

Algonquin-Lake in the Hills Fire Protection District
Proposal for Adoption of Building and Fire Codes with Amendments
12/8/2008
Exhibit “A”

The International Building Code, 2006 edition, (“Building Code”) published by the International Code Council, Inc., Falls Church, Virginia, is hereby adopted by reference and made part of this Section, subject to the modifications set forth herein, and shall be applicable to the Algonquin-Lake in the Hills Fire Protection District.

In addition to those terms defined in Appendix A of this Code, any reference to Fire Code Official or Building Official shall mean the Fire Chief of Algonquin Algonquin-Lake in the Hills Fire Protection District or his/her designee; any reference to a specific chapter, other than Chapter, shall mean the applicable chapter in the applicable building code; and any reference to a code, other than Code, shall mean that particular building code of that section.

MODIFICATIONS TO THE BUILDING CODE

The Building Code shall be amended as follows:

1. Section 101.1, insert Algonquin-Lake in the Hills Fire Protection District
2. Section 106.3, Examination of documents, shall be amended to read as follows:

106.3 Examination of documents. The Fire Code Official shall examine or cause to be examined the fire protection shop drawings and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this Code and other pertinent laws or ordinances. The Fire Code Official may submit the fire protection shop drawings to a third-party plan review agency, chosen by the Fire Code Official. The property owner or owner’s agent shall be responsible for the reimbursement to the Algonquin-Lake in the Hills Fire Protection District of all fees associated with the review of documents by any third-party plan review agency and all fees shall be paid in full prior to the issuance of the permit.

3. Section 109.4, Inspection agencies, shall be amended to read as follows:

109.4 Inspection agencies. The Fire Code Official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability. The Fire Code Official is authorized to engage a third-party inspection agency for inspections of a technical nature. The property owner or the owner’s agent shall be responsible for the reimbursement to the Algonquin-Lake in the Hills Fire Protection District of all fees associated with inspections conducted by any third-party inspection agency and shall be paid in full prior to the issuance of a Certificate of Occupancy.

4. Section 112.1 shall be amended to read as follows:

112.1 General. In order to hear and decide appeals of order, decisions or determinations made by the Fire Code Official relative to the application and interpretation of this code, an appeal may be made to the Algonquin-Lake in the Hills Fire Protection District Board.

5. Table 508.2, Incidental Use Areas, shall be amended to add the following:

ROOM OR AREA	SEPARATION
Fire sprinkler valve room	2 hours
Fire pump room	2 hours

6. Section 902, Definitions, shall be amended to add the following definition:

HIGH-PILED COMBUSTIBLE STORAGE. As defined in Section 2302 of the International Fire Code.

7. Section [F] 903.2 shall be amended to read as follows:

[F] 903.2 Where required. An approved automatic sprinkler system shall be provided throughout all new buildings and structures regardless of Group or fire area and in locations described in the Section.

8. Section [F] 903.2.1 shall be amended to read as follows:

[F] 903.2.1. Group A. An automatic sprinkler system shall be provided for in Group A-1 occupancies.

9. Section [F] 903.2.1.1 shall be amended to read as follows:

[F] 903.2.1.1 Group A-1. An automatic sprinkler system shall be provided for in Group A-1 occupancies.

10. Section [F] 903.2.1.2 shall be amended to read as follows:

[F] 903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for in Group A-2 occupancies.

11. Section [F] 903.2.1.3 shall be amended to read as follows:

[F] 903.2.1.3 Group A-3. An automatic sprinkler system shall be provided for in Group A-3 occupancies.

Exception: Areas used exclusively as participant sports areas where the main floor area is

located at the same level as exit discharge of the main entrance and exit.

12. Section [F] 903.2.1.4 shall be amended to read as follows:

[F] 903.2.1.4 Group A-4. An automatic sprinkler system shall be provided for in Group A-4 occupancies.

Exception: Areas used exclusively as participant sports areas where the main floor is located at the same level as exit discharge of the main entrance and exit.

13. Section [F] 903.2.1.5 shall be amended to read as follows:

[F] 903.2.1.5 Group A-5. An automatic sprinkler system shall be provided in all Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and all other accessory use areas.

14. Section [F] 903.2.2 shall be amended to read as follows and the exception shall be deleted:

[F] 903.2.2 Group E. An automatic sprinkler system shall be provided in all Group E occupancies.

15. Section [F] 903.2.3 shall be amended to read as follows:

[F] 903.2.3 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy.

16. Section [F] 903.2.3.1 shall be amended to read as follows:

[F] 903.2.3.1 Woodworking operations. An automatic sprinkler system shall be provided throughout all Group F-1 occupancies that contain woodworking operations.

17. Section [F] 903.2.4.3 shall be amended to read as follows:

[F] 903.2.4.3 Pyroxylin plastics. An automatic sprinkler system shall be provided throughout buildings where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled.

18. Section [F] 903.2.6 shall be amended to read as follows:

[F] 903.2.6 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy.

19. Section [F] 903.2.8 shall be amended to read as follows:

[F] 903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout buildings containing a Group S-1 occupancy.

20. Section [F] 903.2.8.1 shall be amended to read as follows:

[F] 903.2.8.1 Repair garages. An automatic sprinkler system shall be provided throughout buildings used as repair garages in accordance with Section 406.

21. Section [F] 903.2.8.2 shall be amended to read as follows:

[F] 903.2.8.2 Bulk storage of tires. Buildings and structures used for the storage of tires shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1

22. Section [F] 903.2.91 shall be amended to read as follows:

[F] 903.2.9.1 Commercial parking garages. An automatic sprinkler system shall be provided throughout buildings used for the storage of commercial trucks or busses.

23. Section [F] 903.2.10.1 shall be amended to read as follows:

[F] 903.2.10.1 Stories and basements without openings. An automatic sprinkler system shall be installed throughout every story or basement of all buildings.

24. Section [F] 903.2.10.3, Buildings over 55 feet in height, delete exception 3.

25. Section 903 shall be amended to add the following section:

[F] 903.2.14 Group B. An automatic sprinkler system shall be provided throughout buildings containing a Group B occupancy.

26. Section 903 shall be amended to add the following section:

[F] 903.2.15 Group F-2. An automatic sprinkler system shall be provided throughout buildings containing a Group F-2 occupancy.

27. Section 903 shall be amended to add the following section:

[F] 903.2.16 Group U. An automatic sprinkler system shall be provided throughout buildings containing a Group U occupancy.

Exception: Structures regulated by the International Residential Code in accordance with Section 101.2.

28. Section [F] 903.3.1.1, Exempt locations, delete 2, 3 and 4.

29. Section [F] 903.3.5, Water supplies, shall be amended to read as follows:

[F] 903.5 Water Supplies. Water supplies for automatic sprinkler systems shall comply with this Section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of the Illinois Plumbing Code and Chapter 6B of this Code. A minimum 10 pounds per square inch safety factor shall be provided in the fire protection system hydraulic calculations. The system demand shall be a minimum of 10 pounds per square inch below the seasonal low water flow test supply. Hydrant water flow data used for the design of any sprinkler system shall be no more than 1 year old. Water flow tests shall be witnessed by the fire department.

30. Section [F] 903.3.6, Hose threads, shall be amended to add the following sections:

[F] 903.3.6.1 Algonquin–Lake in the Hills Fire Protection District. The fire department connection on buildings constructed within the Algonquin-Lake in the Hills Fire Protection District shall be based on the fire protection system demand as follows:

1. Less than 400 GPM: One 2.5-inch x 2.5-inch x 4-inch NST double-clappered Siamese connection with metal caps.
2. 400–999 GPM: One 4-inch locking Storz FDC with 30 degree elbow and cap.
3. Greater than 1000 GPM: Two 4-inch locking Storz FDC's with 30 degree elbow and caps. The FDC's shall be remotely located on the building.

[F] 903.3.7 Fire Department Connections. Fire department connections shall be visible and unobstructed on a street front, parking lot, fire lane or other accessible location approved by the appropriate Building Official and appropriate fire protection district. A fire hydrant shall be located within 100 feet of fire department connections. A blue weatherproof 75-candela exterior strobe light shall be installed on the exterior of the building above each fire department connection and shall be activated by water flow only.

31. Section 903 shall be amended to add the following section:

[F] 903.3.8 Fire pump test header. An outside test header shall be provided on all fire pump installations. An OS&Y control valve with a tamper switch shall be provided on all fire pump test headers.

32. Section 903 shall be amended to add the following section:

[F] 903.3.9 Riser check valve. Provide a check valve in each sprinkler riser.

33. Section 903 shall be amended to add the following section:

[F] 903.3.10 Hydraulic placard information. A reproduction of each hydraulic placard shall be included on the design drawings near the corresponding hydraulically calculated area.

34. Section 903 shall be amended to add the following section:

[F] 903.3.11 Sprinkler room access. Where fire sprinkler risers or fire pumps are located in a separate room, a minimum of a 36-inch side-swinging door complying with Section 715.4 shall be installed to provide direct access into the room from inside and outside of the building. Where the fire sprinkler risers are not located in a separate room, a minimum of a 36-inch side-swinging door complying with Section 715.4 shall be installed in an exterior wall, in an approved location, to provide access to the vicinity of the sprinkler risers from the outside of the building. A sign shall be provided on the exterior of the door(s) with minimum 4-inch high non-script letters stating, “SPRINKLER CONTROL VALVES” and/or “FIRE PUMP ROOM,” as applicable.

35. Section 903 shall be amended to add a new section that will read as follows:

[F] 903.3.12 Thinwall pipe. The use of XL thinwall sprinkler pipe shall not be permitted.

36. Section [F] 903.4, Sprinkler system monitoring and alarms, shall be amended to read as follows:

[F] 903.4 Sprinkler system monitoring and alarms. All valves, controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches shall be electrically supervised by the building fire alarm system.

Exceptions: No change

37. Section [F] 903.4.1, Signals, shall be amended to add to read as follows:

[F] Section 903.4.1 Signals. Alarm, supervisory and trouble signals shall be distinctly different and automatically transmitted by radio remote equipment connections to the fire protection district communication/dispatch center SEECOM.

[F] Section 903.4.1.1 Signal Equipment. Per Ordinance No. 2005-03, dated August 18, 2005, of the Algonquin - Lake in the Hills, Fire Protection District (“ALFPD”), all fire alarm and detection systems required in Table 1.2 shall be supervised by a direct connection to the Algonquin - Lake in the Hills, Fire Protection District which operates a remote supervising station at 1020 W. Algonquin Road, Lake in the Hills, IL.

38. Section [F] 903.4.2 shall be amended to read as follows:

[F] 903.4.2 Alarms. A fire alarm shall monitor all automatic sprinkler systems. Approved audible and visual devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Actuation of the automatic sprinkler system shall actuate the building fire alarm system flow alarm, 24 vdc Blue colored strobe and water flow indicating appliances through the fire protection district direct connection. Visual alarm devices shall be arranged so the flashing light beam can be seen at the required level of intensity from all common use areas. Visual alarm appliances shall be provided as directed in Section [F] 907.9.1 and in restrooms. Audible alarms shall be arranged so the alarm can be heard in all areas of the building, as directed in Section [F] 907.9.2.

39. Section [F] 903.4.3 shall be amended to read as follows:

[F] 903.4.3 Floor control valves. Approved, supervised indicating floor control valves with water flow switches shall be provided at the point of connection to the riser on each floor in multiple story buildings, including all floor levels below grade.

40. Section [F] 903 shall be amended to add the following section:

[F] 903.6. Yard Hydrants. Fire hydrants shall be provided around the perimeter of a building in 300 foot increments.

41. Section [F] 905.3 shall be amended to read as follows:

[F] 905.3. Required installations. Class I standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.7 and in locations indicated in Sections 905.4. Standpipe systems are permitted to be combined with automatic sprinkler systems unless otherwise noted.

Exception: Standpipe systems are not required in buildings and structures regulated by the International Residential Code in accordance with Section 101.2, Exception 1.

42. Section [F] 905.3.1 shall be amended to read as follows:

[F] 905.3.1 Building height and area. Class I standpipe systems shall be installed throughout all buildings and portions of buildings:

1. With more than 2 stories above the lowest level of fire department vehicle access.
2. With more than 2 stories below the highest level of fire department vehicle access.

3. Where there is a floor level located more than 30 feet above the lowest level of fire department vehicle access, including mezzanines.
 4. Where there is a floor level located more than 30 feet below the highest level of fire department vehicle access, including mezzanines.
 5. Where any portion of the building floor area, including mezzanines, is more than 400 feet of travel from the nearest point of fire department vehicle access.
43. Section [F] 905.3 shall be amended to add the following section:
- [F] 905.3.8 High-piled combustible storage.** Buildings or portions of buildings with high-piled combustible storage shall be equipped with a Class I automatic wet standpipe system. Standpipe hose connections shall be located in high-piled combustible storage areas where storage exceeds 12 feet in height. Hose connections shall be located at each door to the high-piled combustible storage area. Where the travel distance between hose connections exceeds 200 feet, the Building Official is authorized to require additional hose connections be provided in approved locations. The standpipe system shall be:
1. A separate riser piping system.
 2. Hydraulically calculated for a minimum of 250 gallons per minute at 75 pounds per square inch to the most hydraulically remote fire hose valve.
 3. Where system pressures exceed 100 pounds per square inch, a reduced pressure field-adjustable type hose valve shall be provided.
44. Section [F] 905.4 shall be amended to add the following to the list of locations of Class I standpipe hose connections:
7. In Group A-1 and A-2 occupancies with occupant loads of more than 1,000, hose connections shall be located on each side of any stage, on each side of the rear of the auditorium, on each side of the balcony and on each tier of dressing rooms.
45. Section [F] 905.4 shall be amended to add the following section:
- [F] 905.4.3 Hose connection threads.** Each Class I standpipe hose connection shall be equipped with a 2.5-inch NST male hose valve, with a removable 2.5-inch female to 1.5-inch male adapter, which shall be permanently chained to the hose connection.
46. Section [F] 905.5, Locations of Class II standpipe hose connections, shall be deleted in its entirety.
47. Section [F] 905.6, Locations of Class III standpipe hose connections, shall be deleted in its

entirety.

48. Section [F] 907.1.2, Equipment, shall be amended to read as follows:

[F] 907.1.2. Equipment. All fire alarm systems shall be of the addressable type. Systems and their components shall be listed and approved for the purpose for which they are installed.

49. Section [F] 907.2, Where required, shall be amended to read as follows:

[F] 907.2 Where required. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in accordance with Section 907.2.1 through 907.2.23, as amended, and provide occupant notification in accordance with Section 907.9. An approved manual fire alarm system shall be provided in all Groups. An approved automatic fire detection system installed in accordance with NFPA 72 shall be provided in all non-sprinklered Groups. Where automatic sprinkler protection, installed in accordance with Section 903.1.1 or 903.1.2, is provided and connected to the building fire alarm system, automatic heat detection required by this Section shall not be required. Devices, combinations of devices, appliances and equipment shall comply with Section 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to activate a smoke detector. All fire alarm control panels of full function annunciator panels shall be installed within 10 feet of the main entrance or in a location approved by the fire protection district.

Exception: Buildings and structures regulated by the International Residential Code in accordance with Section 101.2, Exception 1.

50. Section [F] 907.2.1, Group A, delete the exception.

51. Section [F] 907.2.2, Group B, delete the exception.

52. Section [F] 907.2.3, Group E, delete exception 2.

53. Section [F] 907.2.4, Group F, delete the exception.

54. Section [F] 907.2.5, Group H, shall be amended to read as follows:

[F] 907.2.5 Group H. A manual fire alarm system shall be installed in accordance with NFPA 72 in all Group H occupancies. An automatic fire detection system shall be installed in accordance with NFPA 72 in all incidental use areas, all accessory use areas and any non-sprinklered room or area in a Group H occupancy in compliance with Section 903.3.1.1.1, Exception 1.

III. Section [F] 907.2.7, Group M, delete exception 2.

55. Section [F] 907.2.8.1, Manual fire alarm system, shall be amended to read as follows:

[F] 907.2.8.1 Manual fire alarm system. A manual fire alarm system shall be installed in accordance with NFPA 72 in all Group R-1 occupancies.

Delete Exceptions 1 and 2.

56. Section [F] 907.2.8.2, Automatic fire alarm system, shall be amended to read as follows:

[F] 907.2.8.2 Automatic fire alarm system. An automatic fire alarm system shall be installed in accordance with NFPA 72 in all Group R-1 interior common areas.

Delete: Exception.

57. Section [F] 907.2.9, Group R-2, shall be amended to read as follows:

[F] 907.2.9 Group R-2. A manual fire alarm system shall be installed in accordance with NFPA 72 in all Group R-2 common areas. An automatic fire detection system shall be installed in accordance with NFPA 72 in all Group R-2 common areas.

Delete Exceptions 1, 2 and 3

58. Section [F] 907.2.12, High-rise buildings, all exceptions shall be deleted.

59. Section [F] 907.5, Wiring, substitute National Electrical Code in place of ICC Electrical Code.

60. Section [F] 907.9, Zones, shall be amended to read as follows:

[F] 907.9 Zones. Each floor shall be zoned separately and a zone shall not exceed 22,500 square feet. The length of any zone shall not exceed 300 feet in any direction. Multi-tenant buildings shall ring by tenant space.

61. Section [F] 907.9.2, High-rise buildings, shall be amended to read as follows:

[F] 907.9.2 Zone by floor required. A separate zone by floor shall be provided for each of the following types of alarm-initiating devices where provided.

1. Manual fire alarm boxes
2. Heat detectors
3. Smoke detectors
4. Sprinkler water-flow switches

5. Other suppression systems
 6. Other fire detection devices
62. Section [F] 907.9.1.1, Public and common areas, shall be amended to read as follows:
- [F] 907.10.1.1 Public and common areas.** Visible alarm notification appliances shall be provided in public areas and common areas. A clear weatherproof 75-candela exterior strobe shall be installed on the exterior of all multi-tenant buildings over the main entrance to each tenant space, and shall be activated by the fire alarm devices within that tenant space only. A blue weatherproof 75-candela exterior strobe shall be installed on the exterior of the building above the fire department connection and shall be activated by water flow only.
63. Section [F] 907.14, Fire-extinguishing systems, shall be amended to read as follows:
- [F] 907.14 Fire-extinguishing systems.** Automatic fire-extinguishing systems shall be connected to the building fire alarm system.
64. Section 1006.3, Illumination emergency power, shall be amended to add an additional location for emergency illumination, which shall read as follows:
6. All rooms containing building fire sprinkler riser(s), fire pump(s) and fire alarm control panel(s) shall be provided with emergency lighting.
65. Section 1019.1, Minimum number of exits, shall be amended to add the following section:
- For the purposes of this Chapter, tenant spaces shall be provided with exits as required by Table 1015.1.
66. Section 1019.2, Buildings with one exit, shall be deleted in its entirety.
68. Chapter 29, Plumbing Systems and the Illinois State Plumbing Code shall govern the erection, installation, alterations, repairs, relocation, replacement, addition to, use or maintenance of plumbing equipment and systems. Plumbing systems and equipment shall be constructed, installed and maintained in accordance with the Illinois State Plumbing Code.
69. Chapter 35, add the following to the list of NFPA Standards:
- All standards listed in Chapter 45 of the International Fire Code.

INTERNATIONAL FIRE CODE/2006

The International Fire Code, 2006 edition, and appendices B, C, and D, (“Fire Code”), be and the

same are hereby adopted by reference and made a part of this Section, subject to modifications set forth herein, and shall be applicable to the Algonquin-Lake in the Hills Fire Protection District.

MODIFICATIONS TO THE FIRE CODE

The Fire Code shall be amended as follows:

1. For the purpose of this code, any Fire Code sections repeated within the International Building Code and modified therein shall also be considered modified accordingly within the Fire Code.
2. Section 101.1, insert Algonquin-Lake in the Hills Fire Protection District of Algonquin.
3. Section 108.1 shall be amended to read as follows:

108.1 Board of appeals established. In order to hear and decide appeals of order, decisions or determinations made by the fire code/building code official relative to the application and interpretation of this code, an appeal may be made to the Algonquin-Lake in the Hills Fire Protection District Board.

4. Section 108.3, Qualifications, shall be deleted in its entirety.
5. Section 301.1, Definitions, shall be amended to add the following definition:

Approved container. An outdoor fireplace, barbeque grill or pit not more than 36 inches in diameter designed to contain a recreational fire.

6. All required smoke detectors shall be 110-volt with battery-backup, interconnected and supplied by a general lighting circuit. Where smoke detectors are installed adjacent to unconditioned spaces, conduit shall be connected to the side of the junction box.
7. Article 700.12 IV shall be amended to add the following:

Emergency systems shall be properly identified.

8. Article 700.16 shall be amended to add the following:

Emergency lighting consisting of not less than 2 lamps shall be provided in all non-residential bathrooms, connected to the bathroom lighting circuit.

9. Article 760 shall be amended to add the following:

Accessible fire alarm cable, conduit and junction boxes shall be the color red in their entirety.

INTERNATIONAL EXISTING BUILDING CODE/2006

The International Existing Building Code, 2006 edition, (“Existing Building Code”) be and the same, is hereby adopted by reference and made part of the Section, subject to modifications set forth herein, and shall be applicable to the District.

MODIFICATIONS TO THE EXISTING BUILDING CODE

The Existing Building Code shall be amended as follows:

1. Section 101.1, insert Algonquin-Lake in the Hills Fire Protection District.

2. Section 101.2 shall be amended to read as follows:

101.2 Scope. The provisions of the Existing Building Code shall apply to the repair, alteration, change of occupancy, addition and relocation of existing, non-residential and mixed use occupancy buildings located within the Algonquin-Lake in the Hills Fire Protection District. New buildings or a building or portion of a building that has not been previously occupied or used for its intended purpose shall comply with the provisions of the Building Code for new construction. Repairs, alterations, change of occupancy, existing buildings to which additions are made, historic buildings and relocated buildings complying with the provisions of the Building Code, Mechanical Code, Plumbing Code, Electrical Code and Residential Code, as applicable, shall be considered in compliance with the provisions of the code.

3. Section 105.2, Work exempt from permit, delete: 1, 3, 4 and 5.

4. Section 112.1 shall be amended to read as follows:

112.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the Fire Code Official relative to the application and interpretation of this code, an appeal may be made to the Algonquin-Lake in the Hills Fire Protection District Board.

5. Section 112.3, Qualifications, shall be deleted in its entirety.

6. Section [ICC] 305.6, Electrical, shall be amended by inserting National Electrical Code in place of ICC Electrical Code.

7. Section [P] 305.9, Plumbing, shall be amended by inserting Illinois State Plumbing Code in

place of International Plumbing Code.

ILLINOIS ACCESSIBILITY CODE/1997

The Illinois Accessibility Code, effective date April 24, 1997, (71 Illinois Administrative Code 400) (“Accessibility Code”) be and the same, is hereby adopted by reference and made part of this Section and shall be applicable to the District. In the event of a conflict between the provisions of the Illinois Accessibility Code and the International Building Code, the most restrictive provisions shall apply.

PERMIT FEE SCHEDULE

- A. The building permit fee for the construction of new buildings, additions and interior build-outs, not including electrical, plumbing, mechanical or other fees required by this Section, shall be calculated at \$0.10 per square foot for all buildings except single family homes.

- B. Single family homes shall be reviewed at a fee of \$250.00