

APPENDIX D

South Placer Fire Protection District 6900 Eureka Road, Granite Bay CA. 95746 (916) 791-7059

The following are general requirements of the South Placer Fire Protection District for new commercial building sites. These comments are for site plans only. Plans submitted for approval shall reflect all requirements that apply. All of the following comments shall be printed on a comment sheet attached to the plans submitted for approval. Prior to final approval, all applicable fees must be paid.

Commercial Building Site Infrastructure

Fire Safety During Construction, Alteration or Demolition of a Building

Buildings undergoing construction, alteration or demolition shall be in accordance with **Chapter 33** of the most current California Fire Code.

Fire Alarm System

Where required – new buildings and structures. An approved fire alarm system installed in accordance with the provisions of the California Fire Code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5.

Except for Group R and Group U occupancies, all new unsprinklered buildings shall have an approved automatic fire alarm system installed when the total fire area is equal to or greater than 1500 square feet. In addition, Group A, E, and M occupancies in buildings of any square footage, sprinklered or unsprinklered, shall be provided with an approved automatic fire alarm system.

Not less than one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or water-flow detection devices. Where other sections of the California Fire Code allow elimination of fire alarm boxes due to sprinklers or *automatic fire alarm systems*, a single fire alarm box shall be installed *at a location approved by the fire code official*.

Monitoring

Fire alarm systems required by this chapter or by the California Building Code, shall be monitored by an approved Central Station Protective Signaling Service (UUFX) that is listed in the current edition of the UL Online Certifications Directory unless otherwise required by the California Fire Code.

Alarms. One exterior approved audible alarm and visual strobe device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system. Visible alarm notification appliances shall not be required except when required by Section 907. A single approved audible/visual device shall be provided in the interior of the building in a normally occupied location.

Fire Control Room

An approved fire control room shall be provided for buildings protected by an automatic sprinkler system. The room shall contain all sprinkler system risers, fire alarm control panels, and other fire equipment required by the chief. Fire control rooms shall be located within the building on an outside wall at a location approved by the chief and shall be provided with a means to access the room directly from the exterior with an approved door of minimum dimensions of 36" X 80". Durable signage reading "FIRE CONTROL ROOM" with letters not less than three inches in height shall be affixed to the exterior of the door. A key box complying with section 506 shall be installed adjacent to the door.

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Dimensions

Fire control rooms shall have a minimum dimension of five feet and shall be not less than 35 square feet in usable area. The fire sprinkler riser shall be located between 12 inches and 18 inches from the exterior wall and at least 12 inches from any other wall. The fire control room may contain other building service equipment. No other storage will be permitted.

Fire Sprinkler System

Where required in existing buildings and structures.

An automatic sprinkler system shall be provided in existing buildings and structures where required in Chapter 11. In addition, except for Group U and R-3 occupancies, when the area of an existing building is increased to 3600 square feet or more, the addition and existing building shall be provided with an approved automatic fire sprinkler system throughout.

Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in the California Fire Code Sections 903.2.1 through 903.2.19 and as follows:

1. For all new buildings and structures, except Group R-3 and U occupancies, when the total fire area is 3600 square feet or greater.
2. Automatic sprinkler protection shall be provided in all accessible combustible and non-combustible attic spaces, sub-floors, or areas above ceilings, which are greater than six inches in height, in a fire sprinklered structure.
3. For new buildings having no designated use or tenant, the minimum sprinkler design shall be Ordinary Hazard Group 2 or as prescribed by the fire code official.

Bridges

Bridges designed for major ingress/egress roads serving subdivisions or used as part of a fire apparatus access road shall be constructed and designed to meet standard, AASHTO HB-17. Bridges shall be no narrower than the driving portion of the road serving each end. The bridge or culvert crossing shall be designed for a live load of a minimum of 75,000 pounds gross vehicle weight. Vehicle load limits shall be posted at both entrances to bridges and culvert crossings.

Building Access

Access roadways shall extend to within 150 feet of all portions of the exterior walls of the first story of any building.

Dead End Access Roads

Dead-end fire apparatus access roads more than 150 feet in length shall be provided with an approved turnaround for fire apparatus. (See Attached Details)

Gate Entrances

Gate entrances shall be at least two feet wider than the width of the traffic lane serving that gate. All gates providing access from a road to a driveway or private road shall be located at least 30 feet from the roadway and open to allow a vehicle to stop without obstructing traffic on that road. Gates shall be accessible to the fire district by approved electric key switch; strobe entry, person gate and standard key pad access code. Gates shall be provided with an emergency power source that will open the gates in the event of a power failure. During a power emergency, gates shall automatically open and remain open during the period when the primary source of power is not available.

Electronically opened access gates located across fire apparatus access roads shall be provided with an approved strobe switch access system that interfaces with the TOMAR Model 780-1228-PRE or 3M OPTICOM traffic preemption optical signal emitter provided on all District emergency vehicles. An acceptance test of the emergency vehicle strobe switch system shall be witnessed by the fire department prior to final approval. Gates shall be coded to allow a minimum of fifteen (15) minutes of open access time when activated by the strobe entry device.

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All electronically opened perimeter access gates located across fire apparatus access roads shall be provided with a vehicle detection loop on the out-bound drive aisle from the site. The vehicle detection loop shall be placed a minimum of ten-feet from the gate to permit fire apparatus to activate the detection loop without interference from the gate. The vehicle detection loop shall be provided with a 30-second delay prior to closing the gate.

Hydrants

Hydrants shall be wet barrel type with two 2-½ inch discharges and one 4-½ inch discharge, with individual valves for each discharge. (RICH 960 or equivalent). Two-way blue reflective pavement markers shall be placed in the roadway (eight inches from the center line on the hydrant side) at each hydrant location. The area around the hydrant will be kept clear of obstructions including fences, trees and shrubs so as to provide for clear access to the hydrant from the roadway. The center of the lowest discharge shall be a minimum of 18 inches and a maximum of 28 inches off the ground. Hydrant setback location shall meet the appropriate water agency standards, but shall not be greater than 6' from the face of curb or edge of pavement if no curb is present. Water supply and hydrants to be provided before any building construction is allowed. Final acceptance of the water supply system shall be granted only after testing and inspection by the fire district.

Hydrant Spacing

Hydrants shall be spaced a maximum of 300 feet apart. One hydrant shall be placed within 40 feet of each fire department connection when the building is protected by an automatic fire sprinkler system. Ballards shall be provided to protect appliances from vehicle damage when necessary.

Water Supply

On site water supply for firefighting shall be as follows for new commercial buildings: The minimum number of fire hydrants and amount of available water for commercial buildings shall be determined by the size of the building, the planned use for the building and the fire protection proposed for the building. Fire flow for new commercial buildings shall be no less than those amounts specified in Appendix B, Section B105.1(2) of the 2016 California Fire Code. All proposed water supplies shall come from a reliable source such as a fixed underground water distribution system or a static water system equaling or exceeding the National Fire Protection Association (NFPA) Standard 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting". (A reduction in fire flow may be allowed when the building is provided with an approved automatic sprinkler system, but in no case shall the fire flow be less than 1,500 gallons per minute at 20 pounds residual pressure). THE FIRE FLOW FOR THE PROPOSED BUILDING SHALL BE DETERMINED BY THE FIRE DISTRICT AND INDICATED ON THE FINAL APPROVED PLANS.

Road Width

Driveways, thruways, entrances and fire access roads shall be 26 feet in width for commercial buildings 2 stories or less in height and 28 feet for commercial building 3 stories or more in height where aerial apparatus is required. Vertical clearance shall be 15 feet for the width of the road. For the purpose of this section, roadway width shall mean driving surface to face of curb or flow line of rolled curb. Emergency access roadways shall be marked with approved signs stating 'EMERGENCY FIRE ACCESS ROAD'. All roadways and access roads shall be completed before any building construction. (See Attached Details)

Parking

When provisions for parallel parking are included in the width of a street or roadway, a minimum eight (8) foot width shall be allocated for the parking space.

There shall be no parking on fire access roadways less than 34 ft. in width or in required fire apparatus turnaround areas. Parking will only be allowed in designated parking areas. Parking will be allowed on one side of the road on roadways 34 ft. to 42 ft. On roadways, over 42 ft. parking will be allowed on both sides.

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When the roadway width restricts parking, 'NO PARKING FIRE LANE' signs shall be posted every 200 ft and curbs to be painted red with 'NO PARKING FIRE LANE' stenciled on them every 25 feet.

Roadways and Access Routes

The minimum number of access roads serving new commercial buildings shall be determined by the size of the building, the planned use for the building and the fire protection proposed for the building.

Roadway Grades

Fire Apparatus access roads and response routes shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire chief, when the road is surfaced with asphalt or concrete.

The grade for all private lanes and driveways over 16% shall be approved by the Fire Marshal.

In order to accommodate grades in excess of sixteen (16) percent, the access road shall be designed to have a finished surface of grooved concrete or rough asphalt to hold a 45,000 lb. traction load. The concrete grooves shall be ¼ inch wide by ¼ inch deep and ¾ inch on center. The road design shall be certified by a registered engineer and approved by the chief.

Roadway Radius

The inside turning radius for an access road shall be 30 feet or greater. The outside turning radius for an access road shall be 50 feet or greater. (See Attached Details)

Road Surface

Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete, or other all-weather driving surface capable of supporting the imposed loads of fire apparatus weighing at least 75,000 pounds

Roadway Turnarounds

Turnarounds are required on driveways and dead end roads as specified. Cul-de-sac's radius shall be 42 feet of driving surface. Radius is measured from face of curb or flow line of rolled curb. If a hammerhead/T is used, the top of the (T) shall be a minimum of 80 feet in length. (See Attached Details)

Final Plans Accepted

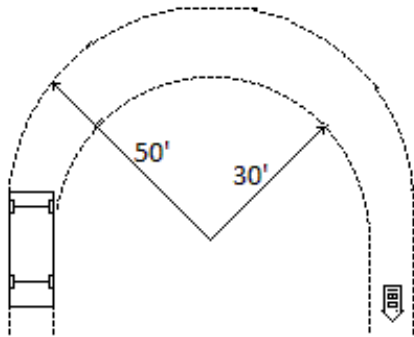
The final plans shall be approved only when stamped and/or signed by authorized the South Placer Fire Protection District personnel.

Commercial Building Final Acceptance

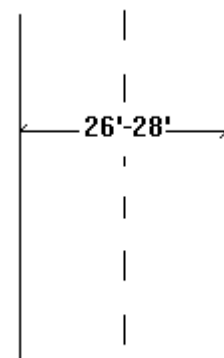
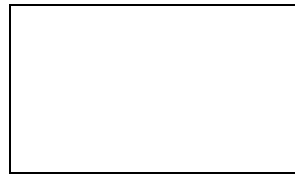
Final acceptance of the project is subject to inspection and testing from the South Placer Fire Protection District. 72-hour notice required previous to inspection and testing.

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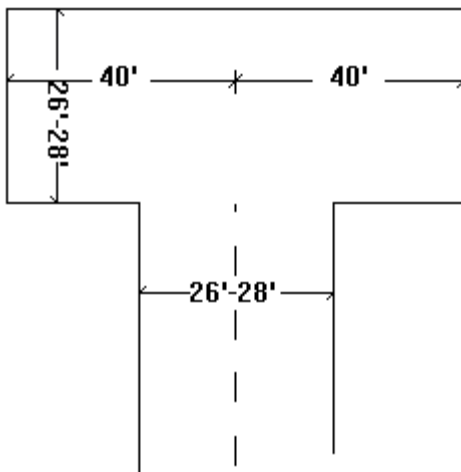
Attached Details Not Drawn To Scale:



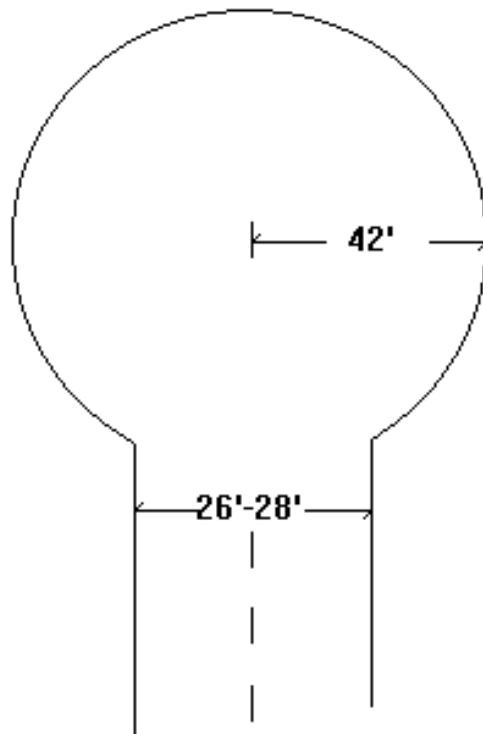
50' Outside; 30' Inside
Turning Radius



Commercial Building
Access Road

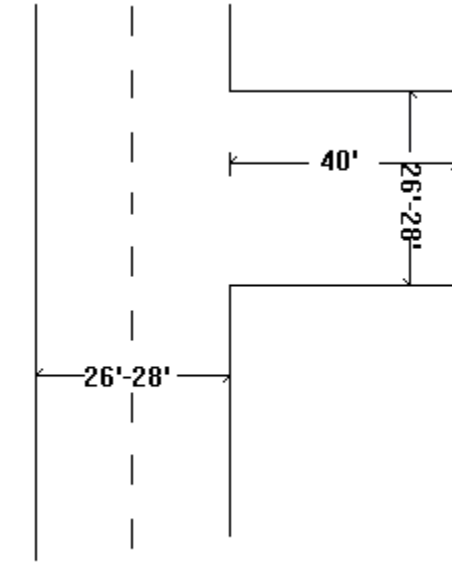


80' Hammerhead
Turnaround
Commercial Roadway

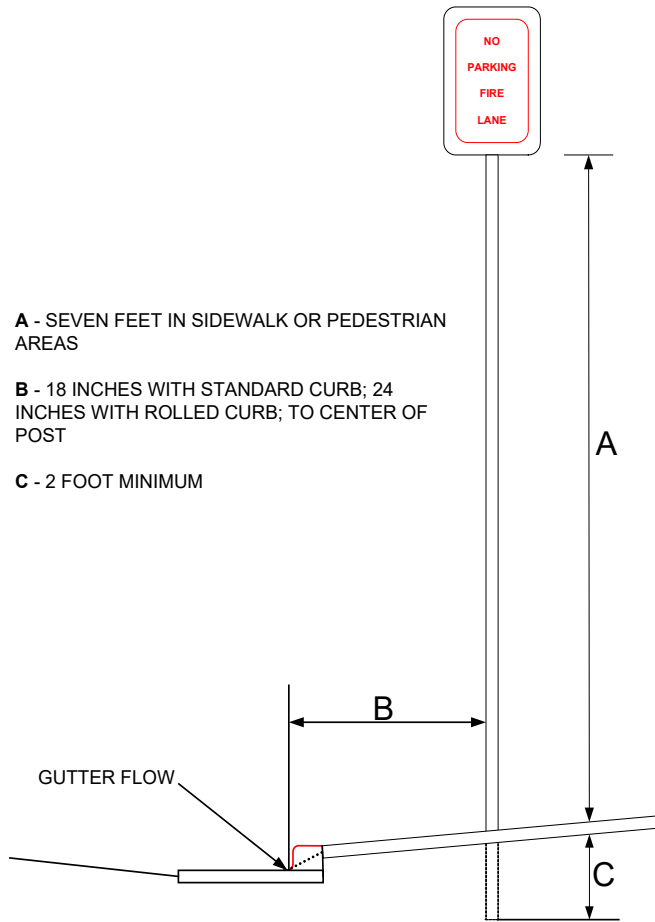


Turnaround

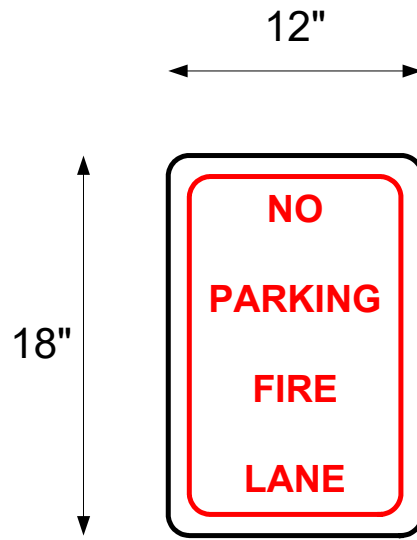
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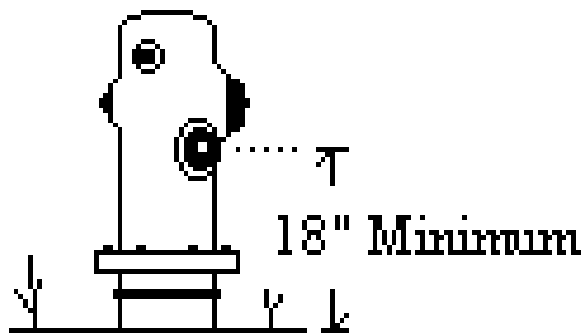
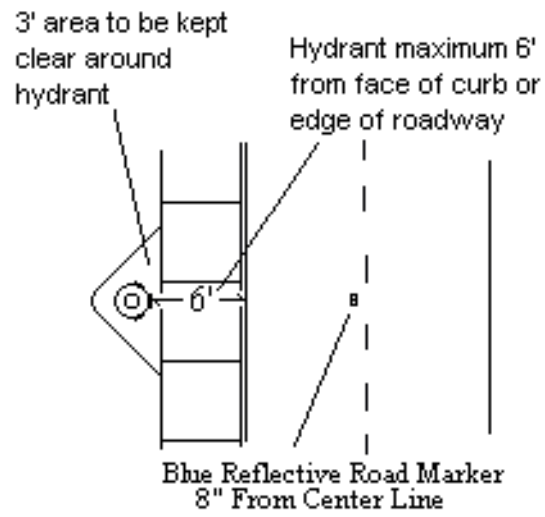
Turnaround
Commercial Roadway



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