



# City of Escondido Fire Department

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## Residential Fire Sprinkler Policies and Procedures

### Plan Submittal Process

Two complete sets of plans and hydraulic calculations shall be submitted for approval prior to beginning any installation. The City of Escondido Fire Department requires that all sprinkler plans be reviewed by a third party consultant prior to being submitted for Fire Department approval. A list of consultants can be found on our website at <http://fire.escondido.org>. The company submitting the plans shall be responsible for satisfying all fees levied by the third party consultant before plans are released back to the Fire Department for approval. The Fire Department plan review fees will be due upon plan submittal. You can also find the fire sprinkler plan check list at <http://fire.escondido.org>.

**Projects with 4 heads or less will not be required to go through a third party review but the plans will need to have supporting documentation that the additional heads will function properly with the existing system.**

NOTE: Any designer or installer having questions regarding specific detail on unique installation challenges is encouraged to contact the Fire Marshal for Fire Department approval.

### When Fire Sprinklers Are Required

The City of Escondido Fire Department requires automatic fire sprinkler systems in all residential structures under the following conditions:

- ❖ All structures built or moved into the District
- ❖ Additions: An automatic sprinkler system installed in accordance section 903.2.2.1 may be required to be installed throughout structures when the addition is more than 50% of the existing building or when the altered building will exceed a fire flow as calculated per section 507.3. When Fire Sprinklers are required under additions this shall meet the entire structure or structures shall be equipped with fire sprinklers. The Fire code official may require that other protective measures be taken based on existing conditions and/or potential hazards.

#### EXCEPTION:

- (1) Group U occupancies not greater than 500 square feet, when building lies more than 20 feet from an adjacent structure or property line.
- (2) Accessory buildings/barns not greater than 1000 square feet, and not otherwise considered enclosed buildings/structures, which are of ignition resistant construction or as determined by the Chief to not present a significant fire hazard.
- (3) Agricultural buildings constructed of wood or metal frames, over which fabric or similar material is stretched, which are specifically used as green houses are exempt from the automatic sprinkler requirements unless physically connected to other structures.

#### Automatic Fire System Remodels or Reconstructions:

An automatic sprinkler system installed in accordance section 903.2.2.2 may be required if the scope of work includes significant modification to the interior or roof of the building, and the cost of installation of an automatic sprinkler system does not exceed 15 percent of the construction costs of the remodel. When Fire Sprinklers are required under remodels and reconstructions this shall mean the entire structure or structures shall be equipped with fire sprinklers. The fire code official may require that other protective measures be taken based on existing conditions and/or potential hazards.

#### Additional Design Criteria:

- a. Hydraulic calculations shall be provided flowing all sprinklers in a compartment to a maximum of two (2 head calculation), except as noted below in “b” and “c”.
- b. Should no compartment as defined by NFPA-13D have more than a single sprinkler present, only one sprinkler is required to be flowing in the hydraulic calculations.
- c. In all residential buildings where sprinklers are to be installed in beams which are sloped at a pitch exceeding the listing of the sprinkler, hydraulic calculations shall be submitted flowing three sprinklers in the compartment.
- d. When sprinklers are installed in beams, the depth of the beam may not exceed 8" or the maximum depth allowed by the listing of the sprinkler, whichever is greater.
- e. When beam depth exceeds the greater of 8" or the maximum depth allowed by the listing of the sprinkler, sprinklers shall be located in the pockets formed by the beams.
- f. An inspector test valve is required at the opposite side of the system riser. Located five feet about the grade.

### **Installation Requirements**

The recognized standard for design and installation within the Fire District is NFPA 13D. The following areas will also be protected:

- ❖ Garages
- ❖ Covered patios, walkways, etc. that extend 10 feet or more from the exterior wall surface (wall to edge of eave)
- ❖ Bathrooms under 55 square feet with combustible fixtures (ie Fiberglass tubs) or doors leading to the exterior
- ❖ Attics, basements, etc. that are designed for storage or that will be used for storage
- ❖ All forced air units (FAUs) regardless of their location
- ❖ All areas beneath stairways which allow access or storage
- ❖ Closets with any type of electrical source
- ❖ Saunas, wine rooms, etc.
- ❖ Utility rooms

#### Water Source Information:

The water supply information and date obtained must be included on every plan submitted. The specified water meter must be capable of supplying the designed demand of the sprinkler system in addition to the domestic demand and irrigation. The water purveyor may require a dual-meter system.

Residential fire sprinkler finals will not be approved with a construction water meter. The meter must be installed by the water purveyor prior to final inspection.

#### Fire Sprinkler Riser:

The riser shall be located in the main garage area. If it is to be located behind a door or cabinet, it must be labeled as “Fire Sprinkler Riser” by a permanently mounted sign prior to final inspection. A spare head box shall be installed also near the riser, and shall be properly equipped. (Two heads of each type used, wrench and key for test valve)

Each separate building (such as guest living quarters, detached garages, etc.) will require a separate riser and should be labeled as mentioned above.

#### Alarm Bell and Monitored Systems:

Water flow alarm(s) shall be clearly audible in all living spaces over background noise with all intervening doors closed. This will occasionally require that the residential structure be equipped with more than one bell.

This area of the system will be tested during the final inspection and should define area of operation based on the number and location of riser(s).

### **Inspection Requests**

The City of Escondido Fire Department will attempt to satisfy your requests for hydrostatic pressure test inspections and final inspections. However, the volume of requests and availability of inspectors may vary and the desired time frame may not be able to be met.