

Chapter 44
FIRE PREVENTION

Part 1
Fire Protection Site Plan Review Code

ARTICLE I
Purpose and Scope

- § 44-1. Purpose.
- § 44-2. Scope.
- § 44-3. Authority.

ARTICLE II
Definitions, Administration
and Enforcement

- § 44-4. Word usage; terms defined.
- § 44-5. Severability.
- § 44-6. Administration and interpretations.
- § 44-7. Enforcement.
- § 44-8. Penalties.
- § 44-9. Damage or injury liability.

ARTICLE III
General Requirements

- § 44-10. Means of access for Fire Department apparatus.
- § 44-11. Fire lanes.
- § 44-12. Parking lot lanes.
- § 44-13. Location of structures.
- § 44-14. Fire protection.
- § 44-15. Water supply. (See Appendix B.)
- § 44-16. Construction of structures.
- § 44-17. Fire protection during construction. (See Appendix B.)
- § 44-18. Plans.

ARTICLE IV
Referenced Publications

- § 44-19. Documents enumerated.
Appendix A
Appendix B

[HISTORY: Adopted by the Board of County Commissioners of Calvert County as indicated in Part histories. Amendments noted where applicable.]

GENERAL REFERENCES

Building construction — See Ch. 18.
Roads — See Ch. 104.

Street names and building numbers — See Ch. 126.

Part 1
Fire Protection Site Plan Review Code
[Adopted 12-22-1992 by Res. No. 45-92]

ARTICLE I
Purpose and Scope

§ 44-1. Purpose.

The purpose of this code is to consolidate into one document the necessary requirements for the prevention or minimizing of loss of lives and property that may result from fire in buildings which are a part of planned building groups. This document represents NFPA 1141 as amended for Calvert County.

§ 44-2. Scope.

- A. This code shall be effective for all plans approved after date of enactment and is intended to apply to all developments meeting the definition of planned building groups and may be used as guidance in other situations where a number of buildings are constructed in an area with limited access, water supply, or other distinguishing features that may be referred to in this code. This code is not intended to apply to mobile home or recreation vehicle parks.
- B. This code shall not be construed as prohibiting better construction or planning features which will materially improve fire protection, fire control, or fire prevention.
- C. The provisions of this code are intended to encourage the use of innovative alternatives which are deemed through inspection, tests, or other substantive means as meeting the intent of this code by the Department. These alternatives require monitoring by the Department to ensure the integrity of the provisions of this code.
- D. This code shall not be construed as altering any existing code, law or regulation which may require fire protection features not covered or alluded to in this code, nor shall it waive any requirements of any code, law or regulation. When any conflict exists between this code and any other applicable code, law, regulation or order, the provisions of the applicable code, law, regulation or order, which are more restrictive shall prevail.
- E. This code is not intended to set forth general fire prevention features or procedures, which may be covered in other codes or standards, nor shall it prohibit the common sense use of fire prevention measures.

§ 44-3. Authority.

This code is written by authority of Article 25, Section 11 of the Annotated Code of Maryland.

ARTICLE II
Definitions, Administration and Enforcement

§ 44-4. Word usage; terms defined.

A. Words defined in this code are intended for use only with the sections of this code. Definitions set forth in any document referenced by this code shall be the acceptable definitions for use of that document only. Words not specifically defined in this code or other referenced documents shall be interpreted as being the ordinary usage of the word as set forth in Webster's Third New International Dictionary of the English Language, Unabridged, as published by the G & C Merriam Company, Springfield, Massachusetts, in 1966.

B. As used in this Part 1, the following terms shall have the meanings indicated:

ALTERNATIVE — A system, condition, arrangement, material or equipment submitted to the Department as a substitute for a code requirement.

APPROVED — Acceptable to the Department.

AUTOMATIC FIRE EXTINGUISHING SYSTEM — Any system which is designed and installed to detect a fire and subsequently discharge an extinguishing agent without human activation or direction.

BASEMENT — A story with more than 50% of its cubic volume below grade.

CURB CUT — Reduced curb height to facilitate vehicle passage over or across a curb. Curb cut can be an abrupt reduction or may be a tapering reduction for the length of the curb on each side of the means of access.

DEPARTMENT — The organization, office or individual responsible for approving equipment, an installation or a procedure. In this case it would be the Department of Public Safety, Division of Fire-Rescue-EMS Life Safety and Fire Prevention Section.

DWELLING — A single unit providing complete and independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

EXISTING CONDITION — Any situation, circumstance, or physical makeup of any structure, premises or process which was ongoing or in effect prior to the adoption of this code.

FARM PROPERTIES — Those properties which are used primarily for agricultural purposes.

FIRE DEPARTMENT — The governmental, quasi-governmental or other organization, which is responsible for providing fire protection services to an area.

FIRE DOOR — A tested, listed or approved door and door assembly constructed and installed for the purpose of preventing the spread of fire through openings in walls, partitions, or other horizontal or vertical construction.

FIRE HAZARD — Any situation, process, material or condition which, on the basis of applicable data, may cause a fire or explosion or provide a ready fuel supply to augment the spread or intensity of the fire or explosion, and which poses a threat to life or the property of others.

FIRE HYDRANT — A valved connection on a piped water supply system having one or more outlets and which is used to supply hose and fire department pumpers with water.

FIRE LANE — The road or other passageway developed to allow the passage of fire apparatus.

FIRE OFFICIAL — An individual designated as the administrative head of the agency, bureau or division responsible for the administration and enforcement of the fire protection laws of the jurisdiction. For purposes of utilizing this code, this term shall also apply to any person designated as a representative of the fire official.

FIRE PROTECTION SYSTEM — Any fire alarm device or system or fire extinguishing device or system, or their combination, which is designed and installed for detecting, controlling, or extinguishing a fire or otherwise alerting occupants, or the Fire Department, or both, that a fire has occurred.

GRADE — The reference plane representing the average elevation of finished ground level adjoining the building at all exterior walls.

JURISDICTION — Any governmental unit or political division or subdivision, including, but not limited to: township, village, borough, parish, city, district or territory located within Calvert County, Maryland over which the governmental unit exercises power and authority.

MEANS OF ACCESS — The method or arrangement by which entry or approach is made to a building area by Fire Department apparatus.

PLANNED BUILDING GROUPS — One or more structures constructed on a parcel of land which is under the ownership, control or development by one individual, corporation, partnership or firm, excluding a single-family dwelling and farms.

PRIVATE BUILDING — Any building or that portion of a building, which is normally not frequented by, nor open to, the public.

PRIVATE DRIVE — The same as “private street.”

PRIVATE DWELLING — The same as “dwelling.”

PRIVATE ROAD — The same as “private street.”

PRIVATE STREET — Any accessway normally intended for vehicular use in the movement between points within a planned building group area or between the planned building group area and a street.

ROADWAY — Any street, private street or fire lane.

STANDPIPE — A pipe and attendant hose valves and hose (if provided) used for conveying water to various parts of a building for fire-fighting purposes.

STATE FIRE MARSHAL — The Maryland State Fire Marshal's Office, which may be responsible also for approving equipment, an installation or procedure covered within this code.

STORY — That portion of a building included between the upper surface of the floor and the upper surface of the floor or roof next above.

STREET — A public thoroughfare (street, avenue, or boulevard) which has been dedicated for vehicular use by the public and can be used for access by Fire Department vehicles.

STRUCTURE — Any building, monument or other object that is constructed with the ground as its foundation or normal resting place.

SUPERVISED AUTOMATIC FIRE EXTINGUISHING SYSTEM — Any automatic fire extinguishing system, which is constantly, monitored so as to determine its operating condition at all times.

SYSTEM — Several items of equipment, assembled grouped or otherwise interconnected, for the accomplishment of a specific purpose or function.

ZONING DISTRICTS — Zoning districts are defined as stated in the Calvert County Zoning Ordinance.¹

§ 44-5. Severability.

If any section, subsection, sentence, clause, or phrase of this code be declared invalid or unconstitutional by a court of competent jurisdiction, such provisions shall be deemed separate, and such invalidity or unconstitutionality shall not affect the validity of the code in its entirety or of the remaining sections or parts thereof.

§ 44-6. Administration and interpretations.

The Department or its designee shall administer the provisions identified in the Calvert County Site Plan Review Code for Fire Protection in Planned Building Groups. The Department for its designee shall be responsible for clarifying the intent of this code.

§ 44-7. Enforcement.

- A. When the Department determines that a violation of these codes has occurred or has found defective or deficient condition, the Department shall notify on-site personnel or the permittee in writing of the violation. The Department shall also send by certified mail or deliver by hand personally a written notice of violation to the permittee. This notice shall describe:
- (1) The nature of the violation;
 - (2) The required corrective action;

¹ Editor's Note: See Vol. II, Ch. 155, Zoning.

- (3) The time period in which to have the violation corrected.
- B. No additional inspections shall be authorized or completed until the violation has been corrected.
 - C. If the violation persists after the date specified for corrective action in the notice of violation or if the situation is deemed to be of a critical fire protection nature, the Department shall stop work on the site. The Department shall determine the extent to which work is stopped, which may include all work on the site except that work necessary to correct the violation. Once the corrective action on the violation is completed, the permittee shall contact the Department and request an inspection of the site. If after the inspection the Department determines that the corrective action is in accordance with this code and acceptable to the Department, the stop-work order shall be removed and work may proceed on the site.
 - D. If corrections to the violations are not commenced and diligently pursued within five days of the notice, and continued thereafter, the Department may issue a civil citation to the permittee.
 - E. Any step in the enforcement process may be taken at any time, depending on the severity of the violation.

§ 44-8. Penalties.

- A. On verification of a violation of this code, the Department may issue a civil citation, in person or by certified mail, to the permittee or the person deemed responsible for committing the violation, including the contractor. The citation shall serve as a notification to the person concerned that the person has been assessed a civil fine that is due and payable to Calvert County.
- B. Any person who is issued a citation shall:
 - (1) Be deemed to have committed a civil violation; and
 - (2) Pay to the County a civil fine in the amount prescribed under this section.
- C. Each separate day of violation that remains uncorrected is a distinct civil violation subject to an additional citation and fine in the amount prescribed in this section.
- D. The fine for each civil violation of this code is:
 - (1) For the first violation: \$100.
 - (2) For the second violation: \$250.
 - (3) For the third violation: \$500.
 - (4) For each violation in excess of three: \$1,000.
- E. If a person who receives a citation for a violation fails to pay the fine by the date of payment set forth in the citation, a formal notice of the violation shall be sent to the person's last address, if known. If the citation is not satisfied within 15 days from the date of the notice, the person is liable for an additional fine not to exceed twice the original fine.

If, after 35 days, the citation is not satisfied, the county may request adjudication through civil lawsuit.

- F. The citation shall be on a form adopted by the Board of County Commissioners of Calvert County, which shall include.
- (1) The date of issuance of the citation;
 - (2) The name and address of the person charged;
 - (3) The section number of the Code that has been violated;
 - (4) The nature of the violation;
 - (5) The place and time when the violation occurred;
 - (6) The amount of the civil fine assessed;
 - (7) The manner, location and time period in which the fine is to be paid;
 - (8) Where applicable, the notice that each day of continued violation thereafter shall be deemed a separate violation subject to additional citation;
 - (9) The name, business address, and telephone number of the case.
- G. Any agency whose approval is required under this code or any interested person may seek an injunction against any person who violates or threatens to violate any provision of this code.

§ 44-9. Damage or injury liability.

Calvert County and the Maryland State Fire Marshal shall not be liable for any damage to persons or properties either by reason of inspection or reinspection of buildings, structures or things, authorized by this code, or by reason or failure to inspect or reinspect such buildings, structures or things, or by reason of any permit issued or the approval or disapproval of any permit issued pursuant to this code or by reason of the approval or disapproval of any equipment authorized by this code.

ARTICLE III
General Requirements

§ 44-10. Means of access for Fire Department apparatus.²

- A. Means of access for Fire Department apparatus shall consist of fire lanes, private streets, streets, parking lot lanes, or a combination thereof or other alternate means approved by the Department.
- B. Means of access for Fire Department apparatus shall be provided to all structures in planned building groups in accordance with this section and the applicable provisions of §§ 44- through 44-.

² Editor's Note: For additional requirements, see Appendix A, included at the end of this chapter.

- C. Means of access for Fire Department apparatus shall be constructed of a hard all-weather surface designed to support the heaviest piece of fire apparatus likely to be operated on the fire lane, private street, street, or parking lot lane. A fire lane may be constructed of a minimum of six inches of compacted gravel or equivalent such that will support the heaviest piece of fire apparatus likely to be driven upon it and then covered with no more than three inches of soil, sod, or both. When a subsurface fire lane is constructed it shall be identified in a manner acceptable to the Department.
- D. Every dead-end roadway more than 300 feet in length shall be provided at the closed end with a turnaround acceptable to the Department. This shall be consistent with the Calvert County Road Ordinance.³
- E. Turns in roadways shall maintain the minimum road width and shall be constructed with a minimum radius of 45 feet at the outside curb line.
- F. Roadways shall be not less than 20 feet wide provided no parking is allowed, not less than 26 feet wide if parallel parking is allowed on one side, and not less than 32 feet wide if parallel parking is allowed on both sides. One way roadways may be reduced at the discretion of the Department but in no case below the Standards of the Calvert County Road Ordinance.
- G. Parking in any means of access shall not be permitted within 20 feet of a fire hydrant, sprinkler or standpipe connection or in other manner, which will obstruct or interfere with the fire department's use of the hydrant or connection.
- H. "No Parking – Tow Away Zone" Signs or other designation indicating that parking is prohibited shall be provided at all normal and emergency access points to structures and within 20 feet of each fire hydrant, sprinkler, or standpipe connection.
- I. Where no recognized water supply distribution system exists, appropriate access shall be provided to water supplies in accordance with the provisions of the Department.

§ 44-11. Fire lanes.

- A. Fire lanes shall be provided as required in keeping with the following recommendations.
- B. Fire lanes shall be at least 20 feet (six meters) in width with the road edge closest to the structure at least 10 feet (three meters) from the structure, for a total of 30 feet.
- C. "No Parking – Tow Away Zone" signs shall be posted for all fire lanes.
- D. Fire lanes connecting to public streets, roadways or private streets shall be provided with curb cuts extending at least two feet (0.6096 m) beyond each edge of the fire lane.
- E. Chains or other barriers may be provided at the entrance to fire lanes or private streets, provided that they are secured in such a way to allow access for fire apparatus.⁴

³ Editor's Note: See Ch. 104, Roads.

⁴ Editor's Note: For additional requirements, see Appendix A, included at the end of this chapter.

- F. The designation and maintenance of fire lanes on private property shall be the responsibility of the owner.

§ 44-12. Parking lot lanes.

Parking lot lanes shall have a minimum of 25 feet (7.5 meters) of clear width between rows of parked vehicles for vehicular access and movement.

§ 44-13. Location of structures.

- A. At least three perimeter walls of structures and all exterior doors into structures constructed as a part of a planned building group shall be within 200 feet (61 meters) of an approved fire lane or street.
- B. Structures exceeding 30 feet (9 meters) in height shall not be set back more than 50 feet (15 meters) from a street, fire lane, or private street. Exception: When any combination of private fire protection facilities, including, but not limited to, fire-resistive roofs, fire separation walls, space separation and automatic fire extinguishing systems, is provided and approved by the Department and/or State Fire Marshal as an acceptable alternative, Subsection B shall not apply.
- C. All structures exceeding three stories in height and 3,000 square feet (279 square meters) in ground floor area and containing nonrated openings in exterior walls facing other structures shall be separated from other structures by at least 20 feet (6 meters) of clear space between structures and 10 feet (3 meters) from a common property line. (See § 44-2D.)
- D. At least two means of access for fire apparatus shall be provided for each structure exceeding 30 feet (nine meters) or three stories in height.⁵
- E. At least 14 feet (four meters) of nominal clearance (height) shall be provided over the full width of streets, private streets, fire lanes and other means of vehicular access.⁶
- F. Placement of landscaping or other obstructions and the maintenance of existing features shall be coordinated with the proper review agencies so as not to impair or impede accessibility of firefighting or rescue operations.⁷

§ 44-14. Fire protection.

- A. All structures more than three stories in height or over 50 feet in height above grade and containing intermediate stories or balconies shall be equipped with a standpipe system in accordance with the provisions of NFPA 14, Standard for the Installation of Standpipe and Hose Systems (see § 44-2D). Fire Department standpipe connections shall be located

⁵ Editor's Note: For additional requirements, see Appendix A, included at the end of this chapter.

⁶ Editor's Note: For additional requirements, see Appendix A, included at the end of this chapter.

⁷ Editor's Note: For additional requirements, see Appendix A, included at the end of this chapter.

within 50 feet of a fire hydrant. Exception: This subsection shall not apply to industrial process structures where life or property of others is not imperiled by fire or explosion.

- B. Automatic fire extinguishing systems shall be required as set forth in the applicable NFPA code or standard for the intended occupancy of the structures or as maybe otherwise required by the Department. Fire Department connections for sprinkler systems shall be located within 50 feet (15 meters) of a fire hydrant. All such systems shall be installed in accordance with the applicable NFPA standard or code for the type of fire extinguishing system installed. (See Appendix B.⁸)
- C. An approved automatic detection system shall be installed in each dwelling unit in accordance with NFPA 74 Standard for the Installation, Maintenance and Use of Household Fire Warning Equipment. The automatic detection system shall include at least one smoke detector on each dwelling unit. (See Appendix B.⁹)
- D. For other than dwelling units, a fire warning or alarm system shall be provided in accordance with the applicable NFPA code or standard for the intended occupancy of the structure. Such systems shall be installed in accordance with the applicable NFPA code or standard for the type of system installed and shall be designed to alert occupants under emergency conditions and to retransmit to ensure notification of the Fire Department. Alarms or warning systems shall be tested and maintained in accordance with the applicable NFPA code or standard or as may be required by the Department and or State Fire Marshal. (See Appendix B.¹⁰)

§ 44-15. Water supply. (See Appendix B.¹¹)

- A. Water supply systems not publicly owned and installed shall meet the minimum requirements of NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, or NFPA 1231, Standard on Water Supplies for Suburban and Rural Fire Fighting, where no recognized water supply distribution exists.
- B. Fire flow requirements shall be determined by the type of zoning and permitted uses. In addition, the flow requirements below may be reduced if the County cannot provide the required flow and pressure to the site. In this case, fire flow will be the maximum provided by the County. Also, interim measures such as water storage tanks may be required. Upon upgrade of County water supply, fire flow shall be increased at the same level or until requirements are met.
- C. No community water systems are required in the RUR Zone, and fire protection will be provided by Fire Department water supply using tankers to haul the needed water. The only exception to this rule is that water flow may be required for construction of non-single-family residences greater than 3,500 square feet in area.

⁸ Editor's Note: Appendix B is included at the end of this chapter.

⁹ Editor's Note: Appendix B is included at the end of this chapter. For additional requirements, see Appendix A, included at the end of this chapter.

¹⁰ Editor's Note: Appendix B is included at the end of this chapter.

¹¹ Editor's Note: Appendix B is included at the end of this chapter.

- D. R1, R2 and Town Center Zones may have community water systems or use individual well and septic with large lots. Fire protection requirements will vary with the usage.
- E. Buildings and residences less than three stories will be considered attached or part of the same structure if they are closer than 30 feet to each other for more than five feet along any wall or structure.
- F. Water systems supplying fewer than 100 single-family residences (100 residences) are not required to provide elevated water storage capacity for fire protection. However, requiring a minimum water main size of eight-inch diameter in smaller water systems allows the incorporation of elevated or groundwater storage to provide water for fire protection in the future.
- (1) Single-family detached residences.
 - (a) Without community/multiuse water systems: Fire Department water supply by tankers.
 - (b) With community/multiuse water systems: a minimum of 500 gallons per minute (GPM) for a duration of 15 minutes with 7,500 gallons of real water and distribution mains sized for flows of 750 gallons per minute.
 - (2) Single-family attached residences.
 - (a) Without community/multiuse water systems: Fire Department water supply by tankers.
 - (b) With community/multiuse water systems: a minimum of 750 gallons per minute for a duration of 15 minutes with 10,000 gallons of real water and distribution mains sized for 1,000 gallons per minute.
 - (3) Townhouse residences. All townhouse developments will be required to have community water systems and a minimum of 1,000 gallons per minute fire flow for a duration of two hours.
 - (4) Multifamily residences.
 - (a) All multifamily residential buildings must be served by a community water system.
 - (b) If the largest building contains a maximum of four units, the required fire flow shall be 1,500 gallons per minute for a duration of two hours.
 - (c) If the largest building contains a maximum of eight units, required fire flow shall be 2,000 gallons per minute for a duration of two hours.
 - (d) Any building containing more than eight units shall be reviewed and approved by the department and in consultation with the local Fire Department to insure that an adequate level of fire protection is provided.
- G. The RC, MC and TC Districts may have community water systems or have to depend on fire department water supply by tankers. Buildings will be considered part of the same structure and their square footage summed if they are closer than 30 feet to each other for more than five feet along any wall or structure.

- (1) When commercial or industrial structures are built in areas without community water systems, the Department and the local Fire Department shall review the site plans and may require on-site storage of water or other special provisions such as ponds, roadways constructed to water systems, etc. to provide an adequate level of fire protection.
 - (2) In areas served by community water systems, fire flow requirements shall be as follows:
 - (a) Commercial and industrial buildings up to 5,000 square feet in size: 1,500 gallons per minute for a duration of two hours.
 - (b) Commercial and industrial building from 5,000 square feet up to 15,000 square feet in size: 2,000 gallons per minute for a duration of two hours.
 - (c) Commercial and industrial buildings of more than 15,000 square feet, or with a hazardous occupancy, exposure problem, or other special hazards may be required to have a higher fire flow or longer duration when the Department, the State Fire Marshal and in consultation with the local Fire Department decide that this is appropriate during their review of the building and site plan.
- H. All fire flow requirements in this section assume that buildings are of ordinary construction. The required flow may be modified upward or downward by the Department in consultation with the local fire department at the time of its review of building and site plans to make allowances for the type of construction, exposures, or other special conditions which would make the fire risk significantly different from that which could be expected for ordinary construction.
- I. All fire flow calculations shall be made with a minimum residual pressure in the system of 20 PSI at the location which is being evaluated.
- J. The required duration shall be determined by taking into consideration the production rate of the wells in the system, the amount of water in storage, and the maximum daily consumption. In calculating the duration time, only the amount of water in storage that can be withdrawn while maintaining the residual pressure of 20 PSI at the test location shall be considered.
- K. When the master plan is prepared for each town center within Calvert County, water supply requirements should be considered based on the expected use. A master plan for water supply that will deliver an adequate fire flow to the entire district should be prepared, and all water line construction should be designed to meet the ultimate flow requirements wherever practicable.
- L. Flow requirements for buildings which are equipped with a NFPA Pamphlet 13 and /or 13D approved automatic sprinkler system may be reduced up to 75%. The Department, the State Fire Marshal and in consultation with the local Fire Department will determine in its building and site plan review how much reduction in flow requirements is appropriate.
- M. Alternative or supplemental methods of providing water flow (e.g., from stormwater impoundments or underground storage tanks) can be used, if approved during review, to meet water flow requirements, provided the total flow meets the appropriate code.

- N. The minimum water main size for all new water systems is eight-inch. However, six-inch water mains may be used in single-family detached residences when the main network is completely graded or proven hydraulically to meet fire flow requirements.
- O. The contractor or installer of water supply systems in planned building groups shall demonstrate by actual test that the capacity of the water supply system will meet fire protection design requirements. Fire flow performance tests shall be witnessed by the Department.
- P. Fire hydrants shall be marked in accordance with NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants.
- Q. Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles.
- R. Fire hydrants shall be set back not less than 24 inches from the edge of the roadway not more than 72 inches, but at no time shall the hydrant be placed in the actual flow of the ditch. In areas with curb closed road sections, the hydrant should not be set back less than 18 inches, no more than 96 inches from back of curb.
- S. Fire hydrants shall be installed in accordance with the standards of the American Water Works Association. (See Appendix ¹²).
- T. Threads on fire hydrant outlets shall be American National Fire Hose Connection screw threads and shall be equipped with thread adapters when the local Fire Department thread is different. (See NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.)
- U. Fire hydrants shall be supplied by not less than a six-inch (15 cm) diameter main installed on a looped system or not less than an eight-inch (20 cm) diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 feet (91 meters) in length.
- V. Dead-end mains for fire protection shall not exceed 600 feet (182.5 meters) in length for main sizes under eight inches in diameter.
- W. There shall be no more than 600 feet between hydrants, with spacing of 300 feet in commercial or industrial areas where practical. Hydrants shall be located near street intersections, with intermediate hydrants set to meet distance requirements. All distances shall be measured as hose can be laid by apparatus.
- X. Location of hydrants in multifamily, commercial, industrial, or institutional complexes shall be with the approval of the Department and after the consultation with the local Fire Department and the Department of Public Works. In review of building and site plans, the County shall take into consideration requirements for supply standpipes, sprinklers or special hazards that might be encountered.

¹² Editor's Note: Appendix B is included at the end of this chapter.

§ 44-16. Construction of structures.

Construction of each structure shall be equal to the requirements of the building code of Calvert County.¹³

§ 44-17. Fire protection during construction. (See Appendix B.¹⁴)

- A. Protection shall be not less than that required by the Department.
- B. Fire Department vehicular access to all structures under construction shall be provided at all times.
- C. The fire protection water supply system, including fire hydrants, shall be installed and in service prior to placing combustible building materials for structures, or combustible pretested fabricated building assemblies on the project site or utilizing them in the construction of building structures. If phased construction is planned, coordinated installation of the fire protection water system is permitted. (See § 44-15G.)
- D. Trash and debris shall be removed from the construction site as often as necessary to maintain a firesafe construction site.
- E. Flammable or combustible liquids shall be stored, handled, or used on the construction site in accordance with the applicable provisions of NFPA 30, Flammable and Combustible Liquids Code; NFPA 58, Standard for the Storage and Handling of Liquefied Petroleum Gases and NFPA 395 Standard for the Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects.
- F. At least one portable fire extinguisher having a rate of at least 4-A, 30-BC shall be within a travel distance of 75 feet or less of any point of a structure under construction. Personnel normally on the construction site shall be instructed in the use of the fire extinguisher provided. (See Appendix B.¹⁵)

§ 44-18. Plans.

- A. All plans for planned building groups shall be submitted to the authority having jurisdiction for approval before the issuance of the construction permit. This approval procedure shall include the Department.
- B. In addition to the requirements of Subsection A, a small-scale drawing of the site's surrounding area showing streets, access points, water supply sources, and other items of fire suppression interest such as standpipe connections, sprinkler connections, hydrants, etc. shall be submitted to the local Fire Department through the Department before the start of any construction. (See § 44-2D.)

¹³ Editor's Note: See Ch. 18, Building Construction.

¹⁴ Editor's Note: Appendix B is included at the end of this chapter.

¹⁵ Editor's Note: Appendix B is included at the end of this chapter.

- C. As-built drawings showing building floor plans, fire protection systems, and items of fire suppression interest such as standpipe connections, sprinkler connections, hydrants, etc. shall be submitted to the Department prior to issuance of a use and occupancy permit upon completion of the project.

ARTICLE IV

Referenced Publications

§ 44-19. Documents enumerated.

The following document or portions thereof are referenced within this code and shall be considered part of the requirements of this document. The most recent edition for each reference will apply. These references are listed separately to facilitate updating to the latest edition by the user.

NFPA Publications, National Fire Protection Association, Battery March Park, Quincy, Ma 02269.

NFPA 13 – Standard for Installation of Sprinkler Systems

NFPA 13D – Standard for Installation of Sprinkler Systems
in One and Two Family Dwellings and Mobile Homes

NFPA 14 – Standard for the Installation of Standpipe
and Hose Systems

NFPA 24 – Standard for the Installation of Private Fire
Service Mains and their Appurtenances

NFPA 30 – Flammable and Combustible Liquids Code

NFPA 58 – Standard for the Storage and Handling of
Liquefied Petroleum Gases

NFPA 74 – Standard for the Installation, Maintenance,
and Use of Household Fire Warning Equipment

NFPA 291 – Recommended Practice for Fire Flow Testing
and Marking of Hydrants

NFPA 395 – Standard for the storage of Flammable and
Combustible Liquids on Farms and Isolated Construction Projects

NFPA 1231 – Standard on Water Supplies for Suburban
and Rural Fire Fighting

NFPA 1963 – Standard for Screw Threads and Gaskets
for Fire Hose Connections

FIRE PREVENTION

APPENDIX A

This Appendix is not part of the requirements of this document, but is included for informational purposes only.

Chapter Section	Explanation
§ 44-10	This section is intended to apply to roads constructed within the confines of private property whether they be dedicated or not.
§ 44-10E	Turns in roads of this width must be designed and constructed as indicated or fire apparatus will have to ride up on the curb. Sharper turns may prohibit or seriously detain apparatus response.
§ 44-10F	Road width must be sufficient for travel, passing other vehicles, and operating from apparatus in the vicinity of the fire scene.
§ 44-11E	Breakaway locks may be used on chains.
§ 44-13D	For taller buildings it may be necessary that provision be made to position apparatus on two or more sides of the building for effective firefighting and rescue operations. Ground ladders can be used effectively on the shorter buildings. Taller buildings normally require the use of aerial ladders. Preferably, access should be provided in the front and rear of the structure.
§ 44-13E	Clearances of less than 14 ft. may prohibit or severely slow the response of certain types or makes of fire apparatus.
§ 44-13F	This would include obstructions obscuring or interfering with fire department connections to sprinkler and/or standpipe systems.
§ 44-14C	For the purposes of this section, a series of non-interconnected single station detectors may be classified as a system.
§ 44-150	It is recommended that the fire department consider the required fire flow as established by the insurance rating authority for the area.

APPENDIX B
Referenced Publications

The following documents or portions thereof are referenced within this code for informational purposes only and thus should not be considered part of the requirements of this document. The edition indicated for each reference is current as of the date of the NFPA issuance of this document. These references are listed separately to facilitate updating to the latest edition by the user.

§ B-1. NFPA Codes, Standards, and Recommended Practices. National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

NFPA 1 – Fire Prevention Code

NFPA 10 – Standard for Portable Fire Extinguishers

NFPA 13 – Standard for the Installation of Sprinkler Systems

NFPA 13A – Recommended Practice for Inspection, Testing, and Maintenance of Sprinkler Systems

NFPA 13D – Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Mobile Homes

NFPA 13R – Standard for the Installation of Sprinkler Systems in Residential Occupancies up to Four Stories in Height

NFPA 20 – Standard for the Installation of Centrifugal Fire Pumps

NFPA 22 – Standard for Water Tanks for Private Fire Protection

NFPA 27 – Recommendations for Organization, Training and Equipment of Private Fire Brigades

NFPA 31 – Standard for the Installation of Oil Burning Equipment

NFPA 54 – National Fuel Gas Code

NFPA 70 – National Electrical Code

NFPA 71 – Standard for the Installation, Maintenance, and Use of Central Station Signaling Systems

NFPA 72 – Standard for the Installation, Maintenance, and the Use of Local Protective Signaling System for Guard's Tour, Fire Alarm and Supervisory Service

NFPA 72E – Standard on Automatic Fire Detectors

NFPA 78 – Lightning Protection Code

NFPA 80 – Standard for Fire Doors and Windows

NFPA 80A – Recommended Practice for Protection of Buildings from Exterior Exposure Fires

NFPA 82 – Standard on Incinerators, Waste and Linen Handling Systems and Equipment

NFPA 90A – Standard for the Installation of Air Conditioning and Ventilating Systems

NFPA 90B – Standard for the Installation of Warm Air Heating and Air Conditioning Systems

NFPA 101 – Life Safety Code

NFPA 203M – Manual of Roof Coverings and Roof Deck Constructions

NFPA 206M – Guide on Building Areas and Heights

NFPA 211 – Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances

NFPA 220 – Standard on Types of Building Construction

NFPA 224 – Standard for Homes and Camps on Forest Areas

NFPA 241 – Standard for Safeguarding Building Construction and Demolition Operations

NFPA 291 – Recommended Practice for Fire Flow Testing and Marking of Hydrants

NFPA 601 – Standard for Guard Service in Fire Loss Prevention

NFPA 601A – Standard for Guard Operations in Fire Loss Prevention

NFPA 1221 – Standard for the Installation, Maintenance and Use of Public Fire Service Communications Systems

§ B-2. Other NFPA publications.

Brannigan, Francis L., Building Construction for Fire Service, Montgomery College, Rockville, Maryland. NFPA FSP-33A, 1982, p. 34

Kimball, Warren Y., Jamestown, Rhode Island, Fire Attack 1, FSP-1, 1966, p.280

Kimball, Warren Y., Jamestown, Rhode Island, Fire Attack 2, FSp-2, 1968, p. 234

NFPA Inspection Manual, Fifth Edition, National Fire Protection Association, SPP-1 1-1982

Fire Protection Handbook, Fifteenth Edition, National Fire Protection Association, FPH!581

Small Community Fire Departments: Organization and Operation, National Fire Protection Association, 1982

§ B-3. Other publications.

Fire Suppression Rating Schedule, Insurance Services Office, Commercial Risk Services, 160 Water Street, New York, NY 10038

Water Distribution Training Course, American Water Works Association, 6666 W. Quincy Avenue, Denver, CO 80235, M-8, 1962, p. 165

Managing Fire Services, International City Managers Association, 1140 Connecticut Avenue NW, Washington, D.C. 20036, 1979

§ B-4. Information sources.

National Fire Protection Association, Batterymarch Park, Quincy, MA 02269

American Institute of Architects, 1735 New York Avenue NW, Washington, D.C. 20006

International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, CA 90601

Building Officials and Code Administrators, 4051 West Flossmor, Country Club Hills, IL 60477

American Insurance Association, 85 John Street, New York, NY 10038

Southern Building Code Congress, 900 Mont Clair Road, South Birmingham, AL 35213

American Water Works Association, 6666 W. Quincy Avenue, Denver, CO 80235

Insurance Services Office, Commercial Risk Services, Two Sylvan Way, Parsippany, NJ 07054

Fire Marshals Association of North America, NFPA, Capital Gallery, Suite 220, 600 Maryland Avenue SW, Washington, D.C. 20024