

# VILLAGE OF RIVERWOODS BUILDING REQUIREMENTS

Reference to  
RIVERWOODS ORDINANCE No. 01-04-13

1998	ILLINOIS STATE PLUMBING CODE
1995	C.A.B.O. 1 & 2 FAMILY DWELLING CODE
1999	B.O.C.A. BASIC BUILDING CODE
1999	NATIONAL ELECTRICAL CODE
1998	B.O.C.A. BASIC MECHANICAL CODE
1999	B.O.C.A. NATIONAL FIRE PREVENTION CODE
1996	B.O.C.A. PROPERTY MAINTENANCE CODE
1997	ILLINOIS ACCESSIBILITY CODE

## WEIGHT LIMITS

By Riverwoods Village Ordinance #88-8-15,  
Maximum weight limits on roads is **6 tons per axle**

- 1. SECT R-107: RIGHT TO APPEAL**  
All appeals from the Building Officer shall be made by the Board of Appeals.  
Riverwoods Ordinance 9-11-13 Board of Appeals.
- 2. SECT R-112: PREFABRICATED CONSTRUCTION:**  
***RIVERWOODS AMENDMENT:***  
Prefabricated Construction is not allowed in the Village of Riverwoods.
- 3. SECT R-202: DESIGN CRITERIA:**  
Provide minimum 30 pounds per square foot roof snow load. Floor loads  
minimum 40 pounds p.s.f. Attic storage areas minimum 20 pounds p.s.f.
- 4. SET R-203: LOCATION ON LOT:**  
The Riverwoods Zoning Ordinance regulates building setback requirements.

**5. SECT R-204: LIGHT AND VENTILATION:**

All habitable rooms shall be provided with aggregate glazing area of not less than eight percent of the floor area of such rooms. One-half of the required area of glazing shall be operable for ventilation.

Bathrooms and other similar rooms shall be provided with aggregate glazing area in windows of not less than three square feet, one-half must be operable.

Glazed areas may be omitted in rooms where mechanical ventilation system is provided capable of producing a change of air every thirty minutes. Bathrooms and other similar rooms shall provide a change of air every twelve minutes.

**6. SECT R-210: PRIVATE GARAGES:**

Provide a minimum 1-3/4" solid core wood door or equal between the house and garage area.

All walls and ceilings of an attached garage shall have a minimum one hour fire rating (5/8" Type X Drywall) or equal.

The garage floor level shall be a minimum six inches below the floor of the attached dwelling.

**7. SECT R-211: EXITS: RIVERWOODS AMENDMENT:**

Basement areas and sleeping rooms, must provide at least one operable window or exterior door approved for egress or rescue. The units must be operable from the inside to a full clear opening without use of tools.

Provide a minimum net clear opening of 5.7 square feet. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20". Windowsill heights shall be maximum 36" from the floor.

**8. SECT R-213: LANDINGS:**

A landing shall be provided on each side of an exit door. The floor or landing shall not be more than 1" lower than the threshold of the doorway. Landings shall be minimum 3' x 3' in size.

**9. SECT R-214: STAIRWAYS:**

Stairways shall not be less than 3 feet in clear width and provide a minimum clear headroom of 6'-8" measured from the stair nosings. Handrails may project maximum 3" into the required width of the stairway.

Spiral stairways and winders are permitted provided that the width of the tread is a minimum 9" wide at a point 12" from the narrow end of the stair and the narrow end is a minimum 6" wide.

Winders are permitted provided the minimum width of any tread is not less than 4" and the average width of any tread is minimum 9" wide.

Stairs shall be: Risers maximum 8" high, treads minimum 9" wide. All treads shall have a nosing of approximately one inch.

**10. SECT R-215: HANDRAILS AND GUARDRAILS:**

Handrails shall be minimum 30", maximum 34" high, measured from the stair nosings. Handrails shall be provided on at least one side of the stairways three risers high or more.

Open sides of stairs more than 30" high above the floor or grade shall have guardrails minimum 30" measured from the stair nosings.

Porches, balconies or raised floors located more than 30" above the floor or grade below shall have guardrails minimum 36" height.

Guardrails and handrails on open sides of stairways shall have intermediate rails or ornamental closures, which will not allow passage of an object 9" in diameter.

**11. ILLINOIS STATE PUBLIC ACT #85-143: SMOKE DETECTORS: SECT 3:**

(a) Every dwelling unit shall be equipped with at least one approved smoke detector in an operating condition within 10 feet of every room used for sleeping purposes. The detector shall be installed on the ceiling and at least 6 inches from any wall, or on a wall located between 4 and 6 inches from the ceiling.

(b) Every single-family residence shall have at least one approved smoke detector installed on every story of the dwelling unit, including basements but not including unoccupied attics. In dwelling units with split-levels, a smoke detector installed on the upper level shall suffice for the adjacent lower level if the lower level is less than one full story below the upper level; however, if there is an intervening door between the adjacent levels, a smoke detector shall be installed on each level.

(f) In the case of any dwelling unit that is newly constructed, reconstructed, or substantially remodeled after December 31, 1987, the requirements of this Section shall apply beginning on the first day of occupancy of the dwelling unit after such construction, reconstruction or substantial remodeling. The smoke detectors required in such dwelling unit shall be permanently wired into the structure's AC power line, and if more than one detector is required to be installed within the dwelling unit, the detectors shall be wired so that the actuation of one detector will actuate all the detectors in the dwelling.

**NOTE:** Riverwoods Amendment requires additional smoke detectors to be installed in basements or utility rooms near heating equipment.

**12. SECT R-302: MATERIALS:**

The ultimate compressive strength of concrete at 28 days shall be minimum 3000 pounds P.S.I.

**13. SECT R-304: FOUNDATION WALLS:**

Foundation walls shall extend at least 8" above finish grade.

**14. SECT R-305: WATERPROOFING:**

Drains shall be provided around foundation enclosing habitable or usable spaces located below grade and which are subjected to ground water conditions. Drains shall be located at or below the area to be protected and shall be discharged by mechanical means into an approved drainage system.

Provide a minimum of 2" of crushed rock under the drain tile and a minimum of 6" of crushed rock over the drain tile. Provide building paper over top of gravel.

**15. SECT R-306: DAMP PROOFING:**

Basements, habitable or useable areas located below grade shall be damp proofed.

**16. SECT R-307: COLUMNS:**

Column bases shall be protected against decay by use of approved decay resistant or treated wood or are located on piers projecting minimum 2" above finished floor and thereby separated from an approved impervious barrier.

- Wood columns shall be minimum 4" x 4"
- Steel columns shall be minimum 3" diameter.

All columns shall be properly anchored at both top and bottom

**17. SECT R-309: UNDER-FLOOR SPACE:**

Provide adequate heat or ventilation for all crawlspace areas. Provide access crawl hole minimum 18" x 24" for all crawlspace areas. Provide a minimum clear height of 36" from the underside of floor joists to the floor.

The under-floor grade shall be cleansed of vegetation and organic material, sealed with a vapor barrier and leveled with minimum 4" of granular fill or a darby finished concrete floor minimum 2" thick.

**18. SECT R-402: WOOD CONSTRUCTION:**

All conventional wood framing shall be constructed on 16" centers. Wood trusses may be spaced on 24" centers. Provide engineering certifications for all wood truss designs. Certification shall bear the design engineer's original signature and seal. For other than conventional designs, structural design calculations shall be submitted the same as truss certifications.

**19. ARTICLE 4: WALL CONSTRUCTION:**

Masonry construction shall comply with the requirements of Article Four.

**20. ARTICLE 5: WALL COVERING:**

In other than accessory structures, all exterior walls shall have minimum of \_" sheeting.

- 21. SECT R-702.3: ALLOWABLE SPANS:**  
Allowable spans for all floor joists, ceiling joists and rafters shall comply with the span tables listed in Appendix B.
- 22. ORDINANCE SECT 8-1-12”C”:**  
Provide minimum R-30 insulation value in all roof/ceiling areas and minimum R-13 insulation value in all exterior walls.
- 23. SECT R-705: VENTILATION:**  
Where determined necessary by the Building Official due to atmospheric or climatic conditions, enclosed attics and enclosed rafter spaces formed where ceilings are applied direct to the underside of roof rafters, shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. The net free ventilating area shall be not less than one one-hundred fiftieth (1/150) of the area of the space ventilated, except that the area may be one three-hundredth (1/300) provided at least fifty (50) percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least three (3) feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.
- 24. SECT 901.3: ROOFING COVERING MATERIALS:**  
At the end of the section, add a new sentence that reads , “ Ice and Water Shield are required on new houses and completely new re-roofs installed per manufacturers specifications.
- 25. SECT R-904: TERMINATION:**  
Chimneys shall extend at least 2’ above the highest point where they pass the roof of the building and at least 2’ higher than any portion of the building within 10’.
- 26. SECT R-913: CHIMNEY CLEARANCE:**  
Provide a minimum 2” clearance of combustible materials from the outside of the chimney.
- 27. SECT R-920: HEARTH EXTENSION:**  
Hearth extensions shall be of approved noncombustible material. Hearth extensions shall extend at least 16” in front of and at least 8” beyond each side of the fireplace opening. Where the fireplace opening is six sq. ft. or larger, the hearth extension shall extend at least 20” in front of and at least 12” beyond each side of the fireplace opening.
- 28. SECT R-921: FIREPLACE CLEARANCE:**  
Combustible framing shall not be placed within 2” of the outside face of masonry fireplaces and not less than 6” from the inside surface of the flue lining.

- 29. SECT R-922: FIREPLACE FIRE-STOPPING:**  
Properly fire-stop all spaces between masonry chimneys and fireplaces and combustible framing with noncombustible material to a depth of 1" at the bottom of such spaces.
- 30. SECT R-923: COMBUSTIBLE MATERIALS:**  
Woodwork and other combustible materials shall not be placed within 6" of a fireplace opening. Combustible material within 12" of a fireplace opening shall not project more than 1/8" for each 1" distance from such opening.
- 31. SECT R-924: FACTORY BUILT FIREPLACES:**  
Factory built fireplaces that consist of a fire chamber assembly, one or more chimney sections, a roof assembly and other parts as tested and listed as an assembly by a nationally recognized testing laboratory may be installed when complying with all of the following provisions:
1. The fire chamber assembly is installed to provide clearance to combustible materials not less than set forth in the manufacturers specs.
  2. The chimney sections are installed to provide clearance to combustible material not less than specified by the manufacturer and if the fireplace chimney extends through floors and ceilings, factory furnished fire-stops or fire-stop spacers shall be installed. Portions of chimneys that extend through rooms or closets are to be enclosed to avoid personal contact, contact of combustible materials and damage to the chimney.
  3. Hearth extensions shall not be less than 3/8" thick approved noncombustible material.
  4. Hearth extensions shall extend not less than 16" in front of and at least 8" beyond both sides of the fireplace opening.
- 32. CHAPTER 11: HEATING, VENTILATION AND COOLING EQUIPMENT:**  
Heat producing and comfort cooling appliances shall be approved by the building official for safe use or shall bear the label of an approved testing agency.
- 33. SECT M-1102: APPLIANCE CLEARANCE:**  
Appliances shall have clearances from combustible materials in accordance with tables No. 11-A and 11-B or in accordance with the manufacturers specifications.
- 34. SECT M-1106: APPLIANCE ACCESS:**  
Comfort heating appliances shall be accessible for inspection, service, repair and replacement without removing permanent construction. Not less than 30" working space and platform shall be provided in front of the appliance firebox opening of fuel burning appliances except unit and room heaters that must have a minimum of 18".
- 35. CHAPTER 12: COMBUSTION AIR:**  
All fuel burning equipment shall have a sufficient supply of air for fuel combustion, ventilation draft hood dilution.

36. **CHAPTER 13: WARM AIR FURNACE:**  
Fuel burning warm air furnaces shall be installed in compliance with chapter 13.
37. **CHAPTER 15: VENTING OF APPLIANCES:**  
All fuel burning comfort heating and comfort cooling appliances shall be vented to the outside. Venting system shall be installed in full compliance with Chapter 15.
38. **CHAPTER 16: DUCTS:**  
All ducts shall be installed in full compliance with Chapter 16.
39. **SECT M-1601: MATERIAL: *RIVERWOODS AMENDMENT:***  
All ducts shall be noncombustible material as per Riverwoods amendment.
40. **CHAPTERS 17&18: COMFORT COOLING:**  
Absorption units and absorption systems for Comfort Cooling and Comfort Heating: All Cooling systems and Absorption systems shall be installed in accordance with these chapters.
41. **CHAPTER 19: FUEL SUPPLY SYSTEMS:**  
All fuel supply systems shall be installed as per Chapter 19.
42. **SECT 230-79: RATING OF DISCONNECT:**  
Single-family Dwelling. A minimum 100 AMP rated three-wire electrical service.
43. **ARTICLE 110: REQUIREMENTS FOR ELECTRICAL INSTALLATIONS:**  
All electrical system installations shall comply with Article 110 requirements and Village of Riverwoods Amendments.
44. **ARTICLE 348: ELECTRICAL METALLIC TUBING:**  
Riverwoods requires that minimum E.M.T. conduit be used for wiring.
45. **SECT 210-8: GROUND FAULT PROTECTION FOR PERSONNEL:**  
GFI protection per NEC in kitchens, bathrooms, garages & outdoor locations.
46. **SECT 210-52: REQUIRED OUTLETS:**  
Provide electrical receptacle outlets maximum 12 ft. apart all around habitable rooms, including walls 2' wide or wider. In kitchen and dining room areas, outlets shall be installed at each counter space 12" or wider. The distance between each outlet must not exceed 4'. All counter top outlets must be GFI. Each counter space separated by other equipment shall be considered separate space. A minimum of one GFI outlet is to be installed in kitchens, bathrooms, outdoor locations, basements and garages.
47. **SECT 210.70: LIGHTING OUTLETS REQUIRED:**  
Provide a minimum of one wall switched lighting outlet in every habitable room, bathrooms, hallways, stairways, attached garages and outdoor locations. At least one lighting outlet shall be installed in an attic, under-floor space, utility room and basement where these spaces are used for storage or contain equipment-requiring service. The switch is to be located next to the opening to the space.

- 48. SECT 410-8: FIXTURES IN CLOTHES CLOSETS:**  
Provide recessed lighting fixtures or fluorescent light fixtures in all clothes closets where the storage is closer than 18" to the lighting fixture.
- 49. ARTICLE 680: SWIM. POOLS, FOUNTAINS, & SIMILAR INSTALLATIONS:**  
All swimming pools shall be installed as per this article for electrical systems and Village of Riverwoods Ordinance Sect 8-3-1.
- 50. SECT 680-40 & 680-41: HOT TUB, SPAS & HYDRO-MASSAGE BATHTUBS:**  
Provide electrical installation of spas, hot tubs and hydro-massage bathtubs as per Sect 680-40 or 680-41.
- 51. SECT 7-2A-3: WATER SERVICE MATERIALS:**  
The following materials shall be used:
- A. Type K tempered copper pipe, tubing ASTM-B-88-62 & B-251 (min. 3/4")
  - B. Service boxes shall be cast iron with plug type lid and interior slip box.
  - C. Foot pieces shall be utilized. (Mueller H-10391 or equivalent).
  - D. Corporation stops or curb stops shall be brass 150 PSI test pressure) with suitable outlets for copper connections. Curb stops shall be of the Minneapolis type with curb stop threaded into service box.
  - E. Water service lines 4" or larger may be of ductile iron pipe with current mortar lining ASA 21.51 class 52 (Min. Tensile Strength: 60,000 PSI minimum Yield Strength: 42,000 PSI; Minimum Elongation: 10% having any approved cast iron pipe jointing system) (4" or larger).
  - F. All fittings shall be high quality waterworks brass with AWWA standard threads.
  - G. Water service lines shall be min. 1" diameter.
- 52. SECT 7-2A-2: SANITARY SERVICE MATERIALS INCLUDING CLEANOUTS:**  
Approved sanitary sewer service materials shall be as follows:
- A. Cast iron pipe ASA A21.8 (or latest revision) having cement mortar lining ASA A21.4 and single rubber gasket joint ASA A 21.11 (or latest revision).
    - 1. Bell and spigot ASA A21.6 or ASA A21.8
    - 2. Mechanical ASA A21.11
    - 3. Flanged ASA B16.1 ANSI A21.15 Class 125
  - B. Cast iron Fittings shall be:
    - 1. Bell and spigot ASA A12.10 (12" and smaller)
    - 2. Mechanical joint ASA A21.10 and ASA A21.11
    - 3. Flanged ASA B16.1 and ASA 21.10 (12" and smaller)
      - a. Soil pipe-standard weight
      - b. Ductile iron pipe with cement mortar lining ASA 21.51 Class 52 (Min. tensile strength; 60,000 PSI; min. yield strength: 42,000 PSI; min. elongation: 10% having any approved cast iron pipe jointing system) (4" or larger)

- 53. TABLE P 404.1.3: WATER DISTRIBUTION PIPE:**  
Water piping shall be brass pipe, copper or copper alloy pipe, copper or copper alloy tubing. Type K (underground) Type L (above grade).
- 54. TABLE P 404.2.1: ABOVE GROUND DRAINAGE AND VENT PIPE:**  
Approved materials shall be cast iron, copper or copper alloy or P.V.C. schedule 40 or 80 pipe.
- 55. TABLE P. 404.2.2: UNDERGROUND BUILDING DRAINAGE & VENT PIPE:**  
All underground building sewer lines shall be min. standard weight cast iron with rubber gaskets or materials listed in note 51.
- 56. TITLE 7 CHAPTER 2:**  
All water and sewer service line installations shall comply with Title 7 Chapter 2, Riverwoods Village Ordinance. Copies of the Water and Sewer Installation Ordinance can be obtained at Riverwoods Village Office.
- 57. SECT P 804.1: BUILDING SUBDRAINS:**  
Building sanitary subdrains located below street grade shall be discharged into a gas-tight covered and vented sump from which the waste shall be lifted and discharged into the building gravity drainage system by automatic pumping equipment. No gravity systems are allowed.
- 58. SECT P-111.5.1:**  
Provide a minimum of a plan view of the plumbing system and a riser diagram showing the size of plumbing lines with the building plans for review.
- 59. SECT 9-2-7:**  
All private water wells and septic systems shall comply with the requirements of the Lake County Health Department. Well and Septic approvals from the Health Department shall be submitted with the Building Permit Application.