

Santa Clara Fire Department

FIRE PREVENTION & HAZARDOUS MATERIALS DIVISION

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Smoke Control System Informational Guide

PURPOSE:

This guide is intended to summarize the requirements for the design and installation of smoke control systems in the City of Santa Clara. This guide does not cover all aspects of the design and installation as required by the Title 24, or our smoke control standard.

SUBMITTAL REQUIREMENTS:

A. RATIONAL ANALYSIS REPORT (First Submittal)

A report must be submitted to the SCFD that addresses the requirements of Section 909 of CFC/CBC. The report shall be based on well-established principles of engineering practice and be prepared by a qualified engineer who is licensed in California. The report shall be signed and stamped by the licensed engineer and shall, at a minimum, include and explain all of the items noted below. A third-party review of the rational analysis at the owners cost may be required.

- Occupancy of building;
- Smoke control methodology;
- Smoke control zones;
- Smoke barrier separations;
- HVAC system details;
- Building floor plans;
- Design calculations;
- Active and passive zones;
- Stack, temperature, and wind effects;
- Fire life/safety analysis;

B. PLAN REVIEW (Second Submittal)

Comprehensive Plan Submittal: A coordinated set of smoke control system drawings shall be created and submitted for review and approval. The submittal shall include the latest architectural, mechanical, electrical, and fire/life safety system drawings. Depending on the complexity of the project a third-party review of the smoke control plans may be required. The third party reviewer may be the same entity as the Special Inspector. The third party reviewer and Special Inspector must both be acceptable to SCFD. The entity/company who prepared the rational analysis cannot be the Special Inspector.

Design professional in responsible charge. As part of this submittal the design team shall designate a registered design professional who shall act as the design professional in responsible charge. The designated individual shall be responsible for reviewing and coordinating submittal documents prepared by others, including revisions, phased and deferred submittal items, for compatibility with the design of the building. This individual may be the Engineer of Record, Architect, or other approved design professional. This individual shall be designated prior to building permit issuance.

C. SPECIAL INSPECTION REQUIREMENTS

The owner shall retain a qualified Special Inspector as approved by the SCFD. The Special Inspector and the registered design professional that prepared the rational analysis report shall be separate entities, unless specifically approved by SCFD at the start of the project. The Special Inspector responsibilities are summarized below:

1. Coordinate the review of the contractor's documents to verify conformance with the approved rational analysis report, and coordinate work between the construction team and the SCFD.
2. Prepare a guideline for testing of the smoke control system, coordinate the interface between the trades, and include the testing procedure.
3. Prepare weekly inspection reports to document inspection activities and submit electronic copies to SCFD.

D. FINAL INSPECTION REPORT

The final inspection report shall be submitted at least seven (7) working days prior to the testing of the system by SCFD. A complete report of system testing shall be prepared by the Special Inspector, and submitted to the SCFD for review. The report shall be in accordance with the requirements of Section 909.18.8.3 of the CFC/CBC, and SCFD Smoke Control Standard. The report shall be signed by both the special inspector and the engineer of the record.

E. FINAL ACCEPTANCE TESTING

A functional inspection and test of the system is required to be coordinated with the SCFD. Final approval is based on the successful completion of this test.