



# Minimize Air Leakage Between Apartments

**Lesson** While it isn't easy, controlling air leakage between apartment units significantly improves resident satisfaction with their homes by providing comfortable temperatures and reduced odors.

**Goal** Minimize air leakage between apartments.

**What Happened** Three demonstration projects have highlighted the importance of addressing air leakage between apartments. At Viking Terrace, testing revealed to developer Southwest Minnesota Housing Partnership (SWMHP) that while the building envelope was very tight, there was a lot of air leaking between units—and that cigarette smoke and cooking odors were moving between units. Now, SWMHP is exploring how to address this issue on future projects.

At The Wellstone, Hope Community managed air flow between units by creating a flat, air-sealed wall between units. Instead of sharing chases for plumbing, ducts, and electrical wiring between units, each unit had its own chase. While this meant they did twice as much plumbing, ductwork, and electrical wiring, it was very effective and easy to seal.

**Recommendations** Apartment buildings are notorious for air leaking between units. It is a challenge to manage, but it's very important to reduce odors migrating between apartments from cooking and/or potentially smoking. It's also important in allowing tenants to control the temperature in their unit, and allowing them to manage their bills if they are responsible for their own heating utility costs.

It is standard practice to share ducting and plumbing chases between multiple units as a way to halve the number of chases. These shared chases are often a source of leakage between units. Specify that all through-wall penetrations be sealed, even where it is not required to prevent fire spread.

**Take Away** While air sealing between units can be challenging and requires extra attention to detail, it improves resident comfort, minimizes odors and cigarette smoke moving between units, and results in greater occupant control over their environment.

**Relevant Green Communities Criteria:**

While no criteria specifically state this as a goal, demonstration projects have identified air leakage between apartments as an issue needing attention.



The Wellstone, Minneapolis

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### LESSONS LEARNED Minnesota Green Communities Demonstration Projects

This publication is part of a series of lessons learned originating from Minnesota Green Communities demonstration projects. The Minnesota Green Communities initiative is currently the largest green building program in Minnesota, with 497 units completed, 908 under construction, and another 1,645 under development. Eight demonstration projects were funded through the Minnesota Green Communities program. The initiative is completing building performance testing on the demonstration projects, and has gathered lessons learned in several areas.

The Lessons Learned series includes the following publications: Integrated Design, Multifamily Green Rehabilitation, Construction Training and Monitoring, Ductwork, Duct Design, Duct Sealing, Kitchen Ventilation, Radon Testing and Mitigation, Pressure Balancing Between Rooms, Water Efficiency, and Cost Increase Triggers in Plans and Specifications. All publications can be found online at [www.mngreencommunities.org](http://www.mngreencommunities.org).

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Minnesota Green Communities, a collaboration of the Greater Minnesota Housing Fund, the Family Housing Fund, and Enterprise, is an initiative designed to foster the creation of affordable, healthier, and more energy-efficient housing throughout Minnesota. The initiative will support the production of affordable housing with markedly reduced energy costs, use of materials beneficial to the environment, conservation-minded land use planning, and attention to the creation of healthy environments and lifestyles for individuals, children, families, and communities. For more information, please visit [www.mngreencommunities.org](http://www.mngreencommunities.org).

Minnesota Green Communities c/o Greater Minnesota Housing Fund  
332 Minnesota Street, Suite 1201 East • St. Paul, MN 55101 • Tel: 651-221-1997 or 1-800-277-2258 • Fax: 651-221-1904