



**Menlo Park Fire Protection District
Fire Prevention Bureau**

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***MENLO PARK FIRE PROTECTION DISTRICT STANDARD
WATER SUPPLIES, FIRE HYDRANTS***

SCOPE: This Standard applies to the installation of both public and private water supplies and fire hydrants. Installation, placement, and fire flow requirements for fire hydrants shall be in accordance with this Standard, the 2013 California Fire Code, the currently adopted version of NFPA 24 by the California State Fire Marshal, Nationally Recognized Standards and Manufacturer's Recommendations.

DEFINITIONS

ACCESS POINT: An approved access is required for all new buildings and shall reach to a point (Access Point) within 150 feet of all exterior areas of each building. See also the 2013 California Fire Code, Appendix B.

OCCUPANCY TYPE: The purpose for which a building or part thereof is used or intended to be used.

ON-SITE HYDRANT: Fire hydrants that are located within the property line and are usually privately owned and maintained. However, there are instances where on-site hydrants are publicly owned and maintained by a water purveyor.

PUBLIC HYDRANT: Fire hydrant installed and maintained by the local water purveyor.

TYPE OF CONSTRUCTION: The framework and construction of a building or structure, such as Type I, Noncombustible to Type V Combustible, as classified in one of five construction types defined by the California Building Code.

WATER PURVEYOR: A public utility, a mutual water company, a governmental body, or other entity, owning and operating a water system and holding a valid permit from the State or County Health Department to purvey water.

GENERAL REQUIREMENTS

Timing of Installation.

Fire hydrants and required access roads shall be provided prior to the time of construction.

Installation

Fire hydrants shall be visible and accessible from a required access road. A fire hydrant shall be substantially supported. Fire hydrant installation details shall be in accordance with NFPA 24 and local water purveyor standards. Roadway turnouts not less than 26 feet wide and 20 feet in length shall be required along the roadway at fire hydrant locations.

Underground Supply Piping

After the hydrant location plans are approved, the engineered underground supply piping plans, with hydrants shown at the approved locations, are required to be plan checked and approved prior to installation as follows:

Public Hydrants.

- Underground plans are reviewed and approved by the local water purveyor and Menlo Park Fire District. The installation is inspected by the water purveyor.

On-Site Hydrants.

- Engineered underground plans are reviewed and approved by the Fire Prevention Division. See also Menlo Park Fire District Guideline “Underground Standards.” The installation is inspected by Menlo Park Fire District.

Painting

Public hydrants shall follow local water purveyor standards.

On-Site Fire hydrants shall be painted red.

Reflective Pavement Markers

Prior to occupancy of any structure, blue reflective hydrant location markers shall be placed on the access roads in accordance with Fire District standards. If the final asphalt cap is not in place at the time final occupancy is desired, the hydrant markers shall still be installed and replaced when the final asphalt cap is completed. See drawing marked “TYPICAL HYDRANT MARKER LOCATION.”

Hydrant Type and Size

All new hydrants shall be a minimum 6 inch wet barrel fire hydrant. The hydrant outlets shall be National Standard Thread, NST and shall have one 4 ½ inch and two 2 ½ inch.

Minimum Flow per Hydrant/Required Fire Flow

The required fire flow is based on the 2013 California Fire Code Appendix B.

Number of Hydrants.

The number of hydrants is based on use/occupancy type, required fire flow, distance and access considerations. See 2013 California Fire Code Appendix C.

Changes/Relocations.

Fire hydrants shall be installed at the locations approved by the Fire Prevention Division. Any changes or relocation of fire hydrants from the approved hydrant location on the plan shall be approved by the Fire Prevention Division prior to installation or relocation.

Out of Service Fire Hydrants

When fire hydrants are for any reason, nonoperational, they shall be covered with black plastic bags and the bags shall be secured in place.

SCHOOLS

Public Schools

California Fire Code Appendix BB and CC shall be used to determine distance/spacing, and number of hydrants. The State Fire Marshal (SFM) requires the Division of State Architect (DSA) to request water and access requirements and approval from the local jurisdiction.

Private Schools

California Fire Code Appendix B and C shall be used to determine distance/spacing, and number of hydrants.

FIRE HYDRANT LOCATION PLAN CHECK

A fire hydrant location plan check is required for all projects where new buildings or additions to buildings are proposed. See also Section 3 of this Standard for general guidance. The following information must be provided:

- a) A Menlo Park Fire District Plan Review application
- b) Two (2) copies of a scaled site/plot plan.
- c) Show existing and proposed hydrant locations. Indicate size of hydrant(s), number and size of outlets (i.e. 6" wet barrel with one 4" and two 2 1/2" outlets).
- d) Show streets, driveways, access roads (including parking lots), gates and all structures existing and proposed.

By checking the plans submitted and guided by the 2013 California Fire Code Appendix B and Appendix C, Nationally Recognized Standards such as NFPA 24, and this Local Ordinance, the Fire Prevention Division will be able to verify the number of hydrants, their size, placement, location and required flow. This information will be indicated on the approved hydrant location plans. Once approved, one copy will be kept for the Fire Prevention file and the others returned to the applicant. Final approval is subject to on-site inspection.

GENERAL GUIDELINES FOR FIRE HYDRANT PLACEMENT

A. NOTES:

1. Hydrants shall have a concrete pad.
2. Consult local Building & Safety for permit requirements for walls.
3. Bollards may be required.

4. Location of front bollards shall be adjusted to provide clearance for outlets, and shall have approval of the Fire Prevention Division.
5. Start at the entrance (s) to the project under review.
6. Use existing hydrants if within the allowable distance based upon the type of project. (Existing hydrants may need to be upgraded) If not sure about existing hydrants, do a site inspection first.
7. Flag lots may present a problem. Hydrant location is critical and must be verified by the Fire Prevention Division.
8. If there is no on-site access required from the street, measure from the closest point on the street (nearest the structure) to the hydrant in the path of travel.
9. Do not place along sharp bends in access road/driveway.
10. When locating on a corner, place the hydrant 5-10 feet past the BCR (beginning curb return).
11. Do not place in the bulb of a cul-de-sac.
12. Place on the right side of the street is possible, based upon the normal response from the first-in fire station.
13. Place on property lines between lots.
14. If driveways are shown, try to place where there is the least impact to on-street parking.
15. Keep 25-50 feet from any building if possible.
16. Try to place where the road/driveway is level.
17. If there is a slope behind the hydrant, require a retaining wall 3 feet back.
18. Require concrete pads around hydrants.
19. Watch grade level, walls and obstructions, anywhere you are considering placing a hydrant.
20. Any changes in location of fire hydrants shall be approved by the Fire Prevention Bureau prior to installation.
21. Fire hydrants and water lines must be in the water purveyor's easement or within easements to the property owners that will benefit from the hydrant.
22. Make sure you denote the hydrant type, size and number of outlets on the approved hydrant location plans.

TYPICAL HYDRANT MARKER LOCATION

Figure 1

TWO LANE STREET

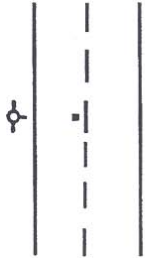


Figure 2

MULTI-LANE STREET

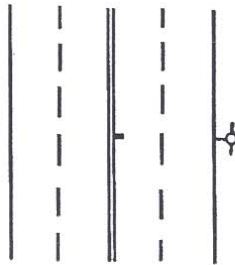


Figure 3

TWO LANE STREET
AT INTERSECTION

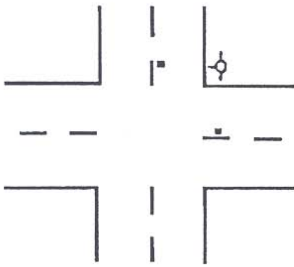


Figure 4

FOUR LANE STREET WITH TURN LANE
AT INTERSECTION

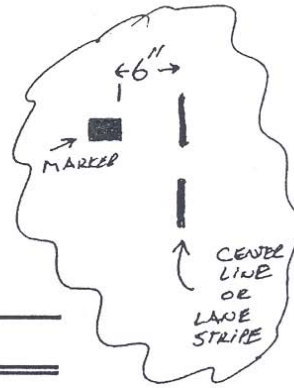
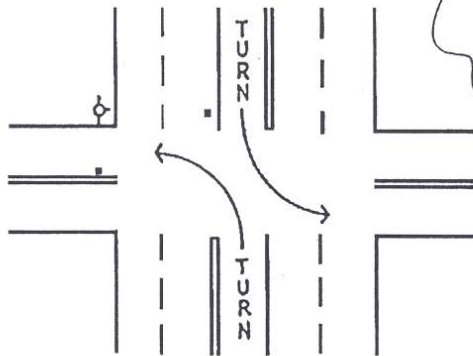


Figure 5

MULTI-LANE STREET WITH
TURN LANE

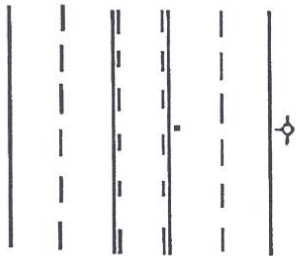


Figure 6

FREEWAYS AND EXPRESSWAYS

