

Chapter 6 - BUILDING AND CONSTRUCTION REGULATIONS
ARTICLE III. ONE AND TWO-FAMILY DWELLINGS

Sec. 6-61. INTERNATIONAL RESIDENTIAL CODE ADOPTED:

There is hereby adopted by the Village the 2018 International Residential Code for one- and two-family dwellings, as hereinafter amended (hereinafter the "Residential Code"). At least one copy of the International Residential Code has been on file in the office of the village clerk for a period of at least thirty (30) days prior to the adoption of these provisions and now are and remain on file in the office of the Village Clerk, and the same are hereby adopted and incorporated as fully as if set out at length herein.

Sec. 6-62. APPLICABILITY

The 2018 International Residential Code shall apply to all single-family detached dwellings, two-family dwellings, and all buildings and structures accessory thereto that are expressly regulated by the International Residential Code.

SEC. 6-63. DELETIONS, ADDITIONS, AND MODIFICATIONS TO THE INTERNATIONAL RESIDENTIAL CODE:

The following sections and subsections of the 2018 International Residential Code are hereby added, amended, revised, and changed as follows:

1. **R101.1 Title. Amend to read as follows:**

Insert "the Village of Northbrook, Cook County, Illinois" for "[name of jurisdiction]".

2. **R101.2 Scope. Delete Exceptions 2, 3, 4 and 5 from the list.**

3. **R102.4.3 State Plumbing Code. Add a new subsection to read as follows:**

R102.4.3 Illinois State Plumbing Code. Whenever a reference is made to the International Plumbing Code or Chapters 25 through 33 of this Code, such reference shall be deemed to refer to the applicable section of the Illinois State Plumbing Code, as adopted by the Village of Northbrook.

4. **R102.4.4 Electrical Code. Add a new subsection to read as follows:**

R102.4.4 Electrical Code. Whenever a reference is made to Chapters 34 through 43 of this Code, such reference shall be deemed to refer to the applicable section of the National Electrical Code, as adopted by the Village of Northbrook.

5. **R103. Department of Building Safety.** Change only the title of this Section to delete reference to the Department of Building Safety and read as follows:

R103 Department of Development and Planning Services.

6. **R103.1 Creation of enforcement agency.** Delete the sentence in its entirety and replace it with the following.

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R103.1 Creation of enforcement agency. The building official shall be a member of the Department of Development and Planning Services, as established by the Northbrook Municipal Code.

7. **Subsection R104.10.1 Flood hazard areas.** Delete this subsection in its entirety.

8. **R105.2 Work exempt from permit.** Change only the title of this section from “Work exempt from permit” to read as follows:

R105.2. Work exempt from building permit.

9. **Subsection R105.3.1.1 Determination of substantially improved or substantially damaged existing buildings in flood hazard areas.** Delete this subsection in its entirety.

10. **R105.5 Expiration.** Delete this Subsection in its entirety and replace it with the following:

R105.5 Expiration and Time Extensions. Permits shall expire in accordance with the limits established in Sec. 6-6 of the Northbrook Municipal Code. Extensions may be granted for expired permits in accordance with the standards and procedures established in Sec. 6-6 of the Northbrook Municipal Code.

11. **R105.6 Suspension or Revocation.** Amend this subsection by changing the title and adding an additional sentence at the end, so the subsection reads as follows:

R105.6 Suspension, revocation or surrender. The building official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code. A permit may also be voluntarily surrendered in accordance with the standards and procedures of Sec. 6-7 of the Northbrook Municipal Code.

12. **R106.1 Submittal documents.** Delete the second sentence of this subsection so that the new subsection reads as follows:

R106.1 Submittal documents. Submittal documents consisting of construction documents, and other data shall be submitted in two or more sets with each application for a permit. Construction documents for all new one-family and two-family residences, additions and alterations shall be prepared by a design professional licensed with the State of Illinois. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

13. **Subsection 106.1.5 Cover sheet.** Add a new subsection to read as follows:

R106.1.5 Village Cover sheet. The building official may require that construction drawings include a Village of Northbrook Cover Sheet that includes standardized construction information. The building official shall prepare and update such cover sheets from time to time and make them available for use by design professionals.

14. **R109.1.3 Floodplain inspections.** Delete this subsection in its entirety and replace it with the following:

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R109.1.3 Floodplain inspections. For construction in flood hazard areas as established by Table R301.2(1), upon placement of the lowest floor, including basement, and prior to further vertical construction, the building official shall require submission of all documentation required in Section R322, and all applicable requirements of the Northbrook Zoning Code.

15. **R109.1.5.1 Fire-resistance-rated construction inspection.** Add a new sentence at the end of this subsection so it reads as follows:

R109.1.5.1 Fire-resistance-rated construction inspection. Where fire-resistance-rated construction is required between dwelling units or due to location on property, the building official shall require an inspection of such construction after all lathing and/or wallboard is in place, but before any plaster is applied, or before wallboard joints and fasteners are taped and finished. *In the event the fire-rated assembly is constructed in phases, the construction must allow the inspection that takes place to identify the layer of construction and its attachment.*

16. **R109.2 Inspection agencies.** Add a new second sentence to make the subsection read as follows:

R109.2 Inspection agencies. The building official is authorized to accept reports of approved agencies, provided such agencies satisfy the requirements as to qualifications and reliability. *Prefabricated construction will be permitted for structural framing only. A certificate of approval by an approved agency shall be furnished with all engineered systems.*

17. **R109.3.1 Condition of property and available equipment.** Add a new Subsection to read as follows:

R109.3.1 Condition of property and available equipment. It shall be the duty of the permit holder to ensure the property and structure being inspected is maintained in a safe and orderly condition during the course of the requested inspection. Furthermore, it shall be responsibility of the permit holder to ensure that ladders, hand tools and other equipment is readily available for the use of those performing inspections.

18. **R110.6 Additional requirements and standards for occupancy.** Add a new Subsection to read as follows:

R110.6 Additional requirements and standards for occupancy. In addition to the standards and procedures established in this Code, occupancies shall also be governed by the requirements of Sec. 6-12, Certificate of occupancy, of the Northbrook Municipal Code.

19. **Section R112 Board of Appeals.** Delete this Section in its entirety and replace it with a new Section R112 and Subsection R112.1 to read as follows:

R112 Appeals

R112.1 General. Appeals of decisions involving the building official and this Code shall be heard by the Architectural Control Commission in accordance with the procedures established in the Northbrook Municipal Code.

20. **Section R113.4 Violation Penalties.** Add a sentence at the end of this subsection to read as follows:

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R113.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law. Fees and fines associated with such violations shall be assessed in accordance with the Village of Northbrook Fee Schedule.

21. Table R301.2(1). Insert the following information into Table R301.2(1):

Climatic and Geographic Design Criteria	
Ground Snow Load	<u>30</u>
Wind Speed (mph)	<u>115 mph</u>
Topographic Effects	<u>No</u>
Special Wind Region	<u>Not Applicable</u>
Windborne Debris Zone	<u>Not Applicable</u>
Seismic Design Category	<u>A</u>
Subject Damage From Weathering	<u>Severe</u>
Subject to Damage From Frost line depth	<u>42 inches</u>
Subject to Damage From Termite	<u>Moderate to heavy</u>
Winter Design Temperature	<u>2 degrees</u>
Ice Shield Underlayment	<u>Yes</u>
Flood Hazard	<u>Yes. See Northbrook Zoning Code; Flood Hazard Overlay District</u>
Air Freezing Index	<u>2000</u>
Mean Annual Temperature	<u>50 degrees</u>
Manual J Design Criteria	
Elevation	<u>653</u>
Latitude	<u>42 degrees North</u>
Winter Heating	<u>4 degrees</u>
Summer Cooling	<u>89 degrees</u>
Altitude Correction Factor	<u>None</u>
Indoor Design Temperature	<u>70 degrees</u>
Design Temperature Cooling	<u>75 degrees</u>
Heating Temperature Difference	<u>66 degrees</u>
Cooling Temperature Difference	<u>14 degrees</u>
Wind Velocity Heating	<u>None</u>
Wind Velocity Cooling	<u>None</u>
Coincident Wet Bulb	<u>73 degrees</u>
Daily Range	<u>Medium</u>
Winter Humidity	<u>30%</u>
Summer Humidity	<u>50%</u>

22. R301.2.4 Floodplain Construction. Delete this subsection in its entirety.

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23. **Table R302.6 Dwelling/Garage separation.** Revise Table R302.6 to specify the material used for garages as specified below:

TABLE R302.6 DWELLING/GARAGE SEPARATION

SEPARATION	MATERIAL
From the residence and attics	<u>Not less than 5/8-inch Type X gypsum board or equivalent</u>
From all habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	<u>Not less than 5/8-inch Type X gypsum board or equivalent</u>
Garages located less than 3 feet from a dwelling unit on the same lot	<u>Not less than 5/8-inch Type X gypsum board or equivalent</u>

24. **R306 Sanitation.** Delete all of the language in the entire subsection and replace with the following:

R306 Sanitation. Refer to the Illinois Plumbing Code, as adopted by the Village of Northbrook.

25. **R310.2.3.3 Window well covers required.** Add a new Subsection to read as follows:

R310.2.3.3 Window well coverings required.

1. Sides. Any window well of dwelling facing the side lot line shall be protected by a window well cover designed to support a 200-pound load or have a 3-foot tall railing installed to prevent a falling hazard while still allowing the window to function as an escape.
2. Front and rear. Any window well located on the front of a dwelling, the side of a dwelling facing a street (corner side yard), or the rear of a dwelling that is located within thirty-six (36) inches of a finished walking surface shall be protected by a window well cover or a three-foot railing.
3. Waiver. The building official may waive the above requirements upon demonstration that the protection is unnecessary to prevent a hazardous condition.

26. **R313.1.1 Automatic Fire Sprinkler Systems. (Code Reference).** Amend Section to read as follows:

R313.1.1 Design and installation. Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with ~~Section P2904~~ or NFPA 13D.

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27. **R313.2 Automatic Fire Sprinkler Systems Required for Major Renovations.** Amend the exception in Section R313.2 to read as follows:

R313.2 One- and two-family dwellings automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings.

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system unless the amount of added habitable floor area (excluding basement area) exceeds 115 percent of the habitable floor area (excluding basement area) of the existing dwelling, in which case an automatic residential sprinkler system shall be required. Such permits shall be classified as Major Renovation Permits.

28. **R322.1.4 Establishing the design flood elevation.** Delete the subsection in its entirety.

29. **R322.1.5 Lowest floor.** Delete the subsection in its entirety.

30. **R322.1.9 Manufactured homes.** Delete the subsection in its entirety.

31. **R322.1.10 As-built elevation documentation.** Delete the subsection in its entirety.

32. **R322.2 Flood hazard areas (including A Zones).** Delete the subsection in its entirety.

33. **R322.3 Coastal high-hazard areas (including V Zones).** Delete the subsection in its entirety.

34. **R328 Private residence elevators.** Add a new Section R328 and associated subsections R328.1 and R328.2 to read as follows:

R328 Private residence elevators

R328.1 Machine/Control room: Private residences with elevators shall have a separate elevator machine or control room with the following minimum specifications:

- 1) The room shall have walls having a minimum one-hour fire rating.
- 2) The room shall have clear headroom of at least 84 inches.
- 3) The door shall be a minimum 36" wide by 80" tall and capable of being locked.
- 4) The main line disc switch shall be located on the lock side of the door and shall be fused and heavy duty.
- 5) The car light disconnect switch shall be located on the lock side of the door and shall be fused and heavy duty.
- 6) The light switch for the room shall be located on the lock side of the door.
- 7) The room shall be illuminated to a minimum level of 5 foot-candles.
- 8) The room shall have a 110V GFI Duplex outlet located below the light switch.
- 9) The room shall be equipped with a minimum 5lb ABC Fire Extinguisher, located on the lock side of the door.

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R328.2 Emergency light and alarm in car. Emergency lighting and an alarm with battery backup shall be installed in elevator cars per ASME A17.1 Section 2.14.7.1.3.

35. **R506.1 General.** Add a sentence at the end of the subsection to read as follows:

R506.1 General. Concrete slab-on-ground floors shall be designed and constructed in accordance with the provisions of this section or ACI 332. Floors shall be a minimum 3.5 inches (89 mm) thick (for expansive soils, see Section R403.1.8). The specified compressive strength of concrete shall be as set forth in Section R402.2. Install a 6"x 6" – 10/10 w.w.f. (welded wire fabric) mesh in all basements and attached garages.

36. **R506.2.2 Base.** Delete the exception in this subsection.

37. **M1601.1.1 Above Ground Duct Systems.** Delete system options "5" and "7" in this subsection, resulting in this subsection reading as follows:

M1601.1.1 Above-ground duct systems. Above-ground duct systems shall conform to the following:

- 1) Equipment connected to duct systems shall be designed to limit discharge air temperature to a maximum of 250°F (121°C).
- 2) Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated in Table M1601.1.1(1).
- 3) Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.
- 4) Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2). Galvanized steel shall conform to ASTM A 653. Metallic ducts shall be fabricated in accordance with SMACNA Duct Construction Standards Metal and Flexible.
- 5) Duct systems shall be constructed of materials having a flame spread index not greater than 200.
- 6) Volume dampers, equipment and other means of supply, return and exhaust air adjustment used in system balancing shall be provided with access.

38. **M1801.6 Direct-vent appliances.** Add a new second sentence to this subsection so it reads as follows:

39. M1801.6 Direct-vent appliances. Direct-vent appliances shall be installed in accordance with the manufacturer's installation instructions. When the termination of a vent system is required by this Code or the manufacturer's specifications to be above the average anticipated snow level shall be 24 inches.

40. **P2904: Dwelling Unit Sprinkler Systems.** Delete this Section in its entirety.

41. **Chapters 25 through 43.** Delete these Chapters in their entirety.

42. **Chapter 44 Referenced Standards.**

1) Delete International Plumbing Code (IPC).

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- 2) Add the Illinois State Plumbing Code, as adopted by the Village of Northbrook.
43. **Appendix A: Sizing and Capacities of Gas Piping.** Adopt this Appendix in its entirety.
44. **Appendix B: Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use with Type B Vents.** Adopt this Appendix in its entirety.
45. **Appendix C: Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems.** Adopt this Appendix in its entirety.
46. **Appendix D: Recommended Procedure for Safety Inspection of an Existing Appliance Installation.** Adopt this Appendix in its entirety.
47. **Appendix E: Manufactured Housing Used as Dwellings.** This Appendix is NOT adopted.
48. **Appendix F: Radon Control Methods.** Adopt this Appendix in its entirety. *(Commentary: 420 ILCS 52, “The Illinois Radon Resistant Construction Act”, requires that all new residential construction in this State shall include passive radon resistant construction.)*
49. **Appendix G: Piping Standards for Various Applications.** This Appendix is NOT adopted.
50. **Appendix H: Patio Covers.** Adopt this Appendix in its entirety.
51. **Appendix I: Private Sewage Disposal.** This Appendix is NOT adopted
52. **Appendix J: Existing Buildings and Structures.** Adopt this Appendix with the following modifications:
- 1) Delete Subsection AJ301.1.2 Plumbing materials and supplies in its entirety.
 - 2) Delete Subsection AJ301.2 Water closets in its entirety.
 - 3) Delete Subsection AJ301.3 Electrical in its entirety.
 - 4) Delete Subsection AJ501.5 Electrical equipment and wiring in its entirety.
53. **Appendix K: Sound Transmission.** Adopt this Appendix in its entirety.
54. **Appendix L: Permit Fees.** This Appendix is NOT Adopted
55. **Appendix M: Home Day Care – R-3 Occupancy.** This Appendix is NOT Adopted
56. **Appendix N: Venting Methods.** This Appendix is NOT Adopted
57. **Appendix O: Automatic Vehicular Gates.** Adopt this Appendix in its entirety.
58. **Appendix P: Sizing of Water Pipe Systems.** This Appendix is NOT Adopted
59. **Appendix Q: Tiny Houses.** This Appendix is NOT Adopted

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- 60. **Appendix R: Light Straw-Clay Construction.** This Appendix is NOT Adopted
- 61. **Appendix S: Strawbale Construction.** This Appendix is NOT Adopted
- 62. **Appendix T: Solar Ready Provisions – Detached One- and Two-Family Dwellings and Townhouses.** Adopt this Appendix in its entirety.

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