



WINDSOR FIRE PROTECTION DISTRICT PLAN REVIEW GUIDELINES



Windsor Fire Protection District (WFPD) has developed this guide to assist you with the planning and construction of projects within the District's boundaries. This document is intended to be a guide to the common fire- and life-safety standards applied by WFPD; it is not intended to replace any specific code references.

Please review your plans for compliance with the guidelines set forth in this document prior to submitting the plans to WFPD. Your compliance with the noted requirements will help us process your plans in a timely fashion.

Windsor Fire Protection District adopts all current fire and life-safety codes. **Note: *Should there be a conflict between two or more code entities, the most stringent code shall apply.***

1. **Plan Submission:** Two sets of plans specifically for WFPD shall be submitted. Review the referenced codes for specific requirements regarding your proposal prior to submitting your plans. Identified requirements shall be addressed within your plan submission.

The Fire Marshal will provide written comments regarding each project. Plans that do not provide required elements/information will require submittal of amended plans and payment of additional fee (see Item 2 below). Each approved plan will receive an approval letter from WFPD. Since conditions may be identified that modify the actual plan approval, it is essential that the letter be reviewed and that requested plan changes be made.

Note: An 8.5" x 11" detailed site plan shall be provided when the plans are submitted to WFPD. WFPD will use this plan for preincident planning.

2. **Fees:** WFPD plan review fees are \$70.00 per hour with a one-hour minimum. Payment of the one-hour minimum is due each time plans are submitted. In the event a plan review session exceeds one hour, an invoice will be issued for any additional monies due.

Because WFPD is a small department with limited staffing, occasionally it is necessary for WFPD to subcontract with consulting services to assist with addressing fire- and life-safety code issues, usually for very large and/or complex projects. When this is necessary, the associated costs are billed to the applicant.



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3. **Inspections:** WFPD inspection fees are \$70.00 per hour with a one-hour minimum for the initial inspection. Additional inspections made necessary by malfunction, code non-compliance, and/or vendors who are not prepared or who are not there at scheduled inspection time will be charged at the rate of \$70.00 for the first reinspection, \$140.00 for the second reinspection, and \$280.00 for the third reinspection. Reinspection fees must be paid prior to the inspection.

Inspections must be scheduled a minimum of 24 hours in advance by calling WFPD at (707) 838-1170. A WFPD inspector will conduct a field inspection to approve permitted work. ***The stamped, approved plans, WFPD approval letter, and Town of Windsor permit job card must be on-site for inspection to take place.***

Inspections may include but not be limited to:

- **Foundation Inspection:** Inspected for compliance with access, fire protection, and vegetation management requirements prior to combustible construction.
 - **Fire Water Supply Storage, Supply Lines, and Fire Hydrants:** Inspection of the underground fire line system, including pressure test of the underground piping prior to covering and the flushing of the underground piping to ensure debris is cleared. These inspections shall occur prior to combustible construction if there are no approved fire hydrants within 150 feet of the building pad.
 - **Fire Sprinkler System:** Inspection of piping welds prior to pipe installation (except R-2), a rough install and hydrostatic pressure test of the overhead sprinkler piping to ensure there is no leakage, and a final inspection to ensure alarms and designed flow requirements are met.
 - **Fire Alarm System:** A functional test to ensure the system has been installed in accordance with the approved plans and that the required visual and audible appliances are located appropriately.
 - **Building:** A final building permit clearance to ensure fire- and life-safety compliance in accordance with the approved plans.
4. **Combustible Construction Requirements:** (CFC 901.3) Access roads, required fire protection water supply, and fire hydrants shall have approved plans, and installation shall be complete and accepted by a WFPD fire inspector ***prior to bringing combustible construction materials onto the site.***
5. **Building Addressing:** (CFC 901.4.5) Illuminated addressing shall be provided on all buildings. Illumination may be internal or may be provided from a dedicated external source. Addresses shall comply with the following:
- a. **Number Size & Appearance**
- Commercial: Minimum height of 12 inches with 1-inch stroke



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- Residential: Minimum height 4 inches with a 1-inch stroke
 - Suite Numbers: Minimum height 6 inches with a minimum of 2-inch stroke
 - Number color shall contrast with background color
- b. **Location**
- On all exterior sides of the building that face the fronting street
 - At a height providing the required visibility
 - Generally located prior to the termination of the exterior walls and plainly visible and legible from the road on which the building is located. The address shall not be located within alcoves, building projections, nor behind landscape features.
- c. In addition, buildings located further than 30 feet from the street and multi-building complexes shall have an address posted at each driveway entrance that shall be visible and legible from both directions of travel along the road on which the address is located.
6. **Fire Department Access:** (SCC13-29) Fire apparatus access roads shall provide approved access to within 150 feet of all exterior portions of the first story of all buildings, as measured by an approved route around the exterior of the building(s). Access roadways shall comply with the following:
- a) **Fire Lanes:** All fire apparatus access roads shall be identified as “Fire Lane” in accordance with CVC Section 22658.
 - b) **Surface:** (SCC13-30) Access roads shall be designed and maintained to support 40,000 pounds (the imposed loads of fire apparatus) and to provide an all-weather surface. On level areas and on grades of less than 5 percent, roads and driveways shall be constructed with a minimum base of 8 inches of compacted Class 2 aggregate. On grades of 5–10 percent, a seal-coated surface shall also be provided. Grades of 10–15 percent shall provide 2 inches of asphalt concrete above the required base. (See SCC 130-30 & 31 for grades exceeding 5 percent; Fire Safe Standards Drawing 12)
 - c) **Width** (SCC 13-34) Fire apparatus access roads shall provide a minimum of 20 feet of unobstructed width. Wider roads may be required in certain circumstances.
 - d) **Turning Radius** (SCC13-32) Required access roads and drives shall provide a minimum 25-foot inside and 50-foot outside turning radius (Fire Safe Standards Drawing 9).
 - e) **Vertical Clearance** (SCC13-33) There shall be an unobstructed vertical clearance of 15 feet.
 - f) **Grade** (SCC13-31) Fire apparatus roads shall have a maximum grade of 15 percent. Grades greater than 5 percent may require additional fire protection measures in accordance with SCC13-63 (Fire Safe Standards Drawing 12).



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- g) **Turnarounds** (SCC 13-36) Dead-end fire apparatus access roads in excess of 150 feet in length shall be constructed with a turnaround that meets fire department standards. (Fire Safe Standards Drawing 8 or 13, with an 18-foot minimum width)
- h) **Obstruction** (SCC 902.2.4.4) The required width of fire apparatus access roads shall not be obstructed at any time in any manner, including but not limited to parking of vehicles, placement of dumpsters, or stacking of building materials or other items. Where required, approved signs or other notices prohibiting parking or obstruction shall be provided and maintained.
- i) **Roadway and Driveway Structures (Bridges)** (SCC 13-33) Structures shall be constructed and maintained in accordance with applicable sections of the County Building Code and the standard specifications for highway bridges. A minimum designed load capacity of HS 20 shall be provided. Signs shall be provided identifying structure capacity, including weight and vertical clearance. Vertical clearance shall be a minimum of 15 feet. (Fire Safe Standards Drawing 5, with an 18-foot minimum width)
- j) **Turnouts** (SCC 13.35, 37) Where one-way driveways are in excess of 500 feet, an emergency turnout shall be provided at approximately the midpoint of the road.
- k) **Secondary Access:** (UFC 902.2.1) Secondary means for emergency vehicle access may be required when, in the opinion of the Fire Chief, access by a single road might be impaired or unsafe due to vehicle congestion, condition of terrain, climatic conditions, high fire-severity zones, or other such local conditions.
- l) **Gates** (SCC 13-38) A means of fire department entry shall be provided wherever gates are installed. Manual gates shall have a fire department Knox key lock provided. Powered gates shall have a Knox fire department access override system. Gate shall open inward. Gate entrances shall be two feet wider than the lane serving the gate and be located a minimum of 30 feet from the roadway to allow a vehicle to stop without obstructing traffic (Fire Safe Standards Drawing 10)

7. Fire Protection

- a. **Water Supply** (SCC 13-51) Buildings served by a public water system shall provide fire flow calculations indicating compliance with CFC Appendix III-A. Buildings not served by a public water system shall provide storage and fire flow calculations indicating compliance with NFPA 1231 "Standard on Water Systems for Suburban and Rural Firefighting." Calculations shall be submitted with the building plan submittal. Subsequent plans shall be provided for construction of the appliances required to provide the storage and fire flow, e.g., fire hydrants,



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water storage tanks, and fire pumps. **Plans shall be submitted and approval obtained prior to the installation of the system.** (CFC 903.2)

- b. **Fire Hydrants** (CFC 903.4.2) Fire hydrants shall be provided along fire department access roadways in accordance with CFC Appendix IIIB. Fire hydrant locations shall be indicated on the building plan submittal. Hydrants shall be placed in accordance with fire department requirements to coincide with fire tactics and equipment, installed along both sides of divided streets, and shall be identified by a reflectorized blue marker located in the center of the adjoining roadway. Type of hydrant and applications may vary, depending on fire flow requirements. Contact WFPD for specifics.
- c. **Automatic Fire Sprinklers** (ToW 2004-179/1003.2.2) All buildings shall be provided with an automatic fire sprinkler system. For specific occupancy requirements, see SCC section 1003.2.2. **Plans shall be submitted and approval obtained prior to the installation of the fire sprinkler system.**
- d. **Fuel Modification** (SCC 13-54) Fuel modification shall be required as specified in SCC sections 13-54 for buildings constructed in specified vegetation areas. (Fire Safe Standards Drawing 15)

8. Special Hazards

- a. **High-Piled Storage (HPS)** Storage in excess of 12 feet in racks or 15 feet in piles requires compliance with HPS requirements, which may include smoke vents, draft curtains, access doors, etc.
- b. **Liquid Propane Tanks** A separate permit and plan review are required for the installation of propane tanks exceeding 125-gallon capacity. The proposed location may be included on the building site plan for reference. A description of the tank and the setback distances to property lines and buildings shall be indicated.
- c. **Hazardous Materials** Occupancies using hazardous materials shall submit and receive approval of a Hazardous Materials Management Plan from the DES Hazardous Materials Division, Sonoma County Office of Emergency Services, prior to final occupancy approval.