



Kerrville Fire Marshal

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Section 2

Plan Review Process

Site Plans - Commercial

This guide is intended as a resource for the civil construction plan submittal requirements for commercial properties.

Civil construction plans consist of the approved site plan, roadways, fire lanes, landscape plans, water, sewer, drainage, and other utility plan drawings. Civil construction plans are reviewed to determine compliance with Fire Marshal requirements as they relate to site construction and layout, building size, fire lanes, fire department access, fire hydrants, and other issues as designated. These requirements can be found in the *International Fire Code*, as adopted and amended by the City of Kerrville. **Plans are not reviewed or approved for fire protection system installation.** In an effort to expedite the Fire Marshal's civil plan review process, please ensure the following list of items are incorporated into the proposed civil construction plans.

Please note that the below information is intended as a guideline and, as such, does not constitute all requirements. Additional requirements may be required based upon each individual plan.

General Comments

1. Site plan in the civil construction drawing set shall be the site plan approved by the Fire Marshal.
2. Submitted plans are required to have affixed a Texas Registered Professional Engineer and or a Texas Licensed Architect's seal and signature.
3. Indicate on the plan building construction type, occupancy type, total number of floors, total height of the building, and the total square footage of the building.
4. Indicate North on the plans.
5. Name and address of the project.
6. Property and or lot lines will need to be indicated on the plan.
7. Indicate street frontages.
8. Location of all proposed and existing buildings and structures.

Fire Access

9. If fire lanes are provided, they shall meet the criteria stipulated in the *Fire Lanes Section*.
10. Size, type and location of turnarounds are required to be approved by the Fire Marshal. (see *Approved Fire Lane Turnaround Section*)
11. Gated access is required to be reviewed and approved by the Fire Marshal. (See *Access Control Gates Section*)
12. A minimum of two (2) points of emergency vehicle access shall be provided. The two points of access shall be a minimum of one half of the length of the maximum overall diagonal dimension of the property or area to served, measured in a straight line between accesses. This includes a cross access/mutual access fire lane.
13. Approved, unobstructed fire department access (fire lanes) shall be provided such that all portions of the exterior of the building shall be within 150 feet, as the hose lays, of a fire lane and/or public street.

14. Additional fire lanes may be required based upon the layout of the site and size of the building(s) with regards to Fire Department access, mutual/cross access, special hazards or as designated by the Fire Marshal.
15. Fire lanes must meet the following criteria:
 - a. Fire lanes with a width of 24 feet, require an inside turning radius of 25 feet and an outside radius of 50 feet.
 - b. Fire lanes with a width of 26 feet, require an inside turning radius of 25 feet and an outside radius of 50 feet.
 - c. Minimum clear vertical height clearance of 13 feet 6 inches.
 - d. Support 75,000 pounds for vehicle weight.
 - e. Cannot exceed 10 percent in grade change without approval of the Fire Chief.
 - f. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with minimum approved fire apparatus access roads capable of accommodating fire department aerial apparatus.
 - i. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.
 - ii. Fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm) in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height.
 - iii. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building.
16. Dead end fire lanes in excess of 150 feet shall be provided with an approved turnaround.
17. Fire Lanes shall be shaded on the site plan with clearly indicated width, radii and construction details.

Fire Hydrants and Water Lines

18. When fire hydrants are required, they shall meet the criteria stipulated in the *Fire Hydrants Section*.
19. Existing fire hydrants shall be indicated on the plans.
20. Proposed new fire hydrants shall be indicated on the plans.
21. Location of valves.
22. Fire hydrant type and construction details. Fire hydrants are required to have 2 - 2½" connections and 1- 5" steamer connection.
23. Type and size of underground water lines serving the fire hydrants and other utility services.
24. Size and location of underground water lines service for the fire sprinkler system.
25. Location of Backflow Prevention
26. **Required fire flow must be achieved in accordance with the *International Fire Code, Appendix B*.**
27. Fire hydrants shall be so spaced such that all portions of the exterior of the building are within 500 feet as the hose lays.
28. Spacing between fire hydrants shall not exceed 500 feet. Spacing may be required to be reduced based upon the required fire flow and site conditions.
29. Distances between hydrants shall be measured along the route the fire hose is laid by a fire apparatus vehicle, not as the "crow flies".
30. Proposed location of the Fire Department Connection (FDC). Note that the FDC is required to be along the fire lane and within 75 feet, as the hose lays, of a fire hydrant.
31. The Fire Department Connection is required to be located away from the building at a minimum distance of 1½ times the height of the building or not less than 40 feet, whichever is greater, or at an alternate location approved by the Fire Marshal.
32. A minimum of a 5 foot wide pathway shall be provided from the fire hydrant to the FDC. Parking/loading spaces are not considered a clear pathway.
33. See *Fire Hydrants Section* for additional information regarding location and spacing.

Additional Site Plan Requirements

34. Minimum 10 foot wide, clear and unobstructed path around the exterior of the building with a maximum 3 percent cross-slope. This is to include a path around AC units, large shrubs, large trees, gates or other construction or utilities unless otherwise approved by the Fire Marshal.
35. Building or facility size, in square feet, to be indicated on the site plan.
36. Building or facility construction type to be indicated on the site plan.
37. Building height to be indicated on the site plan.
38. Indicate if a fire sprinkler system will be installed.
39. When a building is equipped with an electric fire pump(s) for the fire sprinkler system, a secondary electrical feed system shall be installed to power the pump motor(s). An automatic switching or transfer system shall be installed and must be capable of automatically switching the fire pump electrical supply to the secondary feeders upon detection of loss of power from the primary pump electrical feeders.
40. Fire hydrants and fire lane access roadways shall be installed and maintained **PRIOR TO VERTICAL CONSTRUCTION** of any building or structure.

Fire Protection Systems

Site Plans are not reviewed, or approved, for fire protection system installation or underground fire service line installation.

41. Plans must be submitted for review and approval of any fire protection system prior to installation.
NO EXCEPTION.

A Texas Department of Insurance licensed underground fire line contractor must install the fire sprinkler underground main from the point the water line leaves the circulating water system (utility main) and is dedicated to fire protection use, to a point 5 feet inside the building and 1 ft. above the finish floor. A Texas Department of Insurance licensed fire sprinkler contractor must install the fire sprinkler aboveground piping system.