

**Project:** D Street Village - Office Lofts

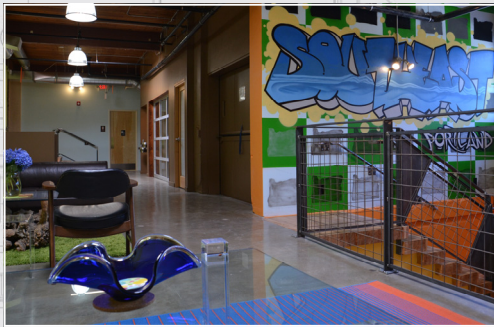
**Location:** Portland, Oregon

## Challenge:

D Street Village - Office Lofts couldn't do an infrastructure upgrade, and the specified RTU demanded more power than was available.

## The Solution:

Daikin SkyAir Inverter Heat Pumps provided individualized comfort without bulking up on the power.



Not many buildings have their own web site, but D Street Village does. This older section of southeast Portland, described as "eclectic, eccentric and a little funky" is in a renaissance, and the D Street Village - Office Lofts is central to it all. Originally built in 1941, and most recently a grocery store, the Lofts has been rebuilt as a multi-use building with 14 upper level office spaces, conference room and retail spaces below. The highlighted architectural features of the building include tall ceilings, large windows, refinished original fir floors — and individually controlled heating and cooling.

As the rebuild was progressing, it became apparent that the existing electrical infrastructure posed a limitation on developers. The mixed-use scenario required most of the available power be dedicated to the lower (retail) floor, with limited capacity remaining to serve the office lofts. Costly power upgrades to the building weren't in the budget, and there wasn't sufficient power for the originally specified single rooftop unit with VAV zone control. They needed a different solution with lower power requirements.

Scott Leverenz with Jacobs Heating & Air Conditioning reviewed the load calculations and proposed the use of multiple Daikin

SkyAir Inverter Heat Pumps for all the upper level zones. Scott's proposal solved a number of issues. The first cost of the installed equipment was less than the original RTU, and the minimal power requirements of the Daikin heat pumps meant that the existing infrastructure of 208/230 single phase power was more than ample. In addition, the superior efficiency of the SkyAir systems was going to result in everyday energy savings and comfort benefits that would be enjoyed by the tenants for years to come.

The decision was made to take advantage of the flexibility of Daikin's SkyAir Inverter Heat Pumps with ducted fan coils, using final low pressure ductwork and standard air distribution. This allowed the flexibility to move demising walls, as needed, to suit tenant requirements, and easy changes to air distribution with minimal impact on mechanical systems. The compact footprint and lighter weight of the Daikin equipment meant that planned structural upgrades required for the original RTU could be left out of the plan as well, providing even more savings for the developer.

By making the General Contractor and Developer aware of the flexibility and potential cost savings impact on the project budget of the Daikin equipment, the tenants of the D Street Village - Office Lofts will now be enjoying the many advantages offered by the SkyAir systems — individual comfort control with lower energy expense and low noise levels Daikin is known for. And, in turn, the developer can better market this urban-style office to the energy-conscious community kindly known as the "hipsters of Portlandia"!



### Project information

**Designer & Estimator:** Scott Leverenz  
Jacobs Heating & Air Conditioning  
Portland, Oregon

**Distributor:** Rick Birket  
Mar-Hy Distributors  
Milwaukie, Oregon

**General Contractor:** Andy Fisher,  
Project Manager  
JDL Development, Inc.

### Daikin Equipment

- 8 (Model # FBQ18PVJU) Indoor DC Duct Concealed Unit
- 5 (Model # FBQ24PVJU) Indoor DC Duct Concealed Unit
- 1 (Model # FTXN12KEVJU) Indoor Wall Mounted Unit
- 2 (Model # FDXS09LVJU) Indoor Slim Duct Built-In Unit
- 8 (Model # RZQ18PVJU9) Outdoor Unit
- 5 (Model # RZQ24PVJU9) Outdoor Unit
- 1 (Model # RXN12KEVJU) Outdoor Unit
- 2 (Model # RXS09LVJU) Outdoor Unit
- 13 (Model # BRC1E71) Navigation Remote Controller