

CASE STUDY

MEDICAL CENTER OF THE ROCKIES LOVELAND, COLORADO





BRINGING A “GREEN” HOSPITAL TO LIFE IN LOVELAND, COLORADO

The Medical Center of the Rockies (MCR) is a 570,000-square-foot facility that is changing the face of healthcare construction. One of the largest LEED-certified healthcare projects west of the Mississippi, the revolutionary critical care facility has achieved LEED Gold®.

The case for more green hospitals is a strong one. On average, healthcare facilities consume nearly twice the annual energy of an average commercial office building. Plus, sustainable design approaches can have multiple benefits, as studies are now discovering a correlation between the quality of the built environment and the well-being of its occupants.

From its earliest stages, the concept for MCR had a green focus. MCR’s parent company, Poudre Valley Health System, set out to build a state-of-the-art facility that not only promoted health and healing, but also supported the environment and the well-being of the hospital’s staff. Careful attention to the bottom line was a priority throughout construction. MCR will use 35% less energy than an average hospital, which is a huge win for the team and long-term energy expenditures.

Architect: CBRE | Heery, Atlanta, Georgia
Glazing Contractor: A-1 Glass, Inc., Englewood, Colorado

Photography: © CJ Berg

DESIGN HIGHLIGHTS

Nestled in the foothills of the Rocky Mountains, MCR was designed to reflect its surroundings and project a resort-like environment. A four-story atrium was created, featuring stacked stone fireplaces and a warm color palette. Along with the large amount of natural light created by the atrium, the warmth and tranquility of the space further contributed to the welcoming, hotel-like feel.

CHALLENGES

- While the views and aesthetics of the design were visually striking, the building's orientation and its proximity to the mountains created some of the project's biggest challenges.
- High wind pressures are common in the Rocky Mountain region. This particular project was challenged with 90 psf loads on the atrium curtain wall. This issue, coupled with the southwestern elevation and the LEED® parameters the team was working within, meant that the thermal performance, products and engineering had to be verified through a licensed engineer in the state of Colorado.
- Hospitals are some of the most complex facilities to engineer for, due to the extensive wiring and electrical systems they must house. The team utilized products with superior water and thermal performance and ensured they were readily available so that construction could remain on schedule.





SOLUTIONS

- For the grand atrium, the team utilized an integrated curtain wall, equipped with both sunshades and light shelves. This combination of products reduces solar heat gain and bounces indirect light into the atrium, saving energy costs and providing daylighting throughout the main area.
- An inside-glazed ribbon window and curtain wall system was chosen for MCR's patient rooms. Zone-dammed and pressure-equalized, the product offered the team fabrication flexibility and thermal performance – two important criteria for the project, which had to be fully enclosed before work could begin on its interior. The oversized windows in patient rooms created an open, airy setting with abundant natural light, further promoting a positive, healing environment.



PRODUCTS USED

- 1600 Wall System®1 Curtain Wall
- 1600 PowerShade® Sun Shade System
- InLighten® Interior Light Shelf
- GLASSvent® Windows for Curtain Wall
- 2250 IG (Inside Glazed) Curtain Wall System
- Custom 350 Medium Stile Entrances