

CASE STUDY

SECONDARY WINDOWS REJUVENATE AGING OFFICE BUILDING

Built in 1975, Hurley Development's 915 Broadway office building in downtown Vancouver, Wash., features floor-to-ceiling windows in every perimeter office—6,000 sq. ft. of windows in total. While all of these single-pane windows let in a vast amount of natural light, they also brought in far too much heat in summer, and too much cold air in winter. This thermal leakage not only led to tenant comfort complaints, it also inflated energy costs by forcing the aging HVAC equipment to strain to maintain indoor temperatures.

With tenant comfort a top priority, Hurley Development committed to finding a solution to solve the thermal leakage caused by so many thin, single-pane windows. When a full window replacement was quoted at \$2–3 million dollars (almost as much as the building is worth), Hurley Development pivoted to a much more affordable and feasible option to solve their comfort and energy-cost issues: Secondary windows.

PROJECT OVERVIEW



EXISTING WINDOWS
**single-pane,
aluminum**



INSTALLED
**double-pane,
low-e coating**



BUILDING TYPE
Office



LOCATION
Vancouver, WA



“I’d definitely recommend secondary windows. The installation was painless and they’re performing exactly the way we expected them to. I don’t know why you wouldn’t want to consider this for your commercial building.”

—David Berg, Vice President of Property Management, Hurley Development

HURLEY DEVELOPMENT FINDS THE “PERFECT-FIT SOLUTION”

“When any building gets to 40 years old, systems start breaking down with age, weather and just natural deterioration,” said David Berg, Hurley Development’s Vice President of Property Management. “We were looking for a variety of options to achieve energy efficiency when Bonneville Power Administration and Clark PUD brought up the idea of secondary windows. We were blown away when we saw the energy-saving and comfort benefits provided by secondary windows. It really was a perfect-fit solution for us—we could achieve 10-15% energy savings forever with an easy installation and at a fraction of the cost full window replacement.”

By attaching directly to the interior or exterior of existing windows to create a thermal air barrier, secondary windows helped Hurley Development avoid the enormous costs and intrusive process of a full window replacement, while allowing them to enjoy all of the comfort and energy-saving enhancements that a full window replacement would have provided. The low-e coating and extra pane provided by secondary windows immediately eliminated 915 Broadway’s comfort issues. “Our tenants are extremely happy,” said Berg. “We used to get daily or weekly complaints, but we haven’t heard a single complaint since the secondary windows were installed.”



“Everybody loves the secondary windows. They’re much more comfortable. In past winters, we would get a lot of complaints. Tenants would have to use space heaters, which would then overload the electrical systems. So, the tenants are very excited at their renewed comfort. We already went through a really hot, record-breaking summer and didn’t have any complaints. And we’re fully expecting the winter to be the same way.”

—David Berg, Vice President of Property Management, Hurley Development



SECONDARY WINDOWS PASS HISTORIC COMFORT TEST

Soon after the secondary windows were installed at the 915 Broadway building, Vancouver was hit with an unprecedented heat wave. In fact, the 116 F temperature reached on June 29, 2021, made it the city's hottest day on record. "We were very worried," said Berg. "In the past, even on a hot 90-degree day, we would receive tenant comfort complaints, and many would be forced to go home early."

"We watched the digital control system throughout the day," Berg remembered. "And we were amazed that, for the most part, all of the offices maintained a 72-degree temperature. We were really surprised—we knew these windows would perform well, but we never expected them to perform this well."

6,000 SQ. FT. OF WINDOWS IN ONE FELL SWOOP

Even with thousands of square feet of windows, the installation crew was able to finish the job in just two weeks with almost no disruption to a fully occupied building. According to Jordan Pratt, Senior Engineer at Energy 350, this relative ease of installation is a big reason why secondary windows are much more affordable (and less invasive) than a full window replacement.

"A full window replacement requires the installation crew to open up the entire building," said Pratt. "This involves cranes and scaffolding and interrupting businesses for weeks on end. And it's much more expensive. The labor and equipment reduction is a big reason why secondary windows are often about half the cost of a full window replacement. A secondary window just fits within the existing window openings, and can be installed in as little as 15 minutes per window."

IN PARTNERSHIP WITH:



915 INSTALLATION RESULTS



COST

89 percent less expensive than a full window replacement



TIME

As little as 15 minutes per window



ENERGY SAVINGS

10.3% reduction in building energy use



To learn more about high-performance window solutions, visit betterbricks.com/solutions/windows.