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Surrounded by Sounds and Smells

Two recurring complaints of residents in multi-family buildings are related to sound transmission and odors emanating from neighboring units. Generally, sound related complaints are most often logged in wood-framed buildings. This is usually because the wood floor support system is lightweight and relatively thin, with air space within the floor-ceiling sandwich.

This configuration allows sound to travel more readily. As opposed to buildings made from steel and concrete, which have thicker floors that are heavier and tend to dampen sound transmission. Both types of buildings use thin, lightweight walls to divide units, which do not dampen sound very effectively.

Often condominium documents require

that the floors be covered in carpet and limit the exposed hard floor surfaces such as tile or wood. This can help absorb and dampen sound related to impacts, such as foot falls. However, the noise related to a loud television or music tend to be less affected.

Sound is a wave of vibration. Solutions to reduce sound transmission can be found in

two categories. One option is sound absorbing materials, such as mats or insulation. The other is isolating solutions, which often involve adding another layer of drywall placed on spacers to reduce the contact and therefore, the locations in which vibrations can travel through a wall or floor.

When white noise machines and other relatively inexpensive approaches do not work, renovations to the living space are the next step to addressing the offending noise. Since the annoyance of disturbing sounds are related to individual tolerances and perceptions, it can be nearly impossible to eliminate sound transmission. It is also costly to address sound, as well. Thus, just the sleeping rooms are usually modified with sound dampening strategies.



Odors from cigarette smoke and cooking are the most logged odor related issues. Gaps in the floor or walls between units can allow odors to travel. Hunting down these gaps can be difficult as the smallest of openings can be the culprit. First look for the most likely locations; gaps around plumbing pipes and exhaust or ventilation ducts that extend between floors and gaps around electrical outlets in walls.

Another likely source is a poorly sealed or a dysfunctional exhaust system. Multi-story buildings often have a common kitchen and bathroom exhaust system that links all the vertically stacked units. Sometimes these ducts are clogged, unsealed, or the rooftop exhaust fan is not operational. Sometimes renovations to units include the installation of kitchen exhaust hoods or bathroom exhaust fans, which were not part of the original system design. Adding these fans can disrupt the operation of the common exhaust system.

If sealing gaps around pipes and ducts proves unsuccessful at stopping the odors, the next step would be to positively pressurize the living space. Most older buildings are negatively pressurized. By introducing positive pressure in the unit, air from neighboring units cannot enter the living space. This usually requires the installation of HVAC-type equipment to bring outside air into the unit. This effectively makes the air drafts associated with the unit exit rather than enter the living space. Newer buildings typically are positively pressurized, so this may not be an option in all cases.

Addressing sound and odor related concerns can be more challenging than stopping water infiltration, as small defects can result in large concerns. Interior walls usually need to be opened to seal the gaps, which can be quite disruptive, and the efforts may be less effective than desired. However, all is not lost, solutions do exist, and improvements or corrections can make a big difference to keep those sounds and smells out of your living space. 

