



Form #B34a



PERMIT SUBMITTAL REQUIREMENTS FOR CONCEPTUAL SMOKE CONTROL SYSTEMS – PHASE 1 OF 2

PLANNING & DEVELOPMENT
BUILDING
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General Design Requirements: Buildings, structures or parts thereof required by the IBC to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of Section 909 and the generally accepted and well-established principles of engineering relevant to the design.

Notes:

- Separate fire alarm, sprinkler, building, mechanical, and electrical permits are required. Approval of the smoke control system **does not** constitute approval of each component system.
- Because of the complexity of smoke control systems, it is important that design documents incorporate the conceptual smoke control approach as early as possible during the design process.
- The smoke control permit shall be issued prior to City approval of the mechanical permit.
- If you have any questions concerning your application, please contact Onlinepermits@edmondswa.gov or Prevention@southsnofire.org

Locations that may require smoke control systems include (2018 IBC reference):

- Pressurized Shafts/Smokeproof Enclosures (504.4; 909.6.3)
- Underground Buildings (405.5)
- Windowless Buildings (408.9)
- Covered Mall Buildings (402.7.2)
- High-rise Buildings (403.5.4)
- Building Atriums (404.5)
- Stages and Platforms (410.2.7)
- Assembly Seating (1029.6.2.1)

To apply for the building or TI permit where smoke control (including shaft pressurization only systems) is provided, documentation consisting of the following is required.

- The Conceptual Smoke Control Design must be prepared by a Professional Engineer competent in the design of smoke control systems and accompanied by current architectural background drawings and Smoke Zone Plans.
- The Conceptual Smoke Control Design is the first submittal of the Smoke Control Permit and must be submitted as a separate permit prior to the Building permit.
- The Conceptual Smoke Control Design must be approved prior to release of the building permit, or submittal of the detailed design.

SUBMITTAL REQUIREMENTS:

Summary Event Matrix (sequence of operations) for the smoke control system.

Smoke Zone Plans at a legible scale (these may be part of the drawing set) identifying smoke zone boundaries and smoke barrier locations. Depict (cross hatching, coloring, etc.) the smoke control approach for each space, such as active (indicate mechanical supply and/or exhaust capability), passive (indicate if vents are provided), or sub-zones (spaces not constructed as a smoke compartment and not provided with smoke control).

A Life Safety Report must be submitted as part of the conceptual design. This report must include a project description of the building, life safety systems and the smoke control system. Calculations/computer modeling analysis need not be provided with the conceptual design.

Life Safety Systems. This report must include a description of the building, occupancies and various life safety features of the project (sprinkler systems, fire pumps, reservoirs, standpipe systems, fire detection/alarm/communication system, Fire Command Center requirements, emergency power systems, in-building radio system, etc.) and how they will interface with each other.

Emergency Evacuation Plan outlining how evacuation will occur, to include phased evacuation, areas of rescue assistance, defend-in-place strategies and use of elevators etc.

The Smoke Control Narrative must detail how the code requirements of IBC 909 will be addressed including the design constraints and limits. It must also clearly describe each space identified on the Smoke Zone Plans, in sufficient detail to describe the smoke control method for each space and how it would be initiated. In particular:

- System performance goals and design objectives, including general testing criteria.
- Specific performance criteria to be evaluated for each zone.
- Location of fire-fighter's smoke control panel.
- Description of the firefighter smoke control panel features.
- Description of the 2-hour protection of pressurization fan wiring, equipment and ductwork.
- Location of pressurization fans.
- Identified design constraints.
- Identification of spaces where computer modeling is planned.
- Design basis fire(s) and locations.
- Tenability criteria.

Conceptual design documents need not include calculations or detailed control diagrams, but must generally identify every smoke zone in the building and the smoke control approach for each zone.

Approval of the Conceptual Design Submittal **does not** constitute approval of the smoke control system. Once the conceptual design submittal has been approved, the Detailed Design shall be submitted as the 2nd phase to the original smoke control application.