Case Study
County City Building
South Bend, IN

Capital Deferment and Increased Comfort

The County City Building Plaza is located in the heart of Downtown South Bend, Indiana. It was constructed in 1968, during a period of heightened urban renewal. Since it was built, the County City Building has served as the home of the local government employees of St. Joseph County, one of the largest employers in the city. Standing at approximately 150 feet tall, the County City Building measures around 200,000 square feet.

U.S. GREEN BUILDING COUNCIL MEMBER

THERMOLITE
WINDOW SYSTEMS

Front view of the windows on the County City Building.

"Annual energy savings alone were estimated at $58,000. This was not possible before the Thermolite windows were installed."

John P. Embrickson
Building Engineer
St. Joseph County City Building

The Search for Temperature Control

Temperature control was a constant struggle for the occupants of the County City Building. The window inefficiencies required heating and cooling equipment to be run at all in times, while employees still had to alternate closing and opening drapes depending on the time of day.

Not only were these attempts at controlling the building temperature a burden, but they unfortunately remained ineffective at maintaining a comfortable environment.

"In the winter months, we were forced to set our steam coals to deliver between 120 and 140 degree heated air. In the summer months, we ran two 350 ton chillers. Even with both chillers operating, we often would lose our ability to cool in the afternoons on hot humid days," says John P. Embrickson, building engineer.

As a government building, factors such as budget, installation time, and historic preservation guidelines are especially important in regards to any building renovations.

Thermolite was called upon to provide a solution that would increase the temperature comfort levels of the County City Building, while also being more energy efficient, cost effective, with as inconvenient an installation as possible.

The solution: Thermolite installed a 2000 AL interior window system in the building. The system installs on the inside of existing windows with no need for the disruptive and expensive window removal and replacement.

The window glass used had a Low E glaze, which greatly improved the temperature control of the building by allowing light through while reflecting heat.

Less than 3 year ROI

11 years maintenance free

Increased comfort

$0 of Chiller or Boiler investment

50%

Energy Savings*

*50% boiler demand reduction and 50% chiller demand reduction.

Immediate Results and Long Term Savings

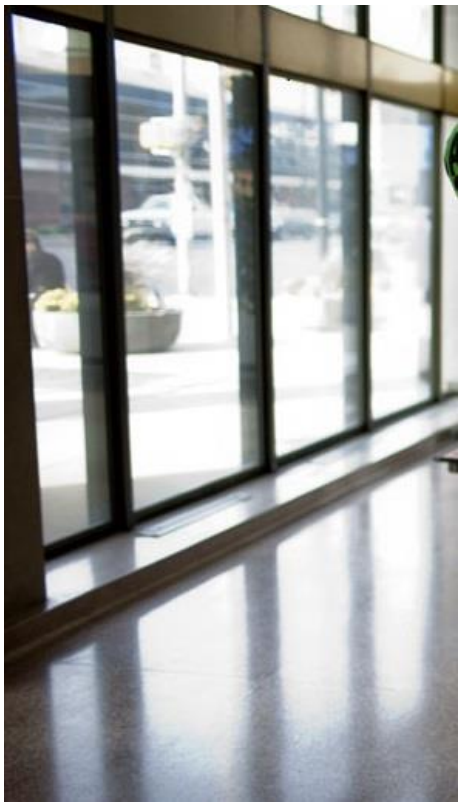
After Thermolite installed the window system, the County City Building was able to immediately maintain set temperature points – without running equipment full time.

Not only were there significant decreases in energy use, but also in equipment maintenance and wear and tear. In fact, the building is now able to rotate one boiler monthly.

"In the spring of 1982, we lost our #1 chiller. Because of Thermolite, we are still able to maintain comfort levels with only one chiller. We found that one chiller, operating at 90% of full load, could now handle the entire complex," explains Embrickson.

> **"I STRONGLY ENDORSE THE USE OF THERMOLITE. WE HAD NO OTHER ALTERATIONS TO OUR BUILDING OR ITS MECHANICAL SYSTEMS AND WE RECEIVED AMAZING RESULTS."**

John P. Embrickson
Building Engineer
St. Joseph County City Building



An indoor view of the lobby of the County City Building.

The County City Building received a return on its initial investment in the Thermolite Window System in just three years. A follow up over a decade after the installation found that not only was it still functioning just as efficiently, but it was yielding an average energy savings of $58,000 every year.

The initial results of Thermolite's Window System in the County City Building were so well-received that the building engineer opted to have entire complex reglazed and have reported additional energy savings, less complaints of cold drafts, and a reduced amount of fading in their furnishings.

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Thermolite is a member of the U.S. Green Building Council®

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