but shall include connections from building service to process equipment.

EXISTING BUILDING is a building or structure erected prior to the adoption of the current Building Code of the jurisdiction and which had or has been issued a certificate of occupancy or had or has been legally occupied.

FIRE CODE is for the City of Memphis the Memphis Fire Code as shown in Chapter 9-36 of the City Code of Ordinance and for unincorporated Shelby County, as shown in Section 22-26 of the County Code of Ordinances as from time to time adopted by the Shelby County Board of Commissioners.

LOAD BEARING ELEMENT is any column, girder, beam, joist, truss, rafter, wall or roof sheathing which supports any vertical load in addition to its own weight, and/or any lateral load.

MATERIALS AND METHODS REQUIREMENTS are those requirements in the building, plumbing, electrical, mechanical, and fire codes that specify material standards, details of installation and connection, joints, penetrations and continuity of any element, component or system in the building. The required quantity, fire resistance, flame spread, acoustic or thermal performance, or other performance attribute is specifically excluded from materials and methods requirements.

MECHANICAL CODE is the last adopted version of the Memphis and Shelby County Mechanical Code.

OCCUPANCY is the purpose for which a building, or part thereof, is used or intended to be used.

PLUMBING CODE is the last adopted version of the Memphis and Shelby County Plumbing Code.

REHABILITATE is to return a building or structure to a state of utility through additions, alterations or repairs. As applied to historic structures, it includes the preservation of those portions or features that are of historical and cultural value.

REPAIR is the patching, restoration or minor replacement of materials, elements, components, equipment and fixtures for the purposes of maintaining such materials, elements, components, equipment and fixtures in good or sound condition.

TECHNICALLY INFEASIBLE is a change to a building that has little likelihood of being accomplished because the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with applicable requirements.

UNSAFE CONDTION is deemed to have been created if an addition or alteration will cause the existing building or structure to become structurally unsafe or overloaded, will not provide adequate egress in compliance with the provisions of this Appendix, will obstruct existing exits, will create a fire hazard, will reduce required fire resistance, or will otherwise create conditions dangerous to human life.

WORK AREA is that portion of a building affected by any repair or alteration work as specified in the approved plans and permit. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed; and portions of the building where work not initially intended by the owner is specifical1y required for an alteration, repair or reconstruction as per this Appendix.

CHAPTER 4
LEVELS OF CONSTRUCTION

SECTION 401 - GENERAL

401.1. General - Existing buildings or structures within the scope of this Appendix shall meet the minimum standards set forth in this chapter, as well as any specific occupancy requirements set forth in this Appendix. Buildings or structures shall meet the minimum level of performance specified in this chapter through compliance with the specific provisions of this Appendix.

401.2 Repairs

401.2.1. General - Except as is otherwise allowed herein, work shall be done using like materials permitted by the applicable code for new construction. The work shall not make the building less conforming with the building, plumbing, mechanical, electrical or fire codes, or with any previously approved alternative arrangements than it was before the repair was undertaken.

401.2.2. Replacing Glazing -Replacement glazing in hazardous locations as defined in the Building Code shall be approved safety glazing.

EXCEPTIONS:
1. Glass-block walls may be repaired using like materials

2. Louvered windows and jalousies may be repaired using like materials.

401.3. Special Repairs - Repairs to any portion of a historic building or structure are permitted to be made with original materials and original methods of construction, subject to the provisions of this chapter.

401.3.1. Relocated Buildings - Foundations of relocated buildings and structures shall comply with the Building Code. Relocated buildings and structures shall be so sited that exterior walls and opening requirements comply with the Building Code or the compliance alternatives of this Appendix.

401.3.2. Replacement - Replacement of existing or missing features using original materials shall be permitted. Partial replacement for repairs that match the original in configuration, height and size shall be permitted.

EXCEPTION: Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the Building Code.

401.3.3. Roof Covering - The existing type of roof covering shall be permitted to be continued and replaced with the same materials if the materials are documented and satisfactory to the Building Official.

401.4. Alterations.

401.4.1. No Reconfiguration Of Space (Level 1) - When the alteration work in the work area includes no reconfiguration of spaces, all new work shall comply with the materials and methods requirements, as defined in Chapter 3 of this Appendix.

EXCEPTION: Interior finishes shall comply with the requirements of Section 405.1of this Chapter.

401.4.2. **Limited Alteration (Level 2)** - When the alteration work in the work area includes any of the following:

1. the reconfiguration of spaces,
2. the addition or elimination of any door or window,
3. the reconfiguration or extension of any system, or
4. the installation of any additional equipment;

All newly constructed elements; components and systems, including the installation of new elevators and boilers, shall comply with the requirements of the Building Code, Mechanical Code, Plumbing Code, Electrical Code, Elevator Code and other regulations applicable to new construction.

EXCEPTIONS:

1. Openable windows may be added without requiring compliance with the light and ventilation requirements of the Building Code.

2. Newly installed e1ectrical equipment shall comply with the requirements of Section 503.1 of this Appendix.

401.4.3. Significant Alteration (Level 3) - When the work area exceeds 50 percent of the aggregate areas of the building, the requirements of the section shall apply throughout the work area, and supplemental requirements shall apply as specified.

SECTION 402 - HEIGHTS AND AREAS

Section 402.1 General - The heights and area of existing buildings or structures shall be acceptable, provided the requirements of this chapter are satisfied.

SECTION 403 – MEANS OF EGRESS

403.1. Single Exit Buildings - In buildings having only one exit, the single exit condition serving the work area shall be permitted to continue in accordance with the Building Code.

403.2. Two Story Buildings - In buildings of Use Group R-2, not more than two stories in height, from floors that are more than 16 feet (4877 mm) above exterior grade, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15,240 mm), the minimum fire-resistance rating of the exit enclosure and of the opening protection shall be one hour.

403.2.1. Three Story Buildings or Less - Use Group R-2 buildings of three stories or less shall be permitted to have a single exit provided the following conditions are met:

l. The stairway is separated from the rest of the building by construction having a minimum fire-resistance rating of one hour with self-closing one-hour fire doors protecting all openings between the stair enclosure and the building, and
2. All corridors serving as access to exits from the work area have a minimum fire resistance rating of 20 minutes, and
3. There is not more than 35 feet (10.7m) of travel distance from the entrance door of any living unit in the work area to an exit, and
4. Twenty-minute fire-resistance rated horizontal and vertical separation between 1iving units in the work area is provided.

403.2.3. Existing Fire Escapes As Exits - When more than one exit is required, existing fire escapes shall be accepted as providing one of the required means of egress unless judged to be dangerous for use under emergency exiting conditions. For use of fire escapes, access shall be through a door except when serving an occupant load of 10 or fewer. All occupants shall have unobstructed access to fire escapes without having to pass through a room subject to locking.

403.2.3.1. New Fire Escapes - When more than one exit is required and there is not sufficient space for an exterior stair within the lot line, a new fire escape shall be accepted as providing one of the required means of egress. Newly installed fire escapes shall comply with the Memphis and Shelby County Building Code.

403.2.3.2. Window Access To Fire Escape -Window access to fire escapes shall be permitted from individual dwelling unit.

403.2.3.3. Ladders Prohibited - For rooming houses, ladders shall be prohibited on fire escapes used as a required means of egress.

403.2.4. Single Exit At Level Of Exit Discharge - A single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet.

403.2.5. Basement Dwelling Units - Dwelling units in basements (stories below grade) shall have two means of egress unless the building has an automatic fire suppression system. (An operable window with a net clear opening of at least 5 square feet, a minimum net clear opening of 24 inches in height and 20 inches in width. and a sill height of not more than 44 inches above the finished floor is acceptable as one of the means of egress.)

403.2.6. Rooming Houses - For rooming houses, a single exit shall be prohibited

403.2.7. Requirements For Multilevel Dwelling Units - Multilevel dwelling units do not require an exit from each level within the dwelling unit provided that these conditions are met: The building is Type 1 or Type 2 construction, with travel distance within the dwelling unit not exceeding 75 feet or the building is not more than three stories and all third floor space is part of a dwelling unit located in part on the second floor and no habitable room has a travel distance of greater than 50 feet from the door of the room to the entrance of the dwelling unit

403.2.8. Rooming House Defined - As used in this subsection, "rooming house" means any building and any part thereof, which contains two or more units of dwelling space which do not provide a private, secure dwelling space arranged for independent living and contain in both full bath and kitchen facilities (exclusive of any such unit occupied by an owner or operator), including any residential hotel. The term does not include any hotel, motel or established guest house in which a minimum of 85 percent of the units of dwelling space are offered on a temporary basis only, for periods lasting no more than 90 days, to guests who either maintain or intend to maintain a primary residence at a location other than the hotel, motel or established guest house. The term also does not include one-family residential dwellings made available for occupancy by not more than five roomers.

SECTION 404-INTERIOR SPACE DIMENSION

404.1. Minimum Dimension - In Group R-2, when habitable spaces as defined in Chapter 2 of the Building Code, are created in previously, unoccupied space, other than a kitchen, they shall not be less than 7 feet in any plan dimension.

404.2. Minimum Ceiling Height - In Group R-2, when habitable spaces as defined Chapter 2 of the Building Code, are created, in previously unoccupied space, they shall have a ceiling height of not less than 7 feet.

EXCEPTIONS:

1. Beams, girders, ducts or piping spaced not less than 4 feet on center and projecting no more than 6 inches below the required ceiling height.

2. For rooms with a sloped ceiling, the prescribed ceiling height is required for at least 35 square feet of the floor area of the room. Any portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall not be considered usable floor and shall not be inc1ude in any computation of the minimum area thereof.

404.3. Minimum Net Floor Area - In Group R-2, when habitable spaces as defined in Chapter 2 of the Building Code, are created in previously unoccupied space, other than a kitchen, they shall have a net floor area of not less 70 square feet.

SECTION 405 - INTERIOR FINISH

405.1. No Reconfiguration Of Space - When the alteration work in the work area includes no reconfiguration of spaces, the requirements of Chapter 8 of the Memphis and Shelby County Building Code as locally amended shall apply in the work area.

405.2. Requirements For Significant Alteration - When the alteration work in the work area includes any of the work specified in Section 401.4.3 Significant Alteration, then in addition to the requirements of 405.1, the requirements of Memphis and Shelby County Existing Building Code, Section 603.4 shall apply throughout the work.

405.2.1. New Code Compliance - The interior finish of walls and ceilings in any work area shall comply with the requirements of the Building Code. All existing interior finish materials which do not comp1y with the requirements of this section shall be removed or shall be treated with an approved fire-resistant coating in accordance with the manufacturer's instructions to secure compliance with the requirements of this Section.

405.2.2. Supplemental Requirements

405.2.2.1. Exits And Corridors -Where the work area on any floor exceeds 50 percent of the floor area, the requirements of Section 405.2 shall apply to the interior finish in exits and corridors serving the work area on the entire floor.

EXCEPTION: Interior finish within a tenant space that is entirely outside the work area need not comply

405.2.2.2. Multi-Story Building Work Areas - In a building with work areas involving over 50 percent of the aggregate floor area within the building, the requirements for interior finishes in exits shall apply from the floor of the highest work area to the floor of the exit discharge, and to all intermediate floors.

SECTION 406 – SHAFT ENCLOSURES AND VERTICAL OPENING PROTECTION

406.1. Newly Constructed - In any work area, newly constructed vertical openings connecting two or more floors shall comply with the requirements of the Building Code.

406.2. For Significant Alterations - When the alteration work in the area includes any of the work specified in Section 401.4.3 Significant Alteration, then the following shall apply throughout the work area and supplemental requirement shall apply as specified

406.3. Required Fire Barrier - For vertical openings not exceeding three stories, a minimum 30-minute fire barrier shall be required.

EXCEPTIONS:

1. Buildings with an automatic fire suppression system throughout; or

2. When the vertical opening connects not more than two floor levels and not more than four dwelling units per floor provided that each dwelling unit has access to a fire escape or other approved secondary exit.

406.4. Openings Connecting Four To Six Floors - For vertical openings connecting four to six floor levels, approved assemblies having a fire resistance rating of not less than one hour with approved opening protectives

shall be required.

406.5. Openings Connecting More Than Six Floors - For vertical openings connecting more than six floor levels, approved assemblies having a fire resistance rating of not less than two hours with approved opening protectives shall be required.

406.6 Existing Openings In A Work Area - In any work area, all existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire-resistance rating of not less than one hour with approved opening protection.

407. EGRESS DOORWAYS

407.1. Two Egress Doorways Required - In any work area, all rooms and spaces having an occupant load greater than 50 or in which the travel distance exceeds 75 feet (22,860 mm) shall have a minimum of two egress doorways

EXCEPTIONS:

1. Storage rooms having an occupant load of l0 or less

2. Where the work area is served by a single exit in accordance with Existing Building Code Section 605.3.1.1.

407.2. Egress Doorways - A minimum of two egress doorways shall be required for all rooms and spaces with an occupant load greater than 50 or in which the travel distance exceeds 75 feet. All egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel.

407.2.1. Door Specifications - All dwelling unit, guest room or rooming unit corridor doors shall be at least 1-3/8 (34.9mm) inch solid core wood or approved equal with approved door closers and shall not have any glass panels, other than approved wire glass in metal frames. Corridor doors shall not be constructed of hollow core wood, shall not contain louvers and shall not be of panel construction. Doors shall fit both plumb and level in frames, and be reasonably tight fitting. All replacement doors shall be 1-3/4 (44.5mm) inch solid core wood or approved equal, unless existing frame will accommodate only a 1-3/8 (34.9 mm) inch door. (Note: Existing doors meeting HUD Guidelines for a rating of 15 minutes or better shall be accepted.)

EXCEPTIONS:

1. Corridor doors within dwelling unit or sleeping unit.

2. Door assemblies having a fire-protection rating of at least 20 minutes.

407.2.2. Doors In Fire Suppressed Structure- In buildings with an automatic fire suppression system, doors are only required to provide a smoke barrier, to be free of louvers, to fit plumb and level and to be reasonably tight fitting.

407.2.3. Self-Closing Required - Any doors opening onto a passageway at grade or onto an exit stair shall be self-closing or automatic closing by listed closing devices.

407.3. Dead End Corridors - Existing dead end corridors shall not exceed 35 feet in length.

EXCEPTIONS:

1. Dead end corridors may be up to 50 feet in length in a building with an automatic alarm system installed in conformance with the Memphis and Shelby County Building Code in effect at the time of its installation.

2. Dead end corridors may be up to 70 feet in length in a building with a suppression system installed in conformance with the Memphis and Shelby County Building Code in effect at the time of its installation.

407.4. Corridors - Corridors in the work area serving as a part of the means of egress system shall be constructed as required by the Building Code. Existing walls and ceilings surfaced with wood lath and plaster or ½ inch (12.7mm) gypsum wallboard may be permitted in lieu of one-hour fire resistive construction provided the surfaces are in good condition.

407.5. Transoms - All transoms in corridor walls of work areas shall be either glazed with ¼ inch (6.3mm) wired glass set in metal frames or other glazing assemblies having a fire-protection rating as required for the door and permanently secured in the closed position or sealed with materials consistent with the corridor construction.

EXCEPTION: Existing corridor walls, ceilings and opening protection not in compliance with the above may be continued when the building is protected with an approved automatic sprinkler system throughout. Such sprinkler system may be supplied from the domestic water supply system when approved by the Building Official, provided the system is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements.

407.6. Other Corridor Openings - In any work area, any other sash, grill or opening in a corridor, and any window in a corridor not opening to the outside air shall be sealed with material consistent with the corridor construction.

407.6.1. Supplemental Requirements For Other Corridor Openings - The requirements of Section 407.6 shall apply on the entire floor when the work area exceeds 50 percent of the floor area. Corridors within a tenant space that is entirely outside the work area need not comply with this requirement.

407.6.2. Self Closing Required - In any work area all doors opening onto an exit passageway at grade or exit stair shall be self-closing or automatic closing by listed closing devices

EXCEPTION: Where exit enclosure is not required by the Building Code.

407.7. Corridor Doors.

407. 7.1. Doors In Work Area - In any work area, door openings into corridors shall be protected by a tight-fitting smoke and draft-control assembly having fire-protection rating of not less than 20 minutes when such opening protection was required by the Code under which the building was constructed. Door closing devices, door gaskets and other requirements, imposed by the Code under which the building was constructed shall be maintained. Corridor doors in the work area shall not be constructed of hollow core wood and shall not contain louvers or glass panels, other than approved wired glass or other approved glazing material in metal frames.

When the building was constructed under the Code that did not require 20-minute smoke and draft control assemblies, doorway openings shall be protected by doors having a fire-protection rating of not less than 20 minutes or by a minimum 1 3/8 inch (34.9 mm) thick solid bonded wood core door or an equivalent insulated steel door. In such case, the frames need not have a fire-resistive time period. Doors shall be maintained self-closing with self-latching hardware as required by the Building Code or shall be automatic closing by activation of a smoke detector.

EXCEPTION: Corridor doors within a dwelling unit or guest room.

407.8 Egress Requirements

407.8.1. Capacity Of Means Of Egress - The capacity of the means of egress in each work area, and throughout the egress path of each work area, shall be sufficient for the occupant load thereof. Capacity shall be determined in accordance with the Building Code. The occupant load of a space shall be determined by whichever of the following methods provides the higher occupancy load.

1. Divide the floor area by the occupant load factor for this use group as provided in the Building Code
2. The actual number of occupants for whom the work area is designed.

EXCEPTION: The Building Official shall be permitted to establish the occupant load as the number of persons for which existing means of egress is adequate, provided that measures are established to prevent occupancy by a greater number of persons

407.8.2. Stairways.

407.8.2.1. Winding And Spiral Stairways - Existing winding or spiral stairways in any work area may serve as part of the means of egress from a building, including single exit buildings complying with Section 403.1 for a maximum occupant load of 10, provided that a complying handrail is located at the stair's outside perimeter. A winding or spiral stair may not be the principal means of egress when used in conjunction with a fire escape as a second means of egress. Means of egress width shall comply with the Building Code. Circular stairways complying with the Building Code shall be acceptable as a means of egress.

407.8.2.2. Alteration Or Replacement Of Existing Stairway - An alteration or the replacement of an existing stairway in an existing structure shall not be required to comply with the requirements of a new stairway as outlined in the Building Code where the existing space and construction will not allow a reduction in pitch or slope.

407.8.2.3. Rise And Run - The largest tread run within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

407.9. Handrails - The following requirement shall apply from the highest work area floor to the level of exit discharge.

1. Every stairway that is part of the means of egress for any work area that has three or more risers and is not provided with at least one existing handrail, or in which the existing handrai1s are judged to be in danger of

collapsing, shall be provided with handrails for the full length of the run of steps on at least one side. All stairways with an egress width of more than 66 inches (1,676 mm) shall have handrails on both sides. Spiral and winding stairways shall have a handrail on the outside perimeter.
2. Where there are no handrails or where the existing handrails must be replaced in accordance with 1 above, the handrails shall be designed and installed in accordance with the provisions of the Building Code

407.10. Guards - All unenclosed floor and roof openings, open and glazed sides of stairways, landings and ramps, balconies or porches that are more than 30 inches (762 mm) above grade at the floor below, and roofs used for other than service of the building, shall be protected by a guard. This section shall apply from the highest work area floor to the level of exit discharge, but shall be confined to the egress path of any work area.

407.10.1. Existing Installations - Existing guards**,** other than guards located on the open side of a stairway, which are at least 36 inches (914 min) in height, shall be permitted to remain. Guards lower than 36 inches (914 mm) in height shall be augmented or corrected to raise their effective height to 36 inches (914 mm). Guards for stairways, exclusive of their landings, may have a height that is not less than 30 inches (762 mm) measured above the nosing of treads. When approved by the Building Official, the spacing between existing intermediate railings or openings in existing ornamental patterns may be accepted.

407.10.2. **New Installations** - Where there are no guards, or where the existing guards must be replaced in accordance with 1 above, the guards shall be designed and installed in accordance with the Building Code.

407.11. Fire Escape Construction Requirements - Fire escapes shall designed to support a live load of 100 pounds per square foot (4788Pa) and shall be constructed of steel or other non combustible materials. Fire escapes constructed of wood not less than nominal 2 inch (51mm) thick are permitted on buildings of Type V construction. Walkways and railings located over or supported by combustible roofs in buildings of Type III and IV construction are note permitted to be of wood not less that nominal 2 inches (51mm) thick.

407.11.1 Dimensions - Stairs shall be at least 22 inches (559mm) wide with risers not more than and treads not less than, 8 inches (203mm). Landings at the foot of stairs shall not be less than 40 inches (1016mm) wide by 36 inches (914mm) long and located not more than 8 inches (203mm) below the door.
meet the following requirements. Fire escapes shall be subject to re-inspection as required by the Building Official. The Building Official may require documentation to show compliance with the requirements of this section. Fire escapes shall comply with the following:

407.11.2 Maintenance Fire escapes shall be kept clear and unobstructed at all times and maintained in good working order.

407.11.3 Clearance From Electrical Service The fire escape shall have a clearance from electrical service conductors as required by the Electrical Code

407.12 Means Of Egress Lighting.

407.12.1. Artificial Emergency Lighting Required - Means of egress in all work areas shall be provided with artificial emergency lighting in accordance with the requirements of the Building Code

407.12.2. (Supplemental Requirement) -Where the work area on any floor exceeds 50 percent of that floor area, means of egress throughout the floor shall be provided with emergency artificial lighting in accordance with the requirements of the Building Code

EXCEPTION: Means of egress within a tenant space that is entirely outside the work area need not comply

407.12.3. (Supplemental Requirement) - In a building with work areas involving over 50 percent of the aggregate floor area within the building, means of egress from the floor of the highest work area to the floor of exit discharge, and all intermediate floors, shall be provided with artificial emergency lighting within the exit enclosure in accordance with the requirements of the Building Code.

407.13 Exit Signs

407.13.1. **Signs Required** - Corridors and exits in all work area shall be provided with exit signs in accordance with the requirements of the Building Code.

407.14. Emergency Egress Windows - When the work being performed creates a bedroom below the third floor, at least one sleeping room window or exterior door shall:

1. Be operable;
2. Have a sill height of not more than 44 inches

3. Have a width of at least 20 inches, a height of at least 24 inches, and a minimum total area of 5.7 square feet measured from head to sill and side to side.
4. Windows are not required to meet these requirements in buildings where the sleeping room is provided with a door to a corridor having access to two remote exits or in buildings equipped throughout with an automatic fire suppression system. For dwelling units in basements, one of the two remote exits may be as per 3. above.

SECTION 408 - FIRE SAFETY.

408.1. General - Every building that does not conform to the construction requirements specified in this Appendix for the occupancy or use and that constitutes a distinct fire hazard as defined herein shall be provided with an approved automatic fire extinguishing system as determined appropriate by the Building Official. However, an automatic fire-extinguishing system shall not be used to substitute for, or act as an alternate to the required number of exits from any facility.

408.2. **When Applicable**- When the alteration work in the work area includes any of the work specified in Section 401.3.3 Significant Alteration**,** then the requirements of this Section shall apply throughout the work area; and supplemental requirements shall apply as specified.

408.3. Type Required - All work areas in any building or portion thereof that is required to have a fire-extinguishing system in accordance with the Building Code shall be provided with an automatic fire-suppression system.

EXCEPTION: In other than high-rise structures, where an automatic water supply for sprinkler protection is not available at that floor level, the Building Officials shall be permitted to accept alternative protection

408.4. (Supplemental Requirements)

408.4.1. Entire Floor To Be Covered - Where the work area on any floor exceeds 50 percent of that floor area, Section 408.3 shall apply to the entire floor.

EXCEPTION: In other than high-rise structures, where an automatic water supply for sprinkler protection is not available at that floor level, the Building Official shall be permitted to accept alternative protection.

408.4.2. **Other Covered Areas** - In a building with work areas involving over 50 percent of the aggregate building area, Section. 408.3 shall apply to the highest floor containing a work area and all floors below.

408.5. Mixed Use - In buildings containing mixed uses, one or more of which requires automatic suppression in accordance with Sections 408.3 or 408.4, suppression will not be required throughout the building, provided that the uses requiring suppression are separated from those not requiring suppression by fire resistive construction having a minimum two-hour rating for Use Group H, and a minimum one-hour rating for all use groups other than Use Group H.

408.6. Supervision - Fire suppression systems required by this Section shall be supervised by an approved central station system in accordance with NFPA 72.

408.7. Stand Pipes - Any work areas in a building that is required to be provided with a standpipe system by the Building Code shall be provided with standpipes up to and including the highest work area floor. The standpipes shall be located and installed in accordance with the Building Code.

EXCEPTIONS:

1. No pump shall be required provided that the standpipes are capable of accepting delivery by fire department apparatus of a minimum of 250 gallons per minute at 65 psi to the topmost floor in buildings equipped throughout with an automatic sprinkler system or a minimum of 500 gallons per minute at 65 psi (448.2 kPa) to the topmost floor in all other buildings. Where the standpipe terminates below the topmost floor, the standpipe shall be designed to meet these requirements (gallons per minute/psi) for possible future extension of the standpipe.

2. In other than high rise buildings, the interconnection of multiple standpipe risers shall not be required.

SECTION 409 -FIRE ALARMS

409.1. When Required - When the alteration work in the work area includes any of the work specified in Section 401.4.3 Significant Alteration, then the requirements of this Section shall apply throughout the work area, and supplemental requirements shall app1y as specified.

EXCEPTION: The fire alarm system shall generate an evacuation signa1 throughout the facility meeting the requirements of the *American Standard Evacuation Signal* or *The Emergency Voice Evacuation Signal* throughout the facility as specified by NFPA Standard 72.

409.2. Smoke Detectors

409.2.1. When Required - In Use GroupR-2, individual guestrooms and individual dwelling units in any work area, shall be provided with smoke detectors complying with the Building Code

409.3. Manual Fire Alarm Systems.

409.3.1. When Required By Floor - Where the work area on any floor exceeds 50 percent of that floor area and the work area is in a building that is required to have a manual fire alarm system in accordance with the Building Code, a manual fire alarm system shall be provided on the floor. Alarm-indicating appliances shall be provided on the floor and shall be automatically activated as required by the Building Code for all new and existing initiating devices.

409.3.2. When Required In A Building- Where the work area involves over 50 percent of the aggregate building area and the work area is in a building that is required to have a manual fire alarm system in accordance with the Building Code, a manual fire alarm system, shall be provided throughout the building in accordance with the Building Code.

409.4. Automatic Fire Detection Systems.

409.4.1. When Required By Work Area - Where the work area is in a building that is required to have an automatic fire detection system in accordance with the Building Code, an automatic fire detection system shall be installed in the work area. Existing alarm-indicating appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-indicating appliances within the work area shall be provided and automatically, activated.

409.4.2. When Required For Floor - Where the work area on any floor exceeds 50 percent of that floor area and the work area is in a building that is required to have an automatic fire detection system in accordance with the Building Code, an automatic fire detection system shall be installed throughout the floor: Alarm-indicating appliances shall be automatically activated throughout the building.

EXCEPTION:
1. Where the building is not equipped with a fire alarm system; alarm indicating appliances on the floor shall be provided and automatically activated

409.4.3. When Required In A Building - Where the work area involves over 50 percent of the aggregate building area, and the building is required to have an automatic fire detection system in accordance with the Building Code, an automatic fire detection system shall be provided throughout the building in accordance with the Building Code.

409.5. Elevator Devices - When the work area exceeds 50 percent of the gross enclosed floor area of the building, all elevator devices serving any part of the work area shall comply with the requirements of Chapter 30 of the Building Code.

SECTION 410 – BOILER/FURNACE EQUIPMENT ROOMS

410.1. When Applicable - When the alteration work in the work area includes any of the work specified in Section 401.4.3, Significant Alteration, then the requirements of this Section shall apply as specified.

410.2. One-Hour Fire Rated Construction Required - Boiler/furnace equipment rooms shall be enclosed by one-hour fire rated construction when the work area is in any of the following facilities: group homes, transitional living homes, rooming and boarding houses and multiple dwellings.

EXCEPTIONS:

1. Furnace and boiler: equipment of low pressure type (operating at pressure of 15 psig or less for steam equipment or 160 psig or less for hot water equipment), when installed in accordance with manufacturer recommendations is not required to be enclosed

2. Furnace rooms protected with automatic' sprinkler protection

SECTION 411 - ACCESSIBILITY

411.1. Standard Adopted - When alteration work defined in Section 401.4.2 Limited Alteration and Section 401.4.3 Significant Alteration is performed, the work shall comply with the A.117.1 ANSI 2009 Edition

SECTION 5

PLUMBING, MECHANICAL, ELECTRICAL AND OTHER SYSTEM REQUIREMENTS

501.1. Structural Strength. -The work shall cause no diminution of structural strength.

501.1.1. Hazardous Materials - Materials no longer permitted, such as asbestos and lead based paints shall not be used

502 PLUMBING

502.1. General - Leaking drain or supply lines shall be repaired or replaced. All unsafe conditions shall be corrected. Any cross-connections or siphonage between fixtures shall be corrected.
When the alteration work in the work area includes any of the work specified in Section 40l.4.2 and the work area is more than 50 percent of the gross floor area as defined in Section 1002 of the Building Code, and the occupant load will be increased by at least 20 percent as a result of the alteration, plumbing fixtures shal1 be provided based on the increased occupant load in the work area in quantities and locations specified in the Plumbing Code based on the increased occupant load.

502.2. Water Closets And Plumbing Fixtures - When any water c1oset or other plumbing fixture is replaced, the replacement water closet or fixture shall comply with all applicable regulations governing water conservation.

502.3. Prohibited Materials And Supplies - The following plumbing materials and supplies shall not be used**:**

502.3.1. General.

1. All purpose solvent cement,
2. Flexible traps and tailpieces,
3. Sheet and tubular copper and brass trap and tailpiece fittings less than B&S 17 gage 0.045 inch (1.143 mm); and solder having more than 0.2 percent lead in the repair of potable water systems

502.3.2. Joints.

1. Cement or concrete Joints
2. Mastic or hot pour bituminous joints;
3. Joints made with fittings not approved for the specific instillation under the Plumbing Code in: effect at the time of installation;
4. Joints between different diameter pipes made with elastomeric O-rings;
5. Solvent-cemented joints between different types of plastic pipe;
6. Saddle type fittings.

502.3.3. Traps.

1. Traps that depend on moving parts to maintain the seal;
2. Bell traps;
3. Crown-vented traps;
4. Traps that are not integral with a fixture and that depend on interior partitions for the seal, except those traps constructed of approved material that is resistant to corrosion and degradation.

503 ELECTRICAL.

503.1. General - Except for the following requirements, existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material.

EXCEPTIONS:
1. Replacement electrical products shall comply with applicable Electrical Code requirements;

2. Replacement of electrical receptacles shall comply with the applicable requirements of the Electrical Code,

3. Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering, per applicable requirements of the Electrical Code.

4. For replacement of non-grounding-type receptacles with grounding-type receptacles, and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system, or to any accessible point on the grounding electrode conduct or, as allowed and described in applicable sections of the Electrical Code.

5. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor if all the applicable conditions of the Electrical Code are met.

503.2. Electrical Item In Good Repair - The electrical service, branch circuits, switches, receptacles, fixtures and

all other electrical wiring in every building or structure shall be in good repair. Broken, loosed frayed, inoperative, defective or missing devices shall be repaired or replaced. All unsafe conditions shall be corrected.

503.3. Conductor Requirements - Residential.

503.3.1. Type - Aluminum conductors shall be No.1/0 AWG or larger size. Smaller size aluminum conductors may be used for grounding conductors and for neutral conductors.

503.3.2. Minimum Size - Lighting circuits shall be permitted to be wired with No. 14 AWG wire and protected by 15-amp overcurrent protective device.

503.4. Electrical Equipment And Wiring. - Nonmetallic-sheathed cable shall be permitted to be used in one and two family dwellings and multifamily dwellings not exceeding one story in height. Wiring methods in commercial and industrial building shall be in accordance with the Electrical Code.

503.5. Alterations -The requirements of this subsection apply in any alteration work area.

503.5.1. New Installation And Equipment - All newly-installed electrical equipment and wiring relating to work done in any work area shall comply with the materials and methods requirements of the Electrical Code. Other existing wiring does not have to be changed if it met the Electrical Code in effect at the time of installation and has been maintained in a safe manner.

EXCEPTION: Electrical equipment and wiring in newly installed partitions and ceilings, shall comply with all applicable requirements of the Electrical Code.

503.5.2. Service Equipment And/Or Feeders In Use Groups R-2 - Service to, existing dwelling units in any work area shall be a minimum of 100 ampere, three-wire capacity, and service equipment shall be dead front, having no live parts exposed whereby accidental contact could be made. Type "S" fuses shall be, installed when fused equipment is used.

EXCEPTION: Existing service equipment of 60 ampere three-Wire capacity, and feeders of 30 ampere or larger, two- or three-wire capacity, shall be accepted if adequate for the, electrical load being served.

503.5. 3. Specific Requirements By Area - In Use Group R-2, when the work area includes any of the following areas within a dwelling unit, the following requirement shall apply:

1. All enclosed areas, other than closets, kitchens, basements, garages, hallways, laundry areas and bathrooms, shall have a minimum of two duplex receptacle outlets or one duplex receptacle outlet and one ceiling or wall type lighting outlet.
2. Kitchen areas shall have a minimum of two duplex receptacles outlets and a switch-controlled lighting outlet.
3. Laundry areas shall have a minimum of one duplex receptacle outlet located near the laundry equipment and installed on an independent circuit.
4. Ground fault circuit protection shall be provided on newly installed 125 volt, 15 and 20 ampere receptacle outlets installed in basements, kitchens, bathrooms, laundries and at outside locations, as required by the Electrical Code.
5. At least one switch-controlled lighting outlet shall be provided in every bathroom, hallway, stairway, attached garage and detached garage with electric power and to illuminate outdoor entrances.
6. At least one switch-controlled lighting outlet shall, be provided in utility rooms and basements where these spaces are used for storage or contain equipment requiring service.

503.6. Clearance Required - Clearance for electrical service equipment shall be provided in accordance with the Electrical Code

504 MECHANICAL.

504.1. When Required - Mechanical systems shall have any unsafe conditions corrected. The requirements of this subsection shall, apply when the alteration work in the work area includes any of the work specified in Section 401.4.2. Repairs.

504.2. Ventilation Required - All altered spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area shall be provided with either natural or mechanical ventilation.

504.2.1. Natural Ventilation - Natural ventilation shall comply with the requirements of the Building Code

504.2.2. New Mechanical Ventilation - Newly installed mechanical ventilation systems shall comply with the requirements of the Mechanical Code.

504.2.3. Existing Mechanical Ventilation-In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured or

extended shall provide not less than 5 cubic feet per minute (cfm) per person of outdoor air and not less than 15 cfm of ventilation air per person; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62-89.

504.2.4. Exhaust To Outside - All newly introduced devices, equipment or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms, and microbial contaminants in such quantities as to adversely affect or impair health, or cause discomfort to occupants, shall be provided with local exhaust terminating to the exterior of the building.

SECTION 505 – STRUCTURAL REQUIREMENTS

505.1. Applicability - The requirements of this section shall apply in any alteration work area**.**

505.2. Minimum Design Loads - The minimum design loads for the structure shall be the loads applicable at the time the building was constructed, provided that no dangerous condition is created. Structural elements which are uncovered during the course of the modification and which are found to be unsound or dangerous, shall comply with applicable requirements of the Building Code. Wood framing is permitted to use the design stress specified in the Building Code under which the building was constructed or other stress criteria approved by the Building Official.

SECTION 506 - OTHER SAFETY FEATURES

506.1. Communicating Attic Spaces - Where adjacent dwelling units have communicating space in the attic, a wall shall be constructed to provide a continuous one hour fire separation using construction materials consistent with the existing wall or complying with the requirements for new structures. All work shall be performed on the side of the wall of the dwelling unit that is undergoing reconstruction.

506.2. Fireblocking And Draftstopping - When the work being performed exposes the framing of any wall, floor, ceiling or roof, the exposed framing shall comply with the requirements for fireblocking and draftstopping in the Memphis and Shelby County Building Code.

506.3. Requirements For High-Rise Buildings - Any building or structure having one or more floors used for human occupancy located either more than six stories or more than 75 feet above the lowest level accessible to a fire department vehicle, shall comply with the following:

1. When the work area is one entire floor or more or when the work area is 20 percent or more of the occupied floor area served by a recirculating air or exhaust system, the recirculating air or exhaust system which serves the work area shall be equipped with approved smoke and heat detection devices installed in accordance with the Memphis and Shelby County Building Code. The devices shall stop the fans automatically and shall be of a manual reset type. Automatic fan shutdown is not required when the system is part of an approved smoke removal or smoke control system.

2. When the work area is one entire floor or more or when the work area is 20 percent or more of the occurred floor area of the building, all elevators in the building shall be equipped with the following emergency control devices: All automatic (nondesignated attendant) elevators having a travel distance of 25 feet or more above or below the designated level shall conform to ASME A17 .1-2007, Ru1e 211.3 through 211.8

Chapter 6
MINIMUM PROVISIONS FOR CHANGE OF USE AND OCCUPANCY TO R-2 USES

SECTION 601 - GENERAL

601.1. Change of Use and Occupancy. The occupancy c1assiftcation of existing buildings and structures may be changed to an R-2 use, provided the building or structure meets the requirements of this chapter and the requirements of Chapter 4 applied throughout the building for the new occupancy classification. Where no specific requirements are included herein, the building or structure shall comply with the Building Code.

Every change of occupancy classification shall require a new certificate of occupancy regardless of whether any alterations to the building are required by this code

EXCEPTIONS:

1. Any repairs and alterations work undertaken in connection with a change of character of use that does not involve a change of occupancy classification shall conform to the requirements of Chapters 4, and 6, respectively, for the applicable occupancy classification, and with 601.2 Special Use and Occupancy, and Sections 608 Plumbing Requirements, Section 609 Mechanical Requirements and Section 610 Electrical Requirements, if applicab1e.

2. Compliance with all the provisions of Chapter 4 is not required where the change of use complies with the requirements of Section 601.6 (Change to an equal or lower hazard classification).

3. Existing stairways shall not be required to comply with the requirements for a new stairway where the existing space and construction will not allow a reduction pitch or slope

601.2 Special Use And Occupancy.

601.2.1. Mixed R-2 And Special Uses- Where the character or use of part of an existing building is changed to R-2 and part is be changed to one of the following special use or occupancy categories as defined in the Building Code, the building shall comply with all of the applicable requirements of that chapter in the Building Code, except for item 3 that shall comply with Chapter 406 of the Building Code to the extent applicable, regardless of whether a change of occupancy classification is involved:

1. Covered mall buildings
2. Atriums,
3. Motor Vehicle Repair facilities
4. Aircraft Related Occupancies
5. Motion picture projection rooms,
6. Stages and platforms,
7. Special amusement buildings, and
8. Hazardous Materials

601.2.2. Underground Buildings - An underground building, as defined in the Building Code, in which there is a change of use shall comply with the requirements of the Building Code applicable to underground structures.

601.3. Partial Change of Occupancy Classification

601.3.1. General Requirement If No Fire Separation - Where a portion of an existing building is changed to a R-2 use, and that portion is not separated from the remainder of the building with fire separation assemblies having a fire-resistance rating as required in the Building Code for the separate occupancy classifications, or with approved compliance alternatives, the entire building shall comply with all the requirements of Chapter 4 applied throughout the building for the R-2 occupancy c1assification, and with the requirements of this chapter.

EXCEPTION: Compliance with all the provisions of Chapter 4 is not required when the change of use complies with the requirements of Section 601.6. (Change to an equal or lower hazard classification).

601.3.2. General Requirement If Fire Separation Present- Where a portion of an existing building is changed to a R-2 use classification and that portion is separated from the remainder of the building with fire separation assemblies having a fire-resistance rating as required in the Building Code for the separate occupancy classifications, or with approved compliance alternatives, the portion changed to a R-2 use shall comply with all the requirements of Chapter 4 for the new occupancy classification, and with the requirements of this Chapter.

EXCEPTION: Compliance with all the provisions of Chapter 4 is not required when the change of use complies with the requirements of Section 601.6. (Change to an equal or lower hazard classification).

601.4. Accessibility - Every building undergoing a change of occupancy shall comply with the accessibility requirements of the Building Code.

601.5. Hazard Category Classifications - The relative degree of hazard between different occupancy

classifications shall be as set forth in the Hazard Category Classifications Tables. These include Table 5-A Height and Area, Table 5 – B Life Safety and Exits, and Table 5-C Exposure of Exterior Walls.

601.5.1. Change From Lower or Equal Hazard Category to R-2 Use - An existing building or portion thereof which has an occupancy classification that is within the same hazard classification as R-2 or is a lower hazard occupancy classification category (higher number) may have its use changed to an R-2 occupancy classification, provided it complies with the provisions of Chapter 4, applied throughout the building or portion thereof in accordance with Section 601.3.2, with Sections 605.1 (Live Loads) and 605.2 (Vertical Loads on Roofs); and with Sections 606 (Handrails and Guards) and 607 (Health and Hygiene).

EXCEPTION: Compliance with all the provisions of Chapter 4 is not required where the change of use complies with the requirements of Section 601.6.

601.5.2. Change To A Higher Hazard Category - An existing building shall comply with all the applicable requirements of this chapter when a change in use will place it in a higher hazard category.

601.5.3. Change In All Categories Allowed. - An existing building may have its use changed to a higher hazard rating (lower number) in all three hazard category Classifications designated in Tables A, B, and C provided it complies with this chapter.

601.6. Change Of Use To An Equal Or Lower Hazard - A change of use to an occupancy classification within the same hazard classification category or to an occupancy classification in a lower hazard classification category (higher number) in the three hazard category classifications addressed by Tables A, B and C shall be permitted in an existing building or portion thereof, provided the provisions of this section are met.

601.6.1. Mandatory Requirements – The following requirements shall be met:

1. The capacity of the means of egress shall comply with the requirements of Section 403.2.2.
2. The interior finish of walls and ceilings shall comply with the requirements of Section 404. 3.
3. The high rise building requirements of Section 409 shall apply.
4. The boiler/furnace room requirements of Section 410 shall apply.

601.6.2. Specific Requirements - When the new use is classified as R-2, the following requirements shall be met throughout the building:

1. Corridor doors and transoms shall comply with the requirements of Section 407.7and 407.6, respectively
2. Fire suppression systems shall comply with the requirements of Section 408.
3. Fire alarm systems shall comply with the requirements of Section 409.

SECTION 602- FIRE AND LIFE SAFETY

602.1. Heights and Area

602.1.1. Increased Height And Area - Where a change of use is made to R-2 from a lower hazard category as shown in Table A Height and Area, the height and area of buildings and structures shall meet the limitations of Chapter 5 of the Building Code for the R-2 occupancy classification.

602.1.2. Decreased Or Equal Height And Area - When a change of use is made to R-2 from an equal or higher hazard category as shown in Table A Height and Area, the height and area of the existing building shall be deemed to be acceptable.

602.1.3. Fire Separation Assemblies - Fire separation assemblies in mixed-use buildings shall comply with the requirements for mixed occupancies in the Building Code

EXCEPTION: Where the fire-separation assemblies are required to have a one-hour fire resistance rating, existing wood lath and plaster in good condition or existing stud wall clad in ½ inch thick (12.7mm) gypsum wallboard shall be permitted.

602.2 Means of Egress

602.2.1. Change From Lower Life Safety and Exits Category - When a change of use is made to a R-2 use from a lower hazard category (higher number) as shown in Table B Life Safety and Exits, egress capacity, arrangement of the means of egress, and all elements of the means of egress, including but not limited to the exit access, exit discharge, occupant load, corridors, doors, enclosures, stairs and ramps, guards and handrails, means of egress doorways, fire escapes and exit lighting and signs, shall comply with the requirements of Chapter 10 of the Building Code

EXCEPTIONS:

1. Stairways shall be enclosed in compliance with applicable portions of Section 603.2

2. Existing stairways including handrails and guards complying with the requirements of Chapter 4 shall be permitted for continued use subject to approval of the building official.

3. Any stairway replacing an existing stairway within a space where because of exiting construction the, pitch or slope cannot be reduced, shall not be required to comply with the maximum riser height and minimum tread depth requirements

4. Existing corridor walls constructed of wood lath and plaster in good condition or ½ inch-thick (12.7mm) gypsum wallboard shall be permitted.

5. Existing corridor doorways, transoms and other corridor opening shall comply with the requirements in Sections 407.7, 407.5 and 407.6.

6. Existing dead end corridors shall comply with the requirements in Section 407.3.

7. An existing operable window with a clear opening area of at least 4 square feet and with minimum opening height and width of 22 inches and 20 inches respectively shall be accepted as an egress window.

602.2.2. Change from Higher Life Safety And Exits Category - When a change of use to R-2 is made from a higher hazard category as show in Table B Life Safety and Exits, existing elements of the means of egress shall comply with the requirements of Section 403 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the Building Code

EXCEPTIONS:

1. Any stairway· replacing an existing stairway within a space where, because of existing construction, the pitch or slope cannot be reduced, shall not be required to comply with the maximum riser height and minimum tread depth requirements.

2. Compliance with Section 403 is not required where the change of use complies with the requirements of Section 601.6.

602.2.3. Capacity Required - Egress capacity shall meet or exceed the occupant load as specified in Section 403 if the change of use to R-2 is from a higher hazard category when evaluated in accordance with Table B Life Safety and Exits.

SECTION 603 -ENCLOSURE OF VERTICAL SHAFTS

603.1. General - Vertical shafts are permitted to be designed to meet the requirements of atria as required by the Building Code or the requirements of this section.

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603.2. Stairways - Interior stairways shall be enclosed as required by the Building Code when a change of occupancy is made to R-2 use from a lower hazard group as shown in Table B Life Safety and Exits.

EXCEPTIONS:

1. An enclosure will not be required for openings serving only one adjacent floor and not connected with corridors or stairways serving other floors.

2. Unenclosed existing stairways that do not exceed four stories above grade need not be enclosed in a continuous vertical shaft if each story is separated from other stories by one-hour fire-resistive construction or approved wired glass set in steel frames and all exit corridors are sprinkled. The openings between the corridor and occupant space shall have at least one sprinkler head above the openings on the tenant side. The sprinkler system shall be permitted to be supplied from the domestic water supply system, provided the system is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements.

3. Existing penetrations of stairway enclosures are permitted if they are properly protected in accordance with the Building Code.

4. Every mechanical penetration if protected by fire/smoke dampers.

603.3. Other Vertical Shafts - Interior vertical shafts other than stairways, including but not limited to elevator hoistways and service and utility shafts, shall be enclosed as required by the Building Code when there is a change of use to the same or a higher hazard category in Table 5-B.

EXCEPTIONS:

1. Existing one-hour interior shaft enclosures shall be accepted where a higher rating is required.

2. Vertical openings, other than stairways, need not be enclosed if the entire building is provided with an approved automatic sprinkler system.

3. Where one-hour fire-resistive floor construction is required, vertical shafts need not be enclosed where floor penetration are fire stopped at every floor level.

603.3.1. Openings - All openings into existing vertical shaft enclosures shall be protected by fire assemblies having a fire protection rating of not less than one hour and shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector. All other openings shall be fire protected in an approved manner. Existing fusible link-type automatic door closing devices shall be permitted in all shafts except stairways if the fusible link rating does not exceed 135°f (75°C).

603.4. Separation of Occupancies - When a change of occupancy is made to a higher hazard group, as shown in Table 5-A, occupancy separations shall be provided as specified in the Building Code.

SECTION 604 - EXTERIOR WALL FIRE RESISTANCE RATINGS

604.1. Required Protection - When a change of use is made to R-2 from a lower hazard category as shown in Table 3-C Exposure to Exterior Walls, exterior walls shall have fire resistance and exterior opening protection as required in the Building Code. This provision shall not apply to walls at right angles to the wall in question.

604.2. No Hazard Change - When a change of use to R-2 is made from an equal hazard category, as shown in Table 5-C Exposure to Exterior Walls, existing exterior walls, including openings, shall be accepted

604.3. Opening Protection - Openings in exterior walls shall be protected as required by the Building Code.

EXCEPTIONS:

1. Protected openings shall not be required in buildings in Group R that do not exceed three stories in height and which have a fire separation distance of at least *3*-feet (914 mm).

2. Where exterior opening protection is required, an automatic sprinkler system throughout may be substituted for opening protection.

3. Exterior opening protection is not required when, the change of occupancy to R-2 is from an equal or higher hazard classification in accordance with Table 5-C Exposure to Exterior Walls.

SECTION 605 - STRUCTURAL SAFETY

605.1. Live Loads - Any existing structure in which the proposed new occupancy requires floor live loads equal to or less than required for the existing occupancy is permitted to be continued in use for the originally approved live loads, provided that the structure is not dangerous and is adequate for the proposed occupancy. If the approved live load is less than required by the Building Code, the areas designated for the reduced live load shall be posted with the approved load or shall be, structural1y strengthened to support the new load. Placards shall be of an approved design.

EXCEPTION: Analysis and test methods for evaluation of existing materials may use the methods specified in the code under which the building was constructed, or other standards approved by the building official.

605.2. Vertical Loads on Roofs - Buildings and structures shall comply with the roof load requirements of the Building Code for roof live load.

EXCEPTION: Existing roofs shall be permitted to be retained provided any dangerous or overloaded conditions are corrected and the roof dead load is not increased by use, reroofing or added equipment.

605.3 Earthquake Loads. - Existing buildings with a change in occupancy shall comply with the seismic provisions of 605.3.1 and 605.3.2.

605.3.1 Compliance With The Memphis And Shelby County Building Code -
When a *change of occupancy* results
in a structure being reclassified to a higher risk category, the structure shall conform to the seismic requirements for a new structure of the higher risk category.

EXCEPTIONS:

1. Specific seismic detailing requirements of Section 1613 of the *International Building Code* for a new structure shall not be required to be met where the seismic performance is shown to be equivalent to that of a new structure. A demonstration of equivalence shall consider the regularity, overstrength, redundancy and ductility of the structure.

2. When a change of use results in a structure being reclassified from Risk Category I or II to Risk Category III and the structure is located where the seismic coefficient, S_{DS}, is less than 0.33, compliance with the seismic requirements of Section 1613 of the *International Building Code* is not required.

605.4. Wind and Snow Loads - When a change of occupancy to R-2 results in an exiting building being assigned a higher wind load or snow load importance factor, in accordance with the Building Code, the building shall be strengthened to meet the Building Code wind load or snow road requirements, respective1y, for new buildings.

SECTION 606 - HANDRAILS AND GUARDS

606.1. Handrails - Existing stairways shall comply with the handrail requirements in Section 407.9

606.2. Guards - Existing guards shall comply with the guardrail requirements in Section 407.10.

SECTION 607 - HEALTH AND HYGIENE.

607.1. Light and Ventilation - Light and ventilation shall comply with the requirements of the Building Code for the new occupancy classification.

SECTION 608 - PLUMBING REQUIREMENTS

608.1. Improvements Required - When the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the Plumbing Code, the intent of the respective Plumbing Code provisions shall be complied with.

SECTION 609 - MECHANICAL REQUIREMENTS.

609.1. Improvements Required - Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to different kitchen exhaust requirements or to increased mechanical ventilation requirements in accordance with the Mechanical Code, the intent of the respective Mechanical Code provisions shall be complied with.

SECTION 610 - ELECTRICAL REQUIREMENTS.

610.1. Improvements Required - Where the occupancy of part of an existing building is changed to one of the following special occupancies in conjunction with the change to a R-2 use, the electrical wiring and equipment of the building or portion thereof that contains the proposed occupancy shall comply with the applicable requirements of the Electrical Code, regardless of whether a change of occupancy classification is involve:
1. Hazardous (classified) locations,
2. Commercial garages, repair or storage,
3. Aircraft hangars,
4. Gasoline dispensing and service stations,
5. Bulk storage plants,
6. Spray application, dipping and coating processes,
7. Health care facilities.
8. Places of assembly,
9. Theaters, audience areas of motion picture and television studios, and similar locations,
10. Motion picture and television studios, and similar locations,
11. Motion picture projection booths, and
12. Agricultural buildings.

610.2. Correct Dangerous Conditions - When the occupancy of an existing building or part of an existing building is changed, all dangerous conditions shall be corrected, without requiring that all other parts of the electrical system comply with the current Electrical Code.

610.3. Service Requirements - When the occupancy of an existing building or part of an existing building is changed to an R-2 use, electrical service shall be upgraded to meet the requirements of the Electrical Code for the new occupancy.

610.4. **Outlets Required** - When the occupancy of an existing building or part of an existing building is changed to an R-2 use, the number of electrical outlets shall comply with the Electrical Code for the new occupancy.

Table 5-A Hazard Categories and Classifications: Heights and Areas

Relative Hazard	Use Classification
1 (Highest Hazard)	H
2	A-1, A-2, A-3, A-4, I,R-1, R-2, R-4
3	E, F-1, S-1, M
4 (Lowest Hazard)	B, F-2, S-2, A-5, R-3,U

Table 5-B Hazard Categories and Classifications: Life Safety and Exits

Relative Hazard	Use Classification
1 (Highest Hazard)	H
2	A-1, A-2, A-3, A-4, I, R-1, R-2, R-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1
5 (Lowest Hazard)	F-2, S-2, U

Table 5-C Hazard Categories and Classifications: Exposure of Exterior Walls

Relative Hazard	Use Classification
1 (Highest Hazard)	H
2	F-1, M, S-1
3	A, B, E, I, R
4 (Lowest Hazard)	F-2, S-2, U