CHAPTER 6

DUCT SYSTEMS

SECTION 601
GENERAL

601.1 Scope. Duct systems used for the movement of air in air-conditioning, heating, ventilating and exhaust systems shall conform to the provisions of this chapter except as otherwise specified in Chapters 5 and 7.

Exception: Ducts discharging combustible material directly into any *combustion* chamber shall conform to the requirements of NFPA 82.

[B] 601.2 Air movement in egress elements. Corridors shall not serve as supply, return, exhaust, relief or *ventilation air* ducts.

Exceptions:

1. Use of a corridor as a source of *makeup air* for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, bathrooms, dressing rooms, ~~((smoking lounges))~~ and janitor closets, shall be permitted, provided that each such corridor is directly supplied with ~~((outdoor))~~ air at a rate greater than the rate of *makeup air* taken from the corridor.
2. Where located within a *dwelling unit*, the use of corridors for conveying return air shall not be prohibited.
3. Where located within tenant spaces of 1,000 square feet (93 m^2) or less in area, use of corridors for conveying return air is permitted.
4. Incidental air movement from pressurized rooms within health care facilities, provided that the corridor is not the primary source of supply or return to the room.

[W] 5.Where such air is part of an engineered smoke control system.

[W] 6.Air supplied to corridors serving residential occupancies shall not be considered as providing *ventilation air* to the dwelling units subject to the following:

6.1 The air supplied to the corridor is one hundred percent outside air; and

6.2 The dwelling units have conforming *ventilation air* independent of the air supplied to the corridor; and

6.3 For other than high-rise buildings, the supply fan will automatically shut off upon activation of corridor smoke detectors which shall be spaced at no more than 30 feet (9144 mm) on center along the corridor; or

6.4 For high-rise buildings, the supply fan will automatically shut off upon activation of the smoke detectors required by Seattle Fire Code Section 907.2.13.1 or upon receipt of another *approved* fire alarm signal. The supply fan is not required to be automatically shut off when used as part of an *approved* building stairwell or elevator hoistway pressurization system.

[B] 601.2.1 Corridor ceiling. Use of the space between the corridor ceiling and the floor or roof structure above as a return air *plenum* is permitted for one or more of the following conditions:

1. The corridor is not required to be of fire-resistance-rated construction;
2. The corridor is separated from the *plenum* by fire-resistance-rated construction;

Exception 6 is poorly worded, but it means that in a R occupancy you can use corridors for ventilation air to dwelling units, provided the corridor supply system is 100% outside air and that ventilation systems exist within the dwelling unit to draw the air from the corridor. Hi rise life safety is addressed by making the corridor a passive zone to stop spread of smoke. The building will be kept at an overall neutral pressure, the transfor from the corridor would be effectively a replacement of the exterior skin 2-duct system to an interior 2-duct system.

down upon activation of the air-handling unit smoke

down upon detection of sprinkler waterflow where

matic sprinkler system; or

3. The space between the corridor ceiling and the floor

component of an *approved* engineered smoke control

enclosure ventilation shall comply with one of the following items:

1. Such *equipment* and ductwork shall be located exterior

exit enclosure by ductwork enclosed in construction as

2. Where such *equipment* and ductwork is located within the exit enclosure, the intake air shall be taken directly

charged directly to the outdoors, or such air shall be

ed through ducts enclosed in construction as required by the *International Building Code* for shafts.

3. Where located within the building, such *equipment* and

building, including other mechanical *equipment*, with

Code for shafts.

In each case, openings into fire-resistance-rated construc-

operation and shall be protected by self-closing fire-resis-

Building Code for enclosure wall opening protectives. Exit

enclosure ventilation systems shall be independent of other building ventilation systems.