the challenge:

The Edith Green-Wendell Wyatt Federal Building, built in 1974, required a complete rebuild – down to the steel framework. Multiple tenants inside the same project – all with their own requirements – made this job especially challenging.

the solution:

Working up front with the general contractor, architect, and sub/mechanical contractors, MetalWorks™ Airtite™ radiant ceiling systems provided a solution for each client on every floor. The work helped produce a LEED® Platinum-certified facility and resulted in the largest radiant project in North America.

The radiant ceiling system offers a sustainable heating and cooling solution with minimal air ventilation by using direct energy transfer from room surfaces from modular-type panels. Hot or cold water circulates through concealed copper tubing on the back of the panels.

The project included 169,000 square feet of metal ceiling panels, with nearly 107,000 square feet of them active radiant panels. Throughout 16 floors, 185 panel sizes were configured, melding active and inactive panels in a wide variety of layouts.

Custom programming was crucial to meeting each tenant’s comfort requirements. Substantial engineering design was completed to work in both the ceiling layouts – encompassing 9.5 miles of radiant panels – and their hot and cold radiant specifications.

The radiant ceiling system retained the standard concepts of ceiling layout with large panels and narrow technical panels for services. All active panels are 100% accessible to electrical and mechanical fixtures and to the plenum space above.

The energy efficient hydronic distribution system was a key sustainable feature in the General Services Administration’s green building initiative. The radiant ceiling panels helped contribute to 55% in overall energy savings compared to a conventional building.

“There was a need to meet the aggressive energy use goals for the project,” said Business Unit Manager, Erik Teyema.

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