Climatic and Geographic Design Criteria

Ground Snow Load	Wind Speed[e] (mph)	Seismic Design Category[g]	Subject to Damage from				Winter Design Temp (°F)[f]	Ice Shield Under Layment Required[i]	Flood Hazard[h]	Air Freezing Index[j]	Mean Annual Temperature (°F)[k]
			Weathering[a]	Frost Line Depth[b]	Termite[c]	Decay[d]					
10 lb/ft^2	90	C	Moderate	13 Inches	Moderate to Heavy	Moderate to Severe	18	No	September 29, 2007	158	61.8

18. Amend "Section R301.2.2 Seismic provisions" by deleting it in its entirety and replacing it with the following

> **R301.2.2 Seismic provisions.** The seismic provisions of this code shall apply to buildings constructed in seismic Design Categories C, D_1 and D_2. All one and two family residential structures in Shelby County subject to this code shall be considered to be in a Category C zone.
>
> The weight and irregularity limitations of Section R301.2.2.2 shall apply to buildings in all Seismic Design Categories regulated by the provisions of this code. Buildings in Seismic Design Category C shall be constructed in accordance with the additional requirements of Section R301.2.2.3.

19. Sections R301.2.2.1 "Determination of seismic design category" and R301.2.2.1.1 Alternative determinations of seismic design category" shall be deleted in their entirety along with Table R301.2.2.1.1 and that section held in reserve so that when amended the code shall read as follows:

> **Section R301.2.2.1 – Reserved**

20. A new section is added as Section 301.2.2.3.4 and is entitled "Full exterior wood structural sheathing" and it shall read as follows:

> **Section R301.2.2.3.4 Full exterior wood structural sheathing.** One and two family houses shall be constructed with full exterior 7/16 inch (11mm) minimum wood structural sheathing as a method of compliance with seismic protection requirements. In parts of the structure that do not provide sufficient support from such sheathing, such as certain garage door openings, or when the owner wished to use such devices as a method of meeting seismic requirements engineered braced wall panels are also allowed.

21. A new section is added as Section R301.2.2.3.5 and is entitled "Exterior Wall Stud Spacing" and it shall read as follows:

Section R301.2.2.3.5 Exterior Wall Stud Spacing. When two by four (2X4) studs are installed as required by the code in exterior load bearing walls, they shall be placed on sixteen (16") centers and when two by six (2X6) studs are used for this purpose they may be installed on twenty four (24") centers.

Chapter 4 Foundations

22. Section R403.1.1 "Minimum size" is deleted in its entirety and replaced with the following:

R403.1.1 Minimum size. Minimum size for concrete and masonry footings shall be as set fourth in Table R403.1 and Figure R403.1 (1). The footing width, *W*, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. All footings shall be at least 10 inches (255mm) in thickness. Footing projections, *P*, shall be at lease 2 inches (51mm) and shall not exceed the thickness of the footing. The size of footing supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.2.1.

23. Section R403.1.4 "Minimum depth" is deleted in its entirety and replaced with the following language

R403.1.4 Minimum depth. All footings shall bear on undisturbed or properly compacted soils a minimum of 13 inches (330mm) below grade. When applicable the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.

24. Figure R403.1 (2) entitled "Permanent Wood Foundation Basement Wall Section" and Figure R403.1 (3) entitled "Permanent Wood Foundation Crawl Space Section" are deleted with no replacement provided.

25. Section R403.2 is deleted in its entirety and replaced with the following language

Section R403.2. Reserved

26. Section R404.2: is deleted in its entirety and replaced with the following language

Section R404.2 Reserved

27. Section R405.2 is deleted in its entirety and replaced with the following language

Section R405.2 Reserved

28. Section R406.3 is deleted in its entirety and replaced with the following language

Section R406.2 Reserved

Chapter 5 Floors

29. Section R504 is deleted in its entirety and replaced with the following language

Section R504 Reserved

Chapter 6 Wall Construction

30. A new section R601.3 entitles "Seismic Design Reference" is added and reads as follows:

> **R601.3 Seismic Design Reference.** In addition to the requirements in this chapter for wall construction, minimum elements for seismic protection are also contained in Section R301.2.2.3.5 entitled "Exterior Wall Stud Spacing".

31. Table R602.3.1 entitled "Maximum allowable length of wood wall studs exposed to wind speeds of 100 MPH or less in Seismic Design Categories A, B, C, D_1 [b c]" is amended by deleting the notation "2 x 4" in the box under the subheading of "On-center spacing (inches)" shown as "24" and for the row heading below "Supporting a roof only" that is designated as ">10" and inserting the notation "2 x 6" so that when amended this table shall read as below. No changes in the footnotes or diagrams for the table are made.

Table R602.3.1
MAXIMUM ALLOWABLE LENGTH OF WOOD WALL STUDS EXPOSED TO WIND SPEEDS OF 100 MPH OR LESS IN SEISMIC DESIGN CATEGORIES A, B, C, D_1 [b c]

Height (feet)	On-Center Spacing (inches)			
	24	16	12	8
Supporting a roof only				
>10	2 x 6	2 x 4	2 x 4	2 x 4
12	2 x 6	2 x 4	2 x 4	2 x 4
14	2 x 6	2 x 6	2 x 6	2 x 4
16	2 x 6	2 x 6	2 x 6	2 x 4
18	NA[a]	2 x 6	2 x 6	2 x 6
20	NA[a]	NA[a]	2 x 6	2 x 6
24	NA[a]	NA[a]	NA[a]	2 x 6
Supporting one floor and roof				
>10	2 x 6	2 x 6	2 x 4	2 x 4
12	2 x 6	2 x 6	2 x 6	2 x 4

14	2 x 6	2 x 6	2 x 6	2 x 6
16	NA[a]	2 x 6	2 x 6	2 x 6
18	NA[a]	2 x 6	2 x 6	2 x 6
20	NA[a]	NA[a]	2 x 6	2 x 6
24	NA[a]	NA[a]	NA[a]	2 x 6
Supporting two floors and roof				
>10	2 x 6	2 x 6	2 x 4	2 x 4
12	2 x 6	2 x 6	2 x 6	2 x 6
14	2 x 6	2 x 6	2 x 6	2 x 6
16	NA[a]	NA[a]	2 x 6	2 x 6
18	NA[a]	NA[a]	2 x 6	2 x 6
20	NA[a]	NA[a]	NA[a]	2 x 6
22	NA[a]	NA[a]	NA[a]	NA[a]
24	NA[a]	NA[a]	NA[a]	NA[a]

Chapter 7 Wall Covering

32. Section R702.4.3 entitled "Limitations" is deleted in its entirety and no replacement provided.

33. Section R703.2 entitled "Weather resistant sheathing paper" is amended by adding the phrase ", including TYVEK sheeting and painting of the exterior sheathing," after the words "weather-resistant material" in the first sentence so when amended it shall read:

> **Section R703.2 Weather resistant sheathing paper** Asphalt-saturated felt free from holes and breaks, weighing not less than 14 pounds per 100 square feet (0.683 mg/m^2) and complying with ASTM D 226 or other approved weather resistant material, including TYVEK sheeting and painting of the exterior sheathing, shall be applied over studs or sheathing of all exterior walls as required by Table 703.4. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51mm). Where joints occur, felt shall be lapped not less than 6 inches (152mm).

Chapter 8 Roof-Ceiling Construction
No Change

Chapter 9 Roof Assemblies
No Change

Chapter 10 Chimneys and Fireplaces
No Change

34. Delete Chapter 11 in its entirety and replace it with the following Sections:

Chapter 11 Energy efficiency

Section N1101 –General

N1101.1 Scope. This chapter sets forth the energy-efficiency related requirements for the design and construction of buildings regulated by this code.

Exception: Provided that they are separated by building envelope assemblies from the remainder of the building, portions of the building that do not enclose conditioned space shall be exempt from the building envelope provision, but shall comply with the provisions for building mechanical and service water heating systems.

N1101.2 Compliance for one and two family dwellings. Compliance for one and two family dwellings shall be demonstrated by meeting the requirements of the 2003 Edition of the International Code Council *Energy Conservation Code* for detached one and two family dwellings in Climate Zone 7b(h) as found in Chapters 2, 3, 4, 5, and 6.

N1101.3 Compliance for townhouses. Compliance for townhouses shall be demonstrated by meeting the requirements of the 2003 Edition of the International Code Council *Energy Conservation Code* for residential buildings of Group R-2 or townhouses in Climate Zone 7b(h)as found in Chapters 2, 3, 4, 5, and 6.

Part V-Mechanical

35. Delete CHAPTER 12 in its entity and replace it with the following:

CHAPTER 12 MECHANICAL ADMINISTRATION

Section M1201 General. The administration of the Mechanical Provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

36. Delete CHAPTER 13 in its entity and replace it with the following:

CHAPTER 13 GENERAL MECHANICAL SYSTEM REQUIREMENTS

Section M1301 General. The General Mechanical System Requirements Provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code

37. Delete CHAPTER 14 in its entity and replace it with the following:

CHAPTER 14 HEATING AND COOLING EQUIPMENT

Section M1401 General. The heating and cooling equipment provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

38. Delete CHAPTER 15 in its entity and replace it with the following:

Chapter 15 EXHAUST SYSTEMS

Section M1501 General. The exhaust system provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

39. Delete CHAPTER 16 in its entity and replace it with the following:

Chapter 16 DUCT SYSTEMS

Section M1601 General. The provisions of this code relating to the construction and operation of duct system shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

40. Delete Chapter 17 in its entirety and replace it with the following:

CHAPTER 17 COMBUSTION AIR

Section M1701 General. The provisions of this code relating to the construction and operation of combustion air shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

41. Delete Chapter 18 in its entirety and replace it with the following:

CHAPTER 18 CHIMNEYS AND VENTS

Section M1801 General. The provisions of this code relating to the construction and operation of chimneys and vents shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

42. Delete Chapter 19 in its entirety and replace it with the following:

CHAPTER 19 SPECIAL FUEL BURNING EQUIPMENT

Section M1101 General. The provisions of this code relating to the construction and operation of special fuel burning equipment shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

43. Delete Chapter 20 in its entirety and replace it with the following:

CHAPTER 20 BOILERS AND WATER HEATERS

Section M2001 General. The provisions of this code relating to the installation and operation of boilers and gas water heaters shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

44. Delete Chapter 21 in its entirety and replace it with the following:

CHAPTER 21 HYDRONIC PIPING

Section M2101 General. The provisions of this code related to the installation and operation of hydronic piping shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

45. Delete Chapter 22 in its entirety and replace it with the following:

CHAPTER 22 SPECIAL PIPING AND STORAGE SYSTEMS

Section M2201 General. The provisions of this code related to the installation and operation of special piping and storage systems shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

46. Delete Chapter 23 in its entirety and replace it with the following:

CHAPTER 23 SOLAR SYSTEM

Section M2301 General. The provisions of this code related to the installation and operation of Solar Energy Systems shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

Part VI – Fuel Gas

47. Delete Chapter 24 in its entirety and replace it with the following:

CHAPTER 24 FUEL GAS

Section G2401 General. The provisions of this code related to the installation and operation of Fuel Gas shall be determined by reference to the latest adopted Memphis and Shelby County Fuel Gas Code.

Part VII - Plumbing

48. Delete Chapter 25 in its entirety and replace it with the following:

CHAPTER 25 PLUMBING ADMINISTRATION

Section P2401 General. The provisions of this code related to the Plumbing Administration shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

49. Delete Chapter 26 in its entirety and replace it with the following:

CHAPTER 26 GENERAL PLUMBING REQUIREMENTS

Section P2601 General. The provisions of this code related to the General Plumbing Requirements shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

50. Delete Chapter 27 in its entirety and replace it with the following:

CHAPTER 27 PLUMBING FIXTURES

Section P2701 General. The provisions of this code related to the Plumbing Fixtures shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

51. Delete Chapter 28 in its entirety and replace it with the following:

CHAPTER 28 WATER HEATER

Section P2801 General. The installation and operation of electric water heaters shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing and Electrical Codes.

52. Delete Chapter 29 in its entirety and replace it with the following:

CHAPTER 29 WATER SUPPLY AND DISTRIBUTION

Section P2901 General. The provisions of this code related to the installation and operation of water supply and distribution systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

53. Delete Chapter 30 in its entirety and replace it with the following:

CHAPTER 30 SANITARY DRAINAGE

Section P3001 General. The provisions of this code related to the installation and operation of sanitary drainage systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

54. Delete Chapter 31 in its entirety and replace it with the following:

CHAPTER 31 VENTS

Section P3101 General. The provisions of this code related to the installation and operation of Vents systems and related devices attached to a plumbing system shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

55. Delete Chapter 32 in its entirety and replace it with the following:

CHAPTER 32 TRAPS

Section P3201 General. The provisions of this code related to the installation and operation of vents systems and related devices attached to plumbing systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

Part VII –Electrical

56. Delete Chapter 33 in its entirety and replace it with the following:

CHAPTER 33 GENERAL REQUIREMENTS

Section E3301 General. The provisions of this code related to the General Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

57. Delete Chapter 34 in its entirety and replace it with the following:

CHAPTER 34 ELECTRIC DEFINITIONS

Section E3401 Electric Definitions. The provisions of this code related to the Electric Definitions shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

58. Delete Chapter 35 in its entirety and replace it with the following:

CHAPTER 35 SERVICES

Section E3501 Services. The provisions of this code related to the electrical services shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

59. Delete Chapter 36 in its entirety and replace it with the following:

CHAPTER 36 BRANCH CIRCUIT AND FEEDER REQUIREMENTS

Section E3601 General. The provisions of this code related to Branch Circuit and Feeder Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

60. Delete Chapter 37 in its entirety and replace it with the following:

CHAPTER 37 WIRING METHODS

Section E3701 General. The provisions of this code related to the General Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

61. Delete Chapter 38 in its entirety and replace it with the following:

CHAPTER 38 POWER AND LIGHTING DISTRIBUTION

Section E3801 General. The provisions of this code related to Power and Lighting Distribution for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

62. Delete Chapter 39 in its entirety and replace it with the following:

CHAPTER 39 DEVICES AND LIGHTING FIXTURES