



**EL SEGUNDO FIRE DEPARTMENT**  
**Fire Prevention Division**

**Regulation H-2-a**  
**Fire Hydrant and Private Fire Main**  
**System Installation**

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**I. INTRODUCTION**

- A. **Purpose:** The purpose of this regulation is to establish a consistent regulatory standard for the installation of fire hydrants and private fire service mains.
- B. **Scope:** These regulations apply to every building and other structure hereafter constructed and to those existing structures designated by the Fire Chief. Fire hydrants are required for buildings or structures where any part of the buildings is more than 150 feet from a street or public way.
- C. **Authority:** El Segundo Municipal Code Sections 13-10-1 and 13-10-2, California Fire Code, Chapter 1, Division II, Sections 102.9 and 104.1

**II. RESPONSIBILITY**

- A. Individuals, Companies and Corporations that have private fire hydrants and fire main systems shall be responsible for compliance with this regulation.
- B. The Fire Prevention Division of the El Segundo Fire Department shall approve all private fire hydrants and fire main systems.

**II. POLICY**

Private (on site) fire hydrants are required for buildings or structures where any part is more than 150 feet from a street or public way. For the purpose of determining the distance of a building from the fire apparatus access, the fire apparatus access point shall be considered the centerline of the street. Public fire hydrants shall be installed in accordance with this Regulation and any standards or regulations adopted or enforced by the El Segundo Department of Public Works, Water Division. Private fire hydrants shall be installed and maintained in accordance with the California Fire Code, as adopted by the City of El Segundo, all adopted standards and this Regulation.

### III. REQUIREMENTS

#### A. Public Fire Hydrants

1. Fire hydrants shall be installed by the developer to meet the fire flow requirements for the building or buildings.
2. Fire hydrants shall be spaced 300 feet (plus or minus 50 feet for an individual hydrant) apart on the street or streets bordering a new commercial, industrial, or multi-residential building or addition over 2500 square feet.
3. Fire hydrants shall be located on the same side of the street as the protected building for streets over 80 feet in width or on divided streets.
4. Hydrants shall be installed before the beginning of construction of the building as set forth in the California Fire Code Section 1412.1.
5. Authorization for installation of hydrants shall be approved by the El Segundo Department of Public Works, Water Division. It is recommended that this be done as early in the building process as possible to avoid delay in construction and occupancy of the building.
6. Adequate water mains required to provide the fire flow shall be provided by the developer as approved by the Water Department. In no case shall they be less than 6 inch in diameter. Sectional valves shall be installed as required by the Water Department.
7. Fire hydrants shall be a James Jones Model J-3775-PL or equivalent fire hydrants with two 4 inch and one 2 ½ inch outlets in industrial areas. The lowest outlet shall be 18 inches to 24 inches above finished grade.
8. Hydrants shall be located as follows:
  - a. At least 30 feet from fire access roads.
  - b. Not more than 15 feet from the street curb.
  - c. At least 40 feet from buildings.
  - d. Approximately 30 feet from street corners.
  - e. A maximum 80 feet from the building's FDC
9. Public fire hydrants shall be painted school bus yellow.

#### B. Private On-Site Fire Hydrants

1. Private fire hydrants shall be installed by the developer or building owner as may be required when any portion of the building is in excess of 150 feet from a fire hydrant connected to the public water supply on the public street, as required in the California Fire Code, Section 507.5.1, City of El Segundo amendment.
2. Private fire hydrants shall have a water supply which will provide the fire flow required by the California Fire Code Section 507.3 and Appendix B to supply all hydrants. Where fire sprinklers and/or standpipes are supplied from the same main, the minimum flow shall exceed the combined flow requirement for the sprinklers and standpipe systems.

3. Any fire hydrant system having 2 hydrants shall be looped or formed at a T. Any fire hydrant system having more than 2 hydrants shall be a looped system and shall be provided with 2 connections to the city water system or to an alternate water supply.
4. All private fire main systems shall have double detector check valve assemblies as required by the El Segundo Department of Public Works, Water Division at each city water connection.
5. All connections to the city water system must be approved by the El Segundo Department of Public Works, Water Division prior to construction of the system.
6. Fire hydrants shall be a James Jones Model J-3775-PL or equivalent fire hydrants with two 4 inch and one 2 ½ inch outlets. The lowest outlet shall be 18 inches to 24 inches above finished grade.
7. Sectional valves must be provided in the system to isolate portions of the system so that a break in the mains will not cause loss of water to the whole system. A sectional control valve must be installed at a point not to exceed a total of five fire hydrants and/or sprinkler systems between sectional valves.
8. Where street key type sectional valves are installed due to the fire apparatus roadway location, the valve must have a Pratt Diviner Position Indicator, or equivalent valve position indicator installed.
9. Where street key type sectional valves are installed due to the fire apparatus roadway location, the valve street cap/cover shall have the words "FIRE SECT" welded into the top of the cap.
10. All street key type valve (private fire hydrant control and sectional valve) street cap/cover shall be painted red.
11. Each private fire hydrant must have a break-off check valve and a street key control valve installed.
12. Private fire hydrants shall be painted red to distinguish them from public hydrants. Chrome fire hydrants are acceptable.
13. Private fire hydrants shall be located on a fire department apparatus access road – fire lane or approved alternate and shall not be in excess of 5 feet from the paved area. They shall be approximately 300 feet apart unless another location is approved by the Fire Chief. See also Regulation A-1-a, "Access Roadways for Fire Apparatus."
14. Where the location of a fire hydrant would make it vulnerable to vehicular damage, appropriate vehicle impact protection (bollards) shall be provided. The bollard installation shall be as follows:
  - a. Constructed of steel not less than 4 inches in diameter and concrete filled.
  - b. Spaced not more than 4 feet between posts on center.
  - c. Set not less than 3 feet deep in a concrete footing of not less than a 15-inch diameter
  - d. Set with the top of the posts not less than 3 feet above ground

- e. Located not less than 3 feet from the hydrant.
15. All underground fire systems shall be inspected by the Fire Prevention Division before being covered. Such inspection shall include the following:
  - a. A visual inspection of all thrust block holes (pre-thrust).
  - b. Thrust blocks, piping, valves and hydrants.
  - c. A 200 PSI hydrostatic pressure test of the fire water main systems or if the test pressure is greater the test will be at least 50 PSI above the street main pressure. To prevent the pipe from buckling under pressure or flow the sections of pipe may be covered in the center with all of the joints exposed.
  - d. A flush of the private fire main system prior to connection of any fire sprinkler system risers.
  - e. A flow test of the hydrants and system from the most hydraulically remote location. Where multiple public water service connections exist, a flow test shall be performed to measure the flow and pressure from each connection separately and a flow test of the combined water supply.
16. Fire hydrants and private fire main systems are required to be maintained in operable condition at all times and must be repaired or replaced when defective by the owner or tenant as may be required by any lease agreements and as set forth in the California Fire Code Section 901.6

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Approved By:   
James Carver  
Fire Marshal