

BEST HEALTH CARE

# Hospital Spaces Promote A Healthier Environment

As the only stand-alone hospital in West Michigan devoted exclusively to pediatric care, the \$286-million, 11-story Helen DeVos Children's Hospital in Grand Rapids deftly weaves a child-friendly environment with environmentally friendly systems.

The LEED-registered hospital also is one of the most advanced medical facilities in Michigan. In addition to a level-one pediatric trauma center within its emergency department, the facility houses neonatal intensive care; pediatric critical care; inpatient and outpatient cardiac care; general and orthopedic surgery; kidney transplantation and neurosurgery; and a cardiac catheterization lab exclusively for children.

Spaces are not only rooted in sustainable design principles but in decades of research and study in creating optimal healing environments for young children. An outdoor plaza, for instance, serves as an interactive playground while doubling as a vegetative roof system in order to mitigate urban heat-island effect. By situating a glass-clad patient tower atop a

three-story base, planners not only maximize daylighting, but they also captured expansive views of downtown Grand Rapids.

During planning, project team members determined that a proposed triple-glazed curtain wall would neither meet designated heat-loss requirements nor maximum weight restrictions for the cylindrical, steel-framed structure, circumstances that prompted the development of an insulated floor-to-ceiling system called Visionwall 4 Element—a four-sided butt-glazed unit.

A custom frit pattern provides unobstructed views while minimizing solar heat gain. Because the curtain wall is composed of hundreds of uniquely sized, custom-fitted glass members, the project team employed 3D building information modeling and 3D laser scanning to maintain construction tolerances.

The result is believed to be the first hospital tower in the world featuring 100% vision glass in all patient rooms. The tower does not contain any opaque spandrel glass between floors.

**Helen DeVos Children's Hospital**  
Grand Rapids, Mich.

**KEY PLAYERS**

**Developer/Owner:** Spectrum Health, Grand Rapids, Mich.

**CM/GC:** Wolverine Building Group, Grand Rapids, Mich.; Turner Construction Co., Detroit

**Architect:** URS Corp., Southfield, Mich.

**SUBMITTED BY:**

Turner Construction Co.



AWARD OF MERIT HEALTH CARE



**Elmhurst Memorial Healthcare Integrated Health Facility**, Elmhurst, Ill.

The opportunity to construct a new replacement hospital afforded the owner the opportunity to rethink the way it delivered patient services. The result is a \$450-million, 1-million-sq-ft campus exclusively dedicated to enhancing integrated patient-focused care.

The approach called for integrating the viewpoints of staff, patients and other stakeholders. Construction of full-scale mock-ups of in-patient, critical-care and emergency exam rooms during design development aided the process. Each room type was evaluated on the basis of five quality milestones before trades duplicated their efforts in remaining rooms.

**KEY PLAYERS**

**Developer/Owner:** Elmhurst Memorial Healthcare, Elmhurst, Ill.

**GC, CM:** Gilbane Building Co., Chicago

**Architect:** Albert Kahn Associates, Detroit

**Structural Engineer:** Albert Kahn Assoc., Detroit

**M/E/P Engineer:** Korda/Nemeth Engineering, Columbus, Ohio

**SUBMITTED BY:**

Gilbane Building Co.

PHOTOS: (TOP) COURTESY OF TURNER CONSTRUCTION CO.; (BOTTOM) COURTESY OF GILBANE BUILDING CO.