Marion County

Fire Code Applications Guide

This guide is intended to provide assistance in the application of the fire code in the following jurisdictions:

Aumsville Fire District
Aurora Fire District
Drakes Crossing Fire District
Gates Fire District
Hubbard Fire District
Idahna-Detroit Fire District
Jefferson Fire District
Keizer Fire District
Marion County Fire District #1
Mill City Fire District
Monitor Fire District
Mt. Angel Fire District
Salem Fire Department
Salem Suburban Fire District
Silverton Fire District
St. Paul Fire District
Stayton Fire District
Sublimity Fire District
Turner Fire District
Woodburn Fire District

Revised 7/14

Notes to Users

Local Development Codes

Check the local city or county development code to determine the applicability of roadway standards as it relates to conflicts with this guide and/or the adopted fire code.

ORS 368.039 Road standards adopted by local government supersede standards in fire codes; consultation with fire agencies.

(1) When the governing body of a county or city adopts specifications and standards, including standards for width, for roads and streets under the jurisdiction of the governing body, such specifications and standards shall supersede and prevail over any specifications and standards for roads and streets that are set forth in a uniform fire code adopted by the State Fire Marshal, a municipal fire department or a county firefighting agency.

(2) This section applies to specifications and standards for roads and streets adopted by the governing body of a county or city in a charter, acknowledged comprehensive plan or ordinance adopted pursuant to ORS chapter 92, 203, 221 or 195.065, 368.039, 478.920, OAR918-480-0100

(3) Before adopting or amending any comprehensive plan, land use regulation or ordinance that establishes specifications and standards for roads and streets, a governing body of a county or city shall consult with the municipal fire department or other local firefighting agency concerning the proposed specifications and standards. The county or city governing body shall consider the needs of the fire department or firefighting agency when adopting the final specifications and standards.

Dispute Resolution Process

The Office of State Fire Marshal's (OSFM), Dispute Resolution Process allows an aggrieved party to dispute inspection findings of the local fire marshal. This process allows the aggrieved party to ask for a "second opinion" but does not supersede the local or State Fire Marshal's appeal process. The local fire marshal, through the OSFM, arranges a conference call with the aggrieved party and on-call code experts from other jurisdictions and industry. The on-call group discusses the case and the local fire marshal takes the group's second opinion into consideration when rendering a decision in writing to the aggrieved party. The goal of the OSFM is to conduct the conference call within 48 hours (two business days) for new construction and no more than seven business days for maintenance issues of the notice of dispute. Aggrieved parties who are not satisfied with the findings can appeal the decision to a local appeals board, if available, otherwise to the OSFM.

Preamble/Authority and Scope

The above jurisdictions have elected to administer and enforce the Oregon Fire Code under the authority granted to them by ORS 476.030 or ORS 476.060. The Oregon Fire Code is the International Fire Code, 2012 Edition, as published and copyrighted by the International Code Council, which has been amended and adopted by the Oregon State Fire Marshal's Office. In order to further the Oregon State Fire Marshal's goal of promoting fire code consistency throughout the state, the above jurisdictions have agreed to reduce local amendments.

Nevertheless, the above jurisdictions have prepared this Applications Guide to provide good faith guidance to building officials, contractors, business owners, the public, and fire marshals on local interpretations and practices that are considered to be in compliance with the Oregon Fire Code. The intent is to clarify aspects of the code that are vague or non-specific by addressing selected issues under normal conditions. This Applications Guide does not create or replace code provisions, and is not an adopted policy of the above jurisdictions. The reader is cautioned that the guidance detailed in this Applications Guide may or may not apply to their specific situation, and that the designated authority for each jurisdiction retains final authority to determine compliance.

Jurisdiction Contact Information

Aumsville Fire District
P.O. Box 247
Aumsville, OR 97325
Ph. 503-749-2894
Fax 503-749-2182

Aurora Fire District
P.O. Box 9
Aurora, OR 97002
Ph. 503-678-5966
Fax 503-678-1344
www.aurorafire.org

Drakes Crossing Fire District
19364 Powers Creek Loop NE
Silverton, OR 97381
Ph. 503-873-6868
Fax 503-873-6868

Gates Fire District
P.O. Box 594
Gates, OR 97346
Ph. 503-897-2929
Fax 503-897-2929

Hubbard Fire District
P.O. Box 378
Hubbard, OR 9703
Ph. 503-981-9454
Fax 503-981-0729
870@hubbardfire.com

Idanha-Detroit Fire District
P.O. Drawer B
Detroit, OR 97342
Ph. 503-854-3494
Fax 503-854-3238

Jefferson Fire District
P.O. Box 911
Jefferson, OR 97352
Ph. 503-327-2822
Fax 503-327-2279
www.jeffersonfire.org

Keizer Fire District
661 Chemawa Rd. NE
Keizer, OR 97303
Ph. 503-390-9111
Fax 503-390-8299
www.keizerfire.com

Marion County Fire District #1
300 Cordon Rd. NE
Salem, OR 97301
Ph. 503-588-6526
Fax 503-588-6537
www.mcfd1.com

Mill City Fire District
P.O. Box 414
Mill City OR 97360
Ph. 503-897-2390
Fax 503-897-2390

Monitor Fire District
15240 Woodburn Monitor Rd.
Woodburn, OR 97071
Ph. 503-634-2570
Fax 503-634-2600

Mt. Angel Fire District
P.O. Box 335
Mt. Angel, OR 97362
Ph. 503-845-2438
Fax 503-845-2855
www.mtangelfire.org

Salem Fire Department
370 Trade St. SE
Salem, OR 97301
Ph. 503-588-6245
Fax 503-588-6371
www.cityofsalem.net

Salem Suburban Fire District
370 Trade St. SE
Salem, OR 97301
Ph. 503-581-7788

Silverton Fire District
819 Rail Way NE
Silverton, OR 97381
Ph. 503-873-5328
Fax 503-873-2805
www.silvertonfire.com

Office of State Fire Marshal
4760 Portland Rd NE
Salem, OR 97305
Ph. 503-373-1540
www.oregon.gov/OSP/SFM/

St. Paul Fire District
P.O. Box 144
St. Paul, OR 97137
Ph. 503-633-4602
Fax 503-633-4601

Stayton Fire District
P.O. Box 8
Stayton, OR 97383
Ph. 503-769-2601
Fax 503-769-1487
www.staytonfire.org

Sublimity Fire District
P.O. Box 911
Sublimity, OR 97385
Ph. 503-769-3282
Fax 503-769-4579

Turner Fire District
P.O. Box 10
Turner, OR 97392
Ph. 503-743-2190
Fax 503-743-3604
www.turnerfire.com

Woodburn Fire District
1776 Newberg Hwy.
Woodburn, OR 97071
Ph. 503-982-2360
Fax 503-981-5004
www.woodburnfire.com

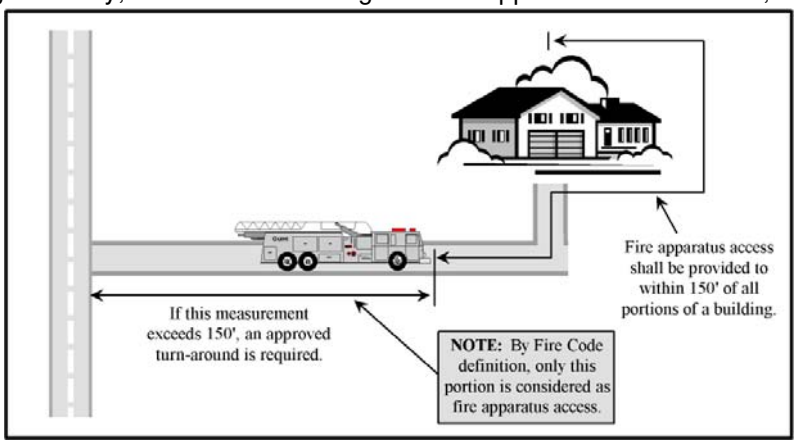
Table of Contents

Fire Apparatus Access

FIRE APPARATUS ACCESS ROAD EXCEPTIONS: The requirements for fire apparatus access may be modified as approved by the fire code official where any of the following apply: (OFC 503.1.1 Exception)

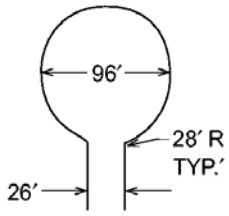
1) Buildings are equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5)).
2) Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
3) There are not more than two Group R-3 or Group U occupancies.

FIRE APPARATUS ACCESS ROAD DISTANCE FROM BUILDING AND TURNAROUNDS: Access roads shall be within 150' feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building. An approved turnaround is required if the remaining distance to an approved intersecting roadway, as measured along the fire apparatus access road, is greater than 150' feet. (OFC 503.1.1)

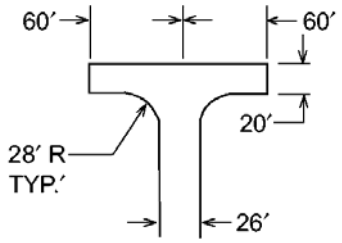


DEAD END ROADS: Dead end fire apparatus access roads in excess of 150' feet in length shall be provided with an approved turnaround.

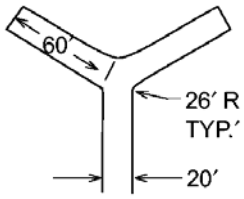
Diagrams of approved turnarounds are shown below: (OFC 503.2.5)



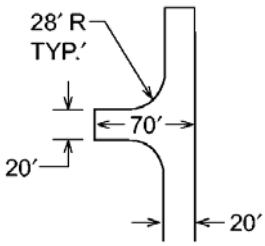
96′ DIAMETER CUL-DE-SAC



120′ HAMMERHEAD



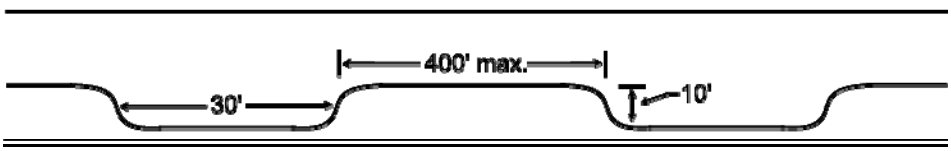
ACCEPTABLE ALTERNATIVE T0 120′ HAMMERHEAD



ACCEPTABLE ALTERNATIVE TO 120′ HAMMERHEAD

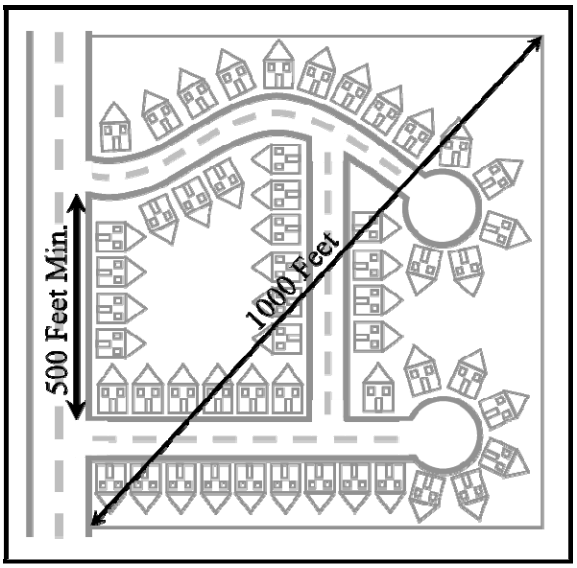
TURNING RADIUS: The inside turning radius and outside turning radius shall be not less than 28' feet and 48' feet respectively, measured from the same center point. (OFC 503.2.4 & Appendix D)

TURNOUTS: When a fire apparatus access road exceeds 400' feet in length, turnouts 10' feet wide and 30' feet long shall be provided in addition to the required road width and shall be placed no more than 400' feet apart, unless otherwise approved by the fire code official. These distances may be adjusted based on visibility and sight distances. (OFC Chapter 5)



MULTIPLE ACCESS ROADS: Developments of one- and two-family dwellings where the number of dwelling units exceeds 30, multiple-family residential projects having more than 100 dwelling units and where vehicle congestion, adverse terrain conditions or other factors that could limit access, as determined by the fire code official, shall be provided with not less than two approved means of access. Exceptions may be allowed for approved automatic sprinkler system. The approval of fire sprinklers as an alternate shall be accomplished in accordance with the provisions of ORS 455.610(5). (OFC D106 & D107)

MULTIPLE ACCESS ROADS SEPARATION: Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses. (OFC D104.3 & D107.1)



GRADE: Fire apparatus access roadway grades shall not exceed 10% percent. Intersections and turnarounds shall be level (maximum 5%) with the exception of crowning for water run-off. When fire sprinklers are installed, a maximum grade of 15% may be allowed. Portions of aerial apparatus access roads that will be used for aerial operations shall be constructed as flat as possible and shall not exceed 6%. The approval of fire sprinklers as an alternate shall be accomplished in accordance with the provisions of ORS 455.610(5). (OFC D103.2) OAR 918-480-0100

ANGLES OF APPROACH AND DEPARTURE: The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus (OFC 503.2.8)

FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE: Fire apparatus access roads shall have an unobstructed driving surface width of not less than 20' feet (26' feet adjacent to fire hydrants) and an unobstructed vertical clearance of not less than 13' feet 6" inches. (OFC 503.2.1 & D103.1)

Note: When serving two or less dwelling units and accessory buildings, the driving surface may be reduced to 12' feet, although the unobstructed width shall be 20' feet. Turning radii for curves and turnarounds on reduced width roads shall be not less than 28' feet and 48' feet respectively, measured from the same center point.

ADDITIONAL ACCESS ROADS-ONE OR TWO FAMILY RESIDENTIAL: Where there are more than 30 one or two family dwelling units, not less than two separate approved means of access shall be provided. Where there are more than 30 dwelling units, and all are protected by approved residential sprinkler systems, a single access will be allowed. (OFC D107)

ADDITIONAL ACCESS ROADS-COMMERCIAL: Buildings exceeding 30' feet in height or three stories in height shall have at least two separate means of fire apparatus access. Buildings having a gross area of more than 62,000 square feet shall have at least two separate means of fire apparatus access. Buildings up to 124,000 square feet that are equipped throughout with an approved automatic sprinkler system can have a single access. (OFC D104)

FIRE APPARATUS ACCESS ROADS WITH FIRE HYDRANTS: Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26' feet (OFC D103)

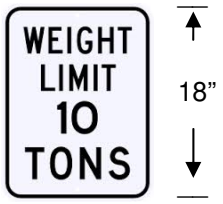
SURFACE AND LOAD CAPACITIES: Fire apparatus access roads shall be of an all-weather surface that is easily distinguishable from the surrounding area and is capable of supporting not less than 12,500 pounds point load (wheel load) and at least 60,000 pounds live load (gross vehicle weight). Documentation from a registered engineer that the final construction is in accordance with approved plans or the requirements of the Fire Code may be requested. The minimum weight specified may be increased by the fire code official based upon the actual weight of fire apparatus vehicles serving the jurisdiction that provides structural fire protection services to the location, including fire apparatus vehicles that respond under automatic and mutual aid agreements. Woodburn ladder weighs 72,000 pounds (OFC D102.1)

AERIAL FIRE APPARATUS ROADS: When the vertical distance between the grade plane and the highest roof surface exceeds 30' feet (measured to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of the parapet walls, whichever is greater), approved aerial apparatus access roads shall be provided. Aerial apparatus roads shall have an unobstructed driving surface width of not less than 26' feet in the immediate vicinity of the building more than 30' feet in height.

At least one of the required access routes meeting this condition shall be located within a minimum of 15' feet and a maximum of 30' feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official. (OFC D105)

BRIDGES AND ELEVATED SURFACES: Where a bridge or elevated surface is part of a fire apparatus access road the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official. (OFC 503.2.6)



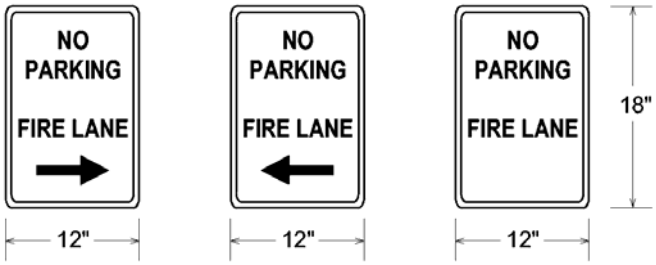
1. Signs shall be a minimum of 18" x 24", 18 gauge steel sign, reflective white in color with black letters a minimum of 3½" inches in height with a 3/8" inch stroke.
2. Signs shall be installed with a clear space above grade at a level of 7' feet.
3. The bridge weight limit as determined by a State of Oregon registered civil or structural engineer, shall appear above the word "TONS".

GATES: Gates securing fire apparatus roads shall comply with all of the following: (OFC D103.5)
Electric automatic gates shall comply with ASTM F 2200 and UL 325.

- Minimum unobstructed width shall be 16 feet, or two 10 foot sections with a center post or island.
- Gates serving one- or two-family dwellings shall be a minimum of 12 feet unobstructed width when in the fully open position.
- Gates shall be set back at minimum of 30 feet from the intersecting roadway.
- Gates shall be of the swinging or sliding type.
- Manual operation shall be capable by one person.
- Electric gates shall be equipped with a means for operation by fire department personnel.
- Locking devices shall be approved by the fire code official.

NO PARKING SIGNS: Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20' feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed with a maximum spacing of 50'. Roads 26' feet wide or less shall be posted on both sides as a fire lane. Roads more than 26' feet wide to 32' feet wide shall be posted on one side as a fire lane.

Signs shall read "NO PARKING - FIRE LANE" and shall be installed with a clear space above grade level of 7' feet. Signs shall be 12" inches wide by 18" inches high and shall have red letters on a white reflective background. (OFC D103.6)



PAINTED CURBS: Where required, fire apparatus access roadway curbs shall be painted red and marked "NO PARKING FIRE LANE" at approved intervals. Lettering shall have a stroke of not less than one (1") inch wide by six (6") inches high. Lettering shall be white on red background. (OFC 503.3)

Firefighting Water Supplies

FIREFIGHTING WATER SUPPLY EXCEPTIONS: The requirements for firefighting water supplies may be modified as approved by the fire code official where any of the following apply: (OFC 503.1.1 Exception)

1) Buildings are equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5)
2) There are not more than two Group R-3 or Group U occupancies.

COMMERCIAL BUILDINGS - FIRE FLOW: The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be determined according to OFC Appendix B. The required fire flow for a building shall not exceed the available GPM in the water delivery system at 20 psi.

SINGLE FAMILY DWELLINGS - REQUIRED FIRE FLOW: The minimum available fire flow for one and two-family dwellings served by a municipal water supply shall be 1,000 gallons per minute. If the structure(s) is (are) 3,600 square feet or larger, the required fire flow shall be determined according to OFC Appendix B. (OFC B105.2)

RURAL BUILDINGS - REQUIRED FIRE FLOW: Required fire flow for rural and suburban areas in which adequate and reliable water supply systems do not exist may be calculated in accordance with National Fire Protection Association Standard 1142, Current Edition, when approved by the fire code official. Please contact the Fire Marshal's Office for special assistance and other requirements that may apply. (OFC B103.3) (OFC B107)

- Residential and accessory structures less than 3,600 square feet, including all floors, garage(s), basement(s), covered porches, and decks shall not require a water supply.

NOTE: Structures protected by an automatic fire sprinkler are not required to have a water supply other than that required to supply the fire sprinkler system.

ACCESS AND FIRE FIGHTING WATER SUPPLY DURING CONSTRUCTION: Approved fire apparatus access roadways and fire fighting water supplies shall be installed and operational prior to any combustible construction or storage of combustible materials are on site and during the time of construction except when approved alternative methods of protection are provided. (OFC 501.4)

PREMISE IDENTIFICATION: Buildings shall have address numbers or approved identification placed in a position that is plainly legible and visible from the access road fronting the property. Identification shall contrast with their background and shall be a minimum of 4" inches high with a minimum stroke width of ½" inch. Identification size is based on distance from the street: (1' to 50' = 4"), (51' to 100' = 6"), (101'-150' = 8"), (151' to 200' = 10"), (201' and up = 12") (OFC 505)

- Check the local city or county development code for additional or alternative requirements.
- Large apartment complexes, 5 or more buildings, large address map is detailed at each street entry point and large address placard is detailed to be approved for size and content (should include complex site layout, foot print of each building, address or ID for each building, at least 24 in. x 36 in.), or as required by the fire official.

Fire Hydrants

FIRE HYDRANTS – COMMERCIAL BUILDINGS: Where a portion of the building is more than 400 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the building, on-site fire hydrants and mains shall be provided. (OFC B105.1)

Note: This distance may be increased to 600' feet for buildings equipped throughout with an approved automatic sprinkler system.

FIRE HYDRANTS – ONE- AND TWO-FAMILY DWELLINGS & ACCESSORY STRUCTURES: Where a portion of a structure is more than 600 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the structure(s), on-site fire hydrants and mains shall be provided. (OFC B105.1)

FIRE HYDRANT NUMBER AND DISTRIBUTION: The minimum number and distribution of fire hydrants available to a building shall not be less than that listed in Table C 105.1. See page 10 for hydrant proximity to FDC. (OFC Appendix C)

TABLE C105.1
NUMBER AND DISTRIBUTION OF FIRE HYDRANTS

FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS[a, b, c] (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT[d]
1,750 or less	1	500	250
2,000-2,250	2	450	225
2,500	3	450	225
3,000	3	400	225
3,500-4,000	4	350	210
4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more[e]	200	120

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m.

a. Reduce by 100 feet for dead-end streets or roads.

b. Where streets are provided with median dividers which can be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis up to a fire-flow requirement of 7,000 gallons per minute and 400 feet for higher fire-flow requirements.

c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

d. Reduce by 50 feet for dead-end streets or roads.

e. One hydrant for each 1,000 gallons per minute or fraction thereof

Considerations for placing fire hydrants may be as follows: (OFC Appendix C)

- Existing hydrants in the area may be used to meet the required number of hydrants as approved. Hydrants that are up to 600' feet away from the nearest point of a subject building that is protected with fire sprinklers may contribute to the required number of hydrants. (OFC 507.5.1)
- Hydrants that are separated from the subject building by railroad tracks shall not contribute to the required number of hydrants unless approved by the fire code official.
- Hydrants that are separated from the subject building by divided highways or freeways shall not contribute to the required number of hydrants. Heavily traveled collector streets only as approved by the fire code official.

- Hydrants that are accessible only by a bridge shall be acceptable to contribute to the required number of hydrants only if approved by the fire code official.
- When evaluating the placement of hydrants at apartment or industrial complexes the first hydrant(s) to be placed shall be at the primary access and any secondary access to the site. After these hydrants have been placed other hydrants shall be sited to meet the above requirements for spacing and minimum number of hydrants.

FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD: Fire hydrants shall be located not more than 15' feet from an approved fire apparatus access roadway unless approved by the fire code official. (OFC Appendix C)

REFLECTIVE HYDRANT MARKERS: If required by the fire code official fire hydrant locations shall be identified by the installation of reflective markers. The markers shall be blue. They shall be located adjacent and to the side of the centerline of the access road way that the fire hydrant is located on. In case that there is no center line, then assume a centerline, and place the reflectors accordingly. (OFC 508.5.4)

PHYSICAL PROTECTION: Where fire hydrants are subject to impact by a vehicle, guard post, bollards or other approved means of protection shall be provided. (OFC 507.5.6 & 312)

CLEAR SPACE AROUND HYDRANTS: A 3' foot clear space shall be provided around the circumference of the fire hydrant. (OFC 507.5.5)

FIRE HYDRANT/FIRE DEPARTMENT CONNECTION: A fire hydrant shall be located within 100' feet of a fire department connection (FDC) or as approved by the fire code official. Fire hydrants and FDC's shall be located on the same side of the fire apparatus access roadway. (OFC 912 & NFPA 13, 13D, & 13R)

FDCs shall normally be remote and outside of the fall line (collapse zone) of the building typically a distance of 1½ times the height of the building, or as approved by the fire code official.

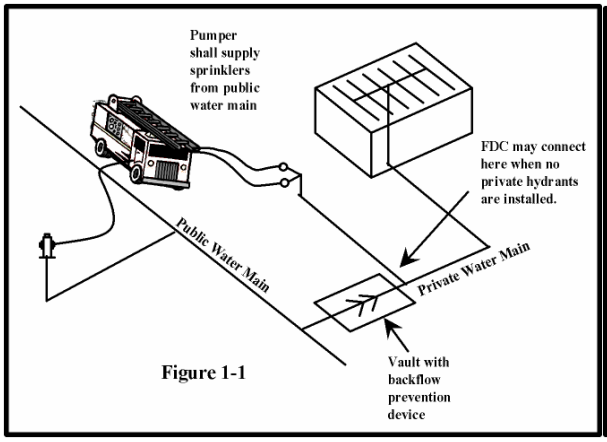


Figure 1-1

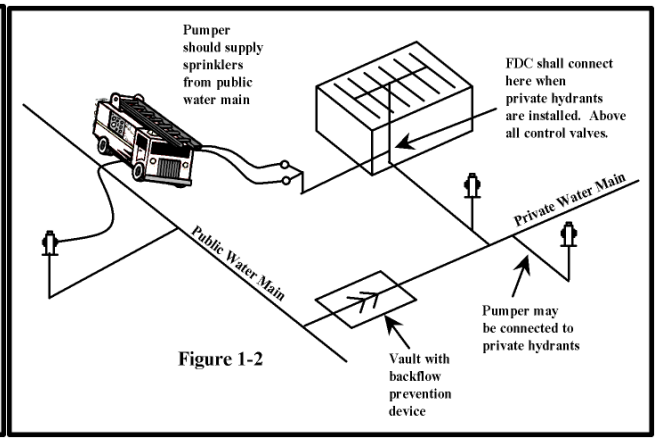


Figure 1-2

Key Boxes & Fire Protection Equipment Access

KEY BOX: A key box for building access may be required. Please contact the appropriate jurisdiction for location requirements or for an order form and instructions regarding installation and placement. (OFC 506)

FIRE DEPARTMENT ACCESS TO FIRE PROTECTION EQUIPMENT: Fire protection equipment shall be identified in an approved manner. Rooms containing fire alarm panels, fire sprinkler risers and valves or other fire detection, suppression or control features shall be identified with approved signs (OFC 509.1)

Emergency Radio Coverage

EMERGENCY RESPONDER RADIO COVERAGE NEW BUILDINGS: All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communications systems of the jurisdiction at the exterior of the building. (OFC 510)

EMERGENCY RESPONDER RADIO COVERAGE EXISTING BUILDINGS: Existing buildings that do not have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communications systems of the jurisdiction at the exterior of the building, shall be equipped with such coverage according to one of the following: (OFC 1103.2)

- Whenever an existing wired communications system cannot be repaired or replaced, or where not approved in accordance with Section 510.1 Exception 1.
- Within a time frame established by the adopting authority.

Fire Watch

FIRE WATCH: Whenever a required fire alarm, detection or suppression system is out-of-service and a life hazard and or distinct fire hazard is present, the fire code official and/or the property owner or manager shall initiate a fire watch. A fire watch is defined as a temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department. Each affected area or building must be patrolled hourly and documented on a written log. Individuals assigned to fire watch duty must be provided with a means of communication such as a cell phone or two-way radio and their only duties shall be to perform constant patrols. The watch must remain in effect until repairs are made and the system(s) are back in-service. When in doubt if a system is required or if a fire watch is needed, contact the local Fire Marshal's Office for consultation and or response. (OFC 901.7 & Appendix N)

EXAMPLES:

The automatic smoke detection system in the Family Birth Center at the local Hospital is taken off-line due to unwanted false alarms and an alarm technician has been dispatched to evaluate the system. This is a required detection system and the patients occupy the floor. A fire watch is required and could be conducted by nursing and or security personnel.

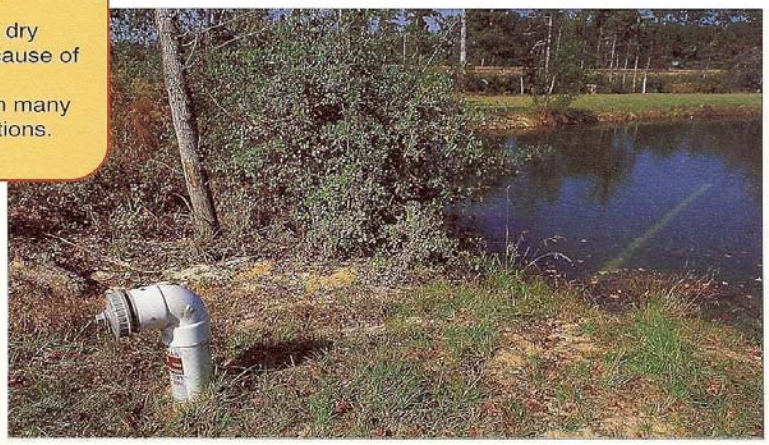
The manual fire alarm system at a local Elementary School is initiating false alarms and is taken off line by school district personnel; the automatic smoke detection and fire sprinkler system are operational. It's Saturday afternoon and the building is not occupied. Although this is a required system, a fire watch is not required as the building is vacant.

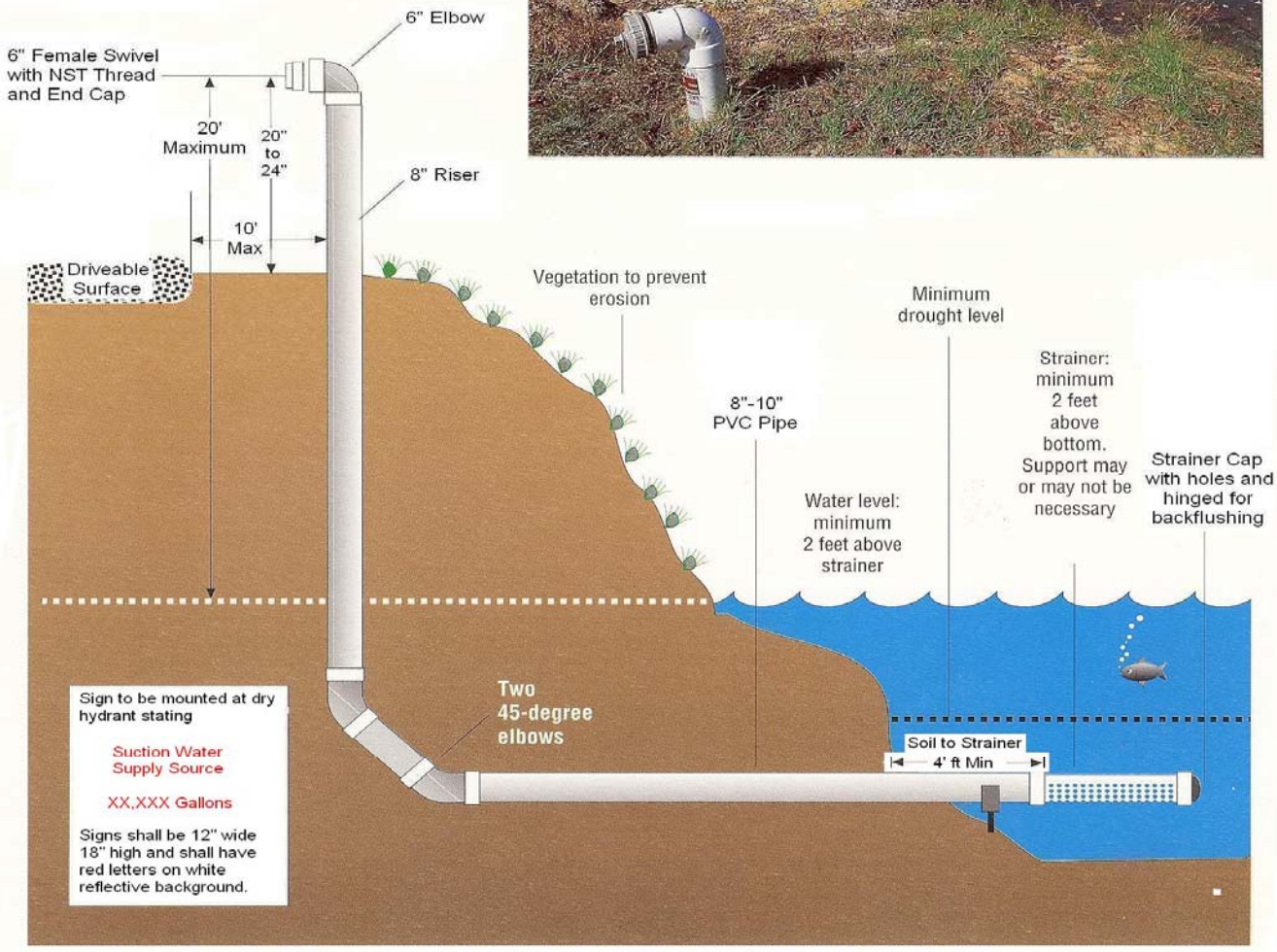
The water main that serves a local apartment complex is damaged in a construction accident rendering the fire hydrants and residential fire sprinkler systems out-of-service. It's Sunday night and nearly all of the apartments are occupied. Both systems are required and a continuous fire watch is needed.

Dry Hydrant Construction

Steel and iron pipe may be used to construct a dry hydrant, but PVC plastic is frequently used because of its low cost, accessibility and low friction loss. Construction details at specific sites can vary in many ways according to local preferences and conditions.

(not to scale)





CISTERN EXAMPLE