

UFAD – The Good The Bad and the Ugly

CASE STUDY

BOSTON COLLEGE ADMINISTRATION BUILDING

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BOSTON, MA**



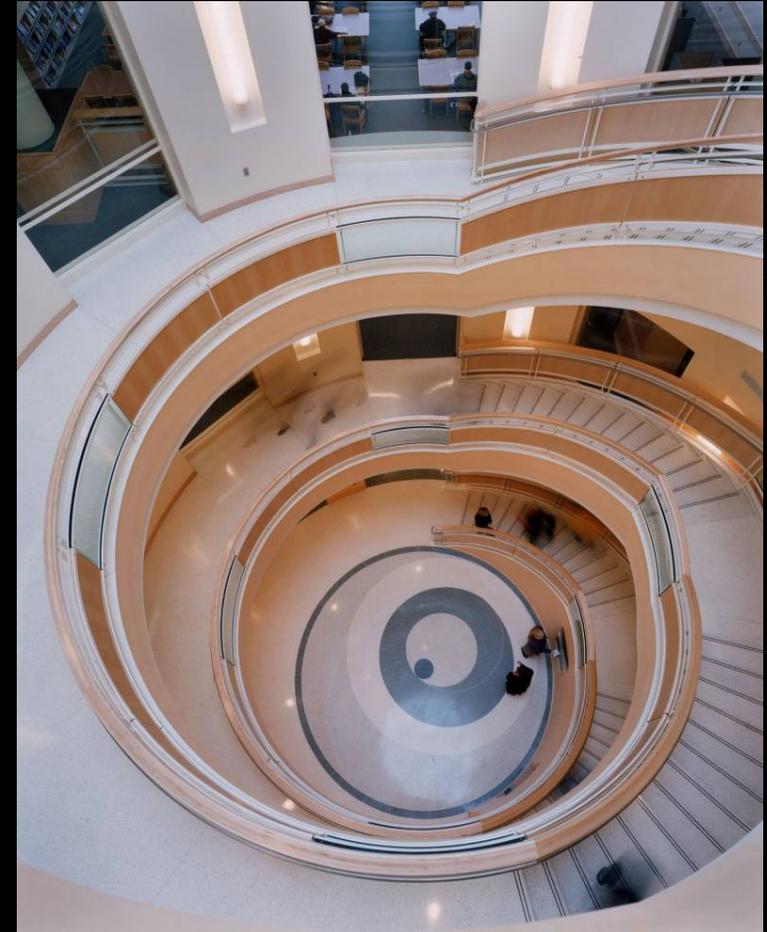
BRONSON METHODIST HOSPITAL KALAMAZOO, MICHIGAN



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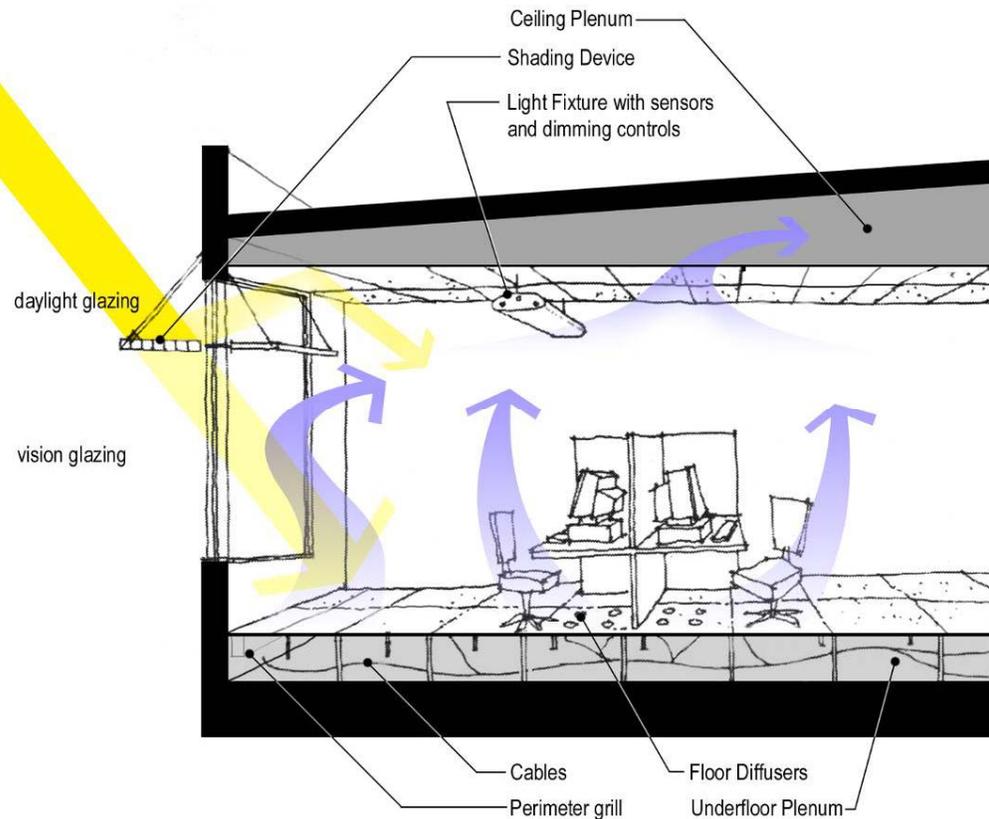
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**WARREN B. RUDMAN US COURTHOUSE,
CONCORD, NH**

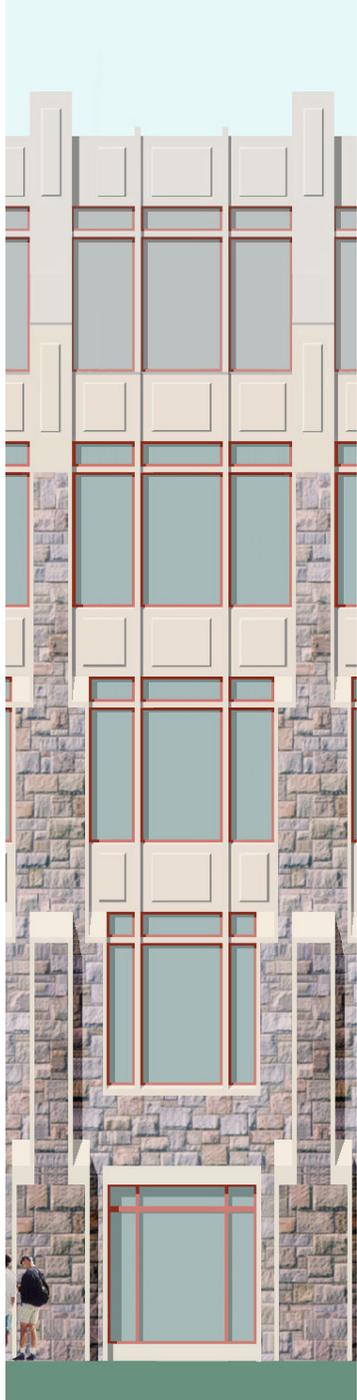


EQ 2 – Increase Ventilation Effectiveness - EQ 6.1 and 6.2 Controllability of Systems

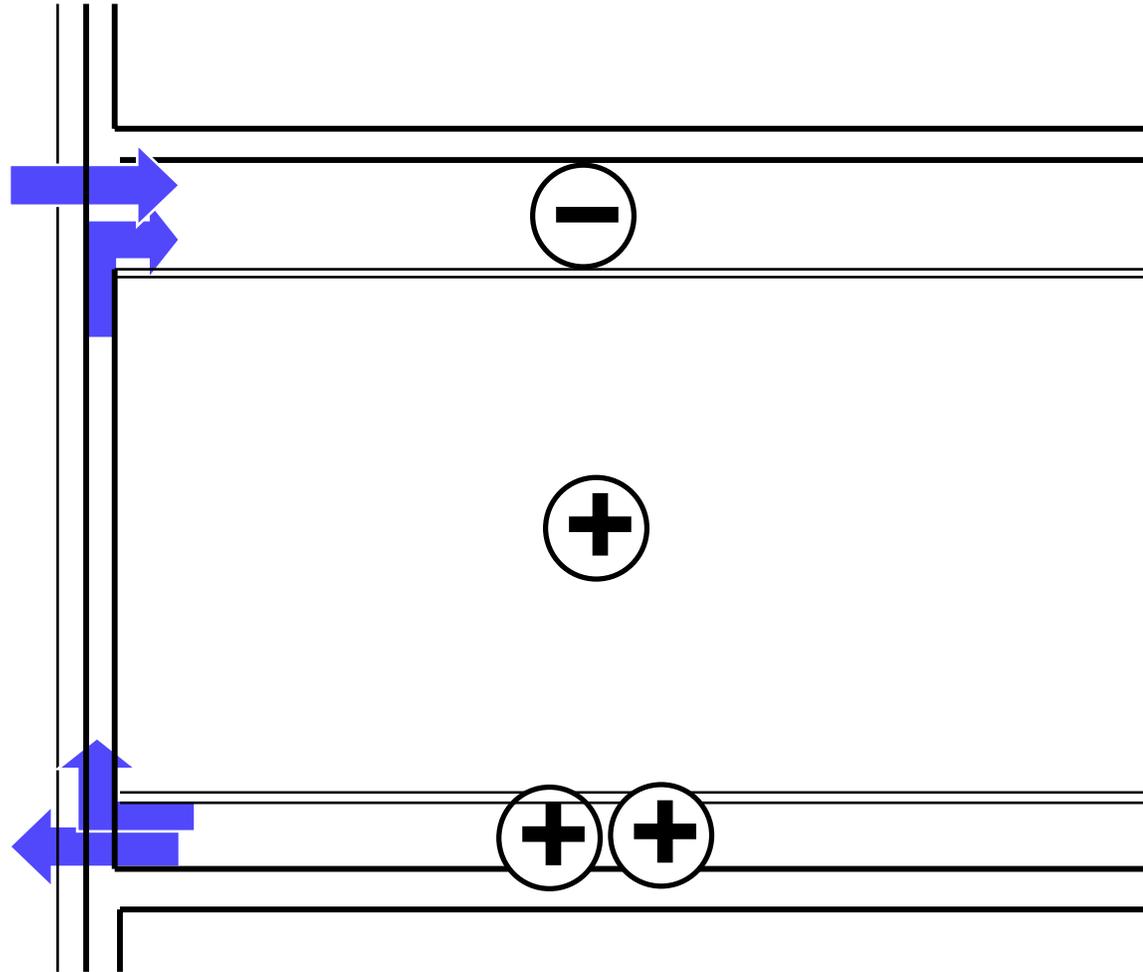




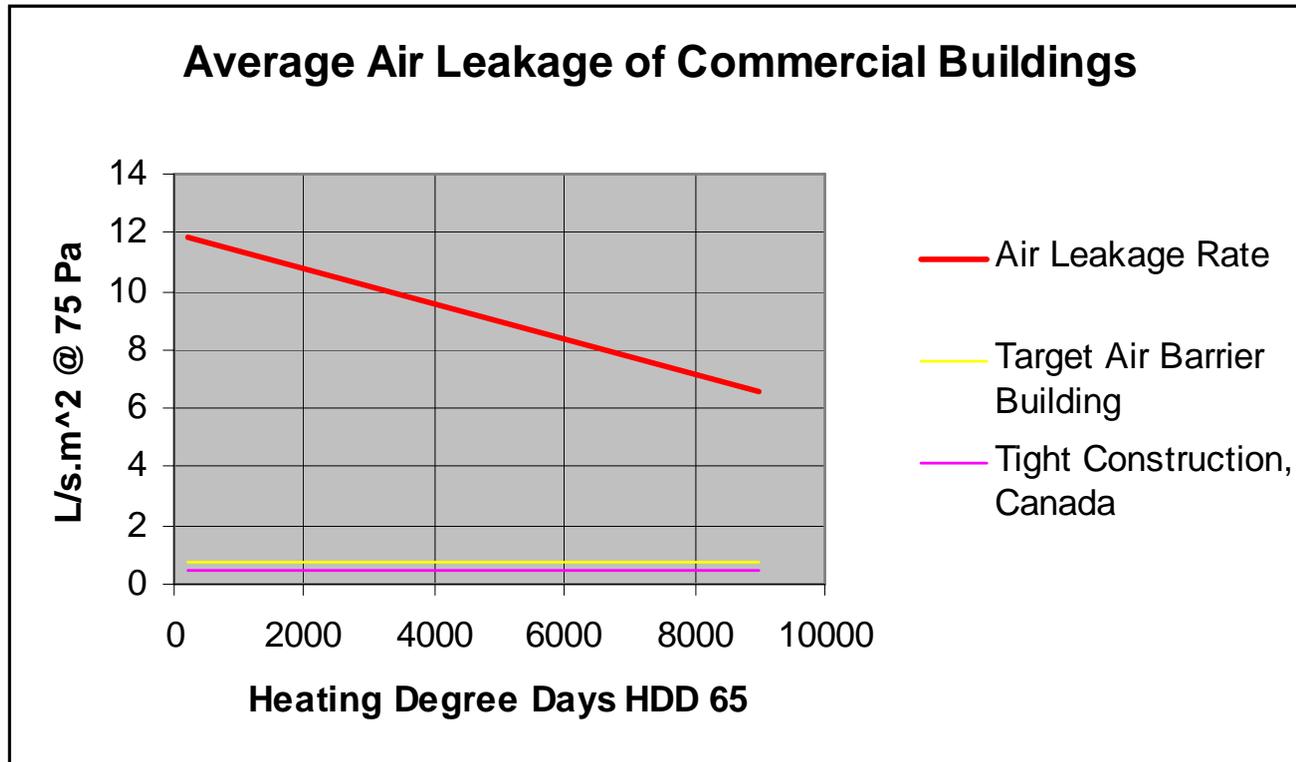




Are you trying to inflate a balloon with holes?

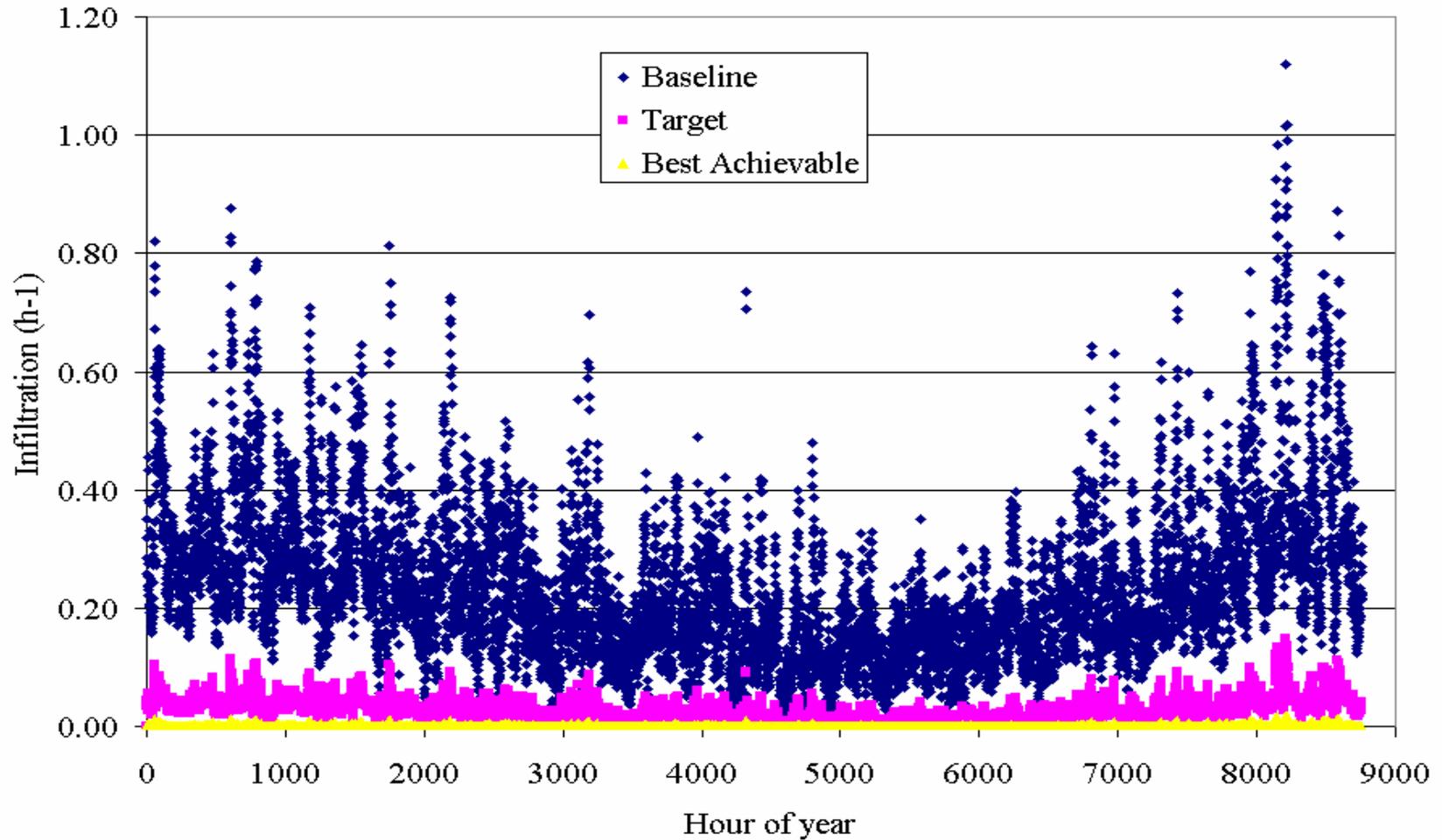


INFILTRATION RATES



Hourly Infiltration - St. Louis

NISTIR 7238



Curtain Wall Firestopping

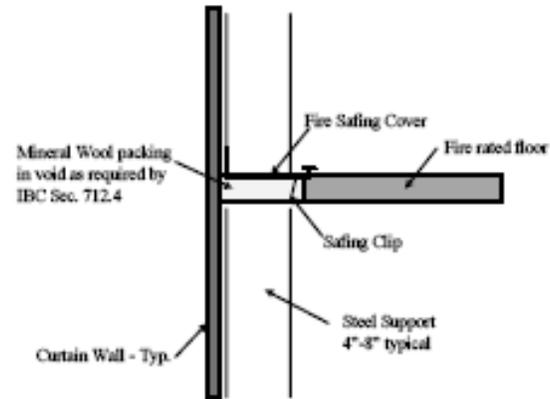
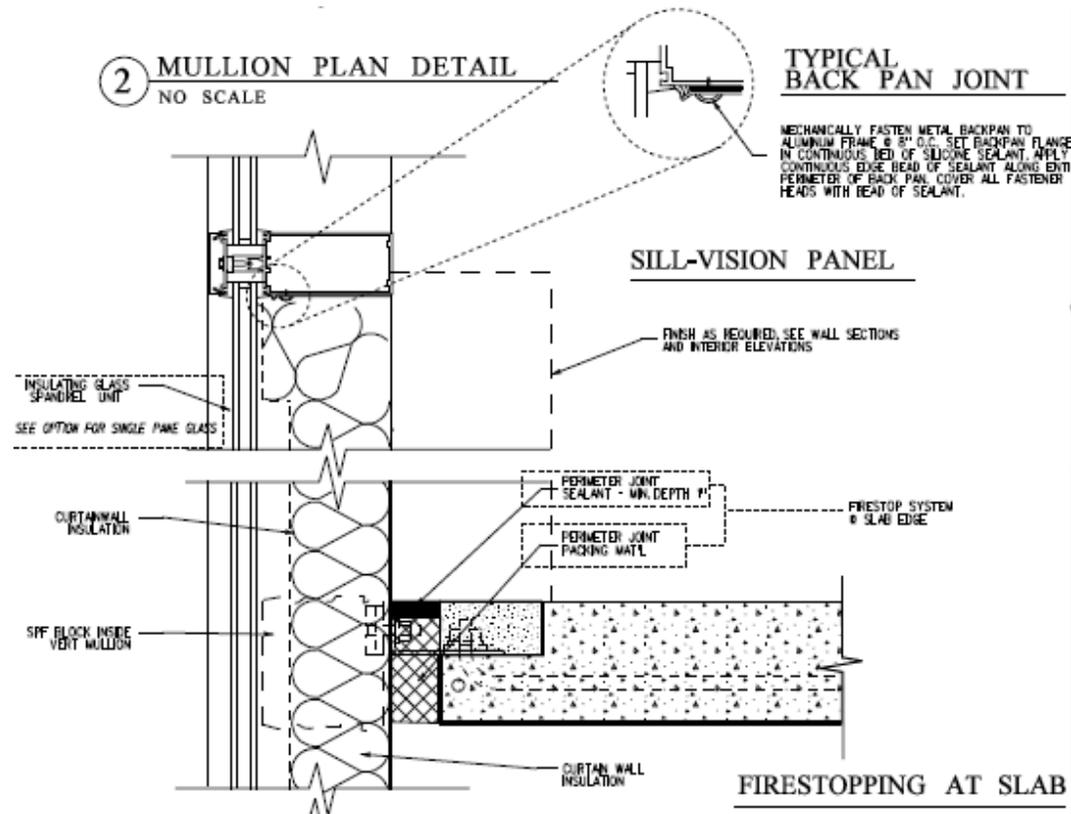


Fig.2 Exterior Curtain Wall/Floor Intersection with no interior wall

Curtain Wall Backpan and Firestopping











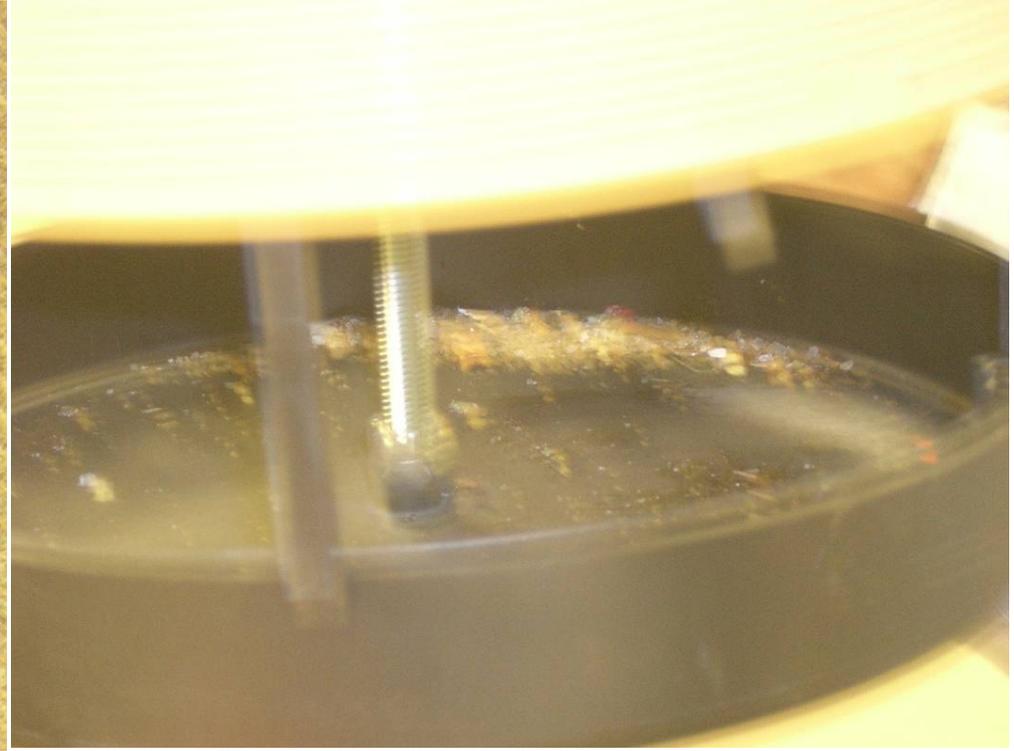








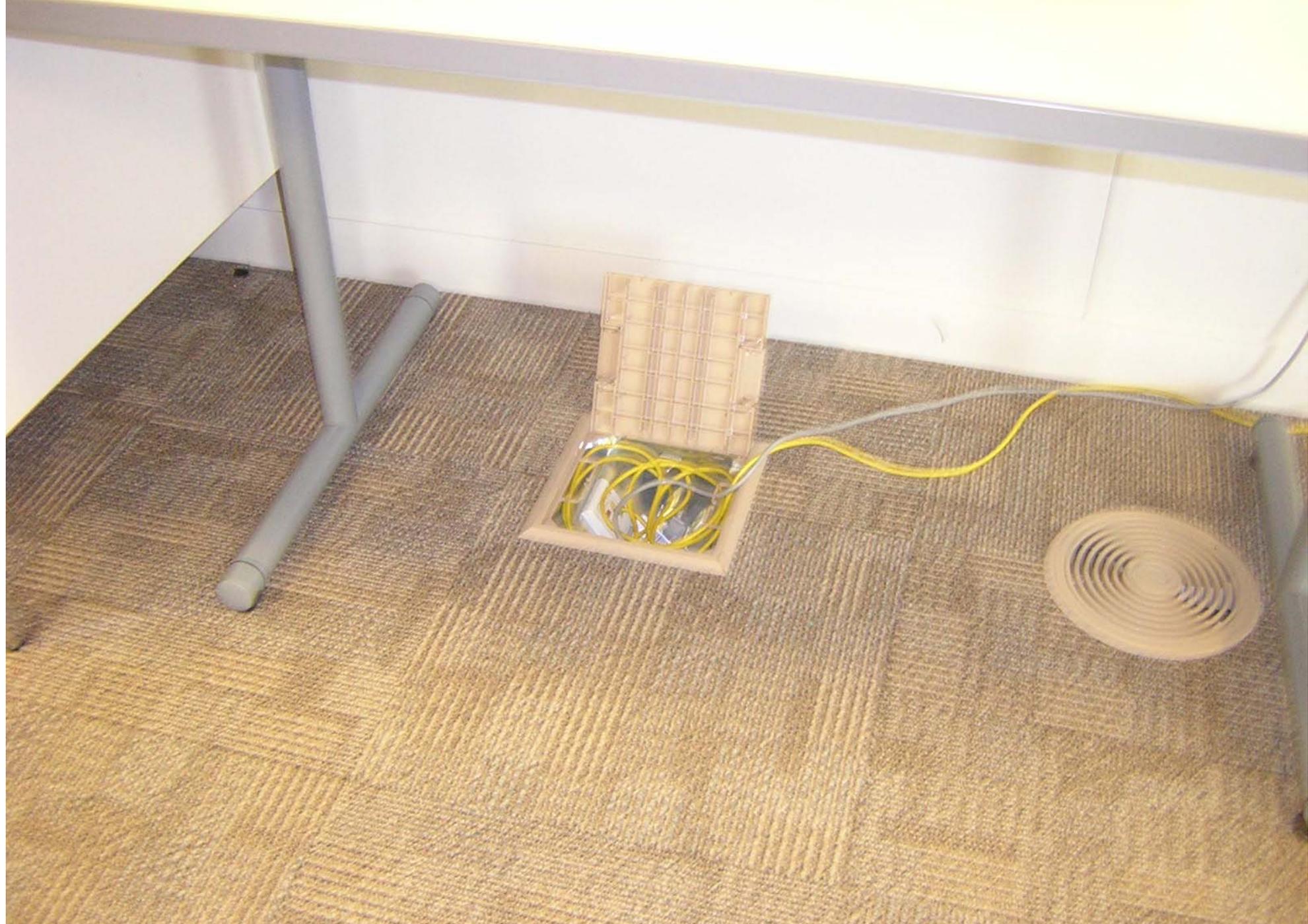












Conclusions

- ◆ **Compartmentalize UFAD zones in accordance with fan service zone**
- ◆ **Fans with VSD's and pressure sensors**
- ◆ **Catastrophic water leak: structural collapse: Indirect drains with solenoid valves activated by water/sensors/alarms.**
- ◆ **Insulation of slabs on grade and other slabs**
- ◆ **Seal conduits esp. to thermostat**
- ◆ **No MC Cable**
- ◆ **Filters on fan boxes need access**

Conclusions

- ◆ NIBS – GSA Standard for UFAD systems.
- ◆ Pressure test plenums. Leakage 12% max. achievable.
- ◆ Educate building users. Users' manual?
- ◆ Coordinate outlet locations w/ workstations.
- ◆ Provide longer “whips” on outlets
- ◆ Building uses “less energy than budgeted”
- ◆ Fewer occupant complaint building

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