the challenge:
The Portland PDX Airport Headquarters was designed to bring the majority of the Port of Portland employees under one roof while sitting on top of a 3,000-space long-term parking structure. The project needed to be sustainable and use environmentally responsible building practices.

the solution:
Like the plane wing or ship hull its shape imitates, the Portland PDX Airport Headquarters melds the very best of engineering and design earning LEED® Platinum certification using an innovative modular ceiling system – one of the largest of its kind in the United States. MetalWorks™ Airtite™ radiant ceiling systems use direct energy transfer to and from surfaces in a room via extruded and modular-type panels. Hot or cold water circulates through concealed copper tubing on the back of the panels, providing sustainable heating and cooling and superior comfort with minimal air ventilation.

More than 73,000 square feet of active and inactive radiant torsion spring and lay-in ceiling panels, mostly 2’ x 6’, were combined to impressive effect. The radiant system requires less airflow, and thus smaller duct sizes and a reduced plenum height – which results in significant savings in construction costs.

Multiple panel types and sizes not only achieved the vision of an industrial open floor plan, but also integrated well with the project’s mechanical, electrical and lighting requirements.

Highly perforated panels delivered the optimum solution for combining acoustical value and aesthetics in a modern design.

Compared with conventional all-air systems, the radiant ceiling system cuts HVAC energy costs by approximately 25 percent. This project, together with the savings from geothermal, dedicated outdoor air system, and lighting, achieved energy savings over a conventional building of about 40 percent.

“*The manufacturer was involved in the project on every level. What really stood out for me is that they volunteered to come to the job site to make sure everything was going smoothly. That was noteworthy and a big value-add. They not only provided the product, but they represented it in the field,*” said Project Engineer Ben Wiley.

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