

General Description:

- **Location:**
Toledo, OH
- **Profile:**
St. Charles Mercy Hospital
- **Project:**
Four vegetated roofs

Services Provided:

- Evaluation
- Design Development
- Construction Management
- Field Quality Control

Challenges:

- Inset roof areas - difficult to access
- Coordination of work schedules for three companies
- Minimal disruption to hospital business

Solutions:

- Used cranes to lift trays over and inside of the inset areas
- Increased communication
- Scheduled working times with hospital staff

Mercy Health Partners St. Charles Mercy Hospital Rehabilitation Center

St. Charles Mercy Hospital has been providing the healthcare needs of Toledo's eastern communities since 1953. A 390-bed level III trauma center, St. Charles Mercy Hospital is the preferred hospital for Toledo's eastern communities, and serves the residents of Oregon, East Toledo, Lucas, Wood and Ottawa counties.

St. Charles Mercy Hospital achieved a U.S. Green Building Council (USGBC) Leadership in



Facilities team engaged StructureTec to assess the conditions of all of its roofing assets and to help develop a long-range management plan.

Based on this plan, four roofs were selected to be replaced, not

only due to their age and conditions, but also because of their strategic locations with respect to patient rooms.

The hospital's goal was to create an environment where patients and family members could look outside the windows and view an inviting area, which would hopefully help them through their healing process.

After a careful design selection process, the St. Charles facilities team opted to not only replace these roofs, but also enhance the areas by incorporating landscaping features, which included a combination of pavers, pedestal pavers and vegetation.

StructureTec performed the design engineering associated with all four roof areas (approx-



Overview of completed vegetated roof area

Energy and Environmental Design (LEED®) designation, and this project is in line with the (USGBC) Leadership in Energy and Environmental Design (LEED®) certification objectives.

St. Charles Mercy Hospital recently completed four new green vegetated roof projects at the Intensive Care area of the South Building. The St. Charles Mercy



mately 16,000 sq. ft.). The design included a complete removal and replacement. Given that these areas are all inset in the building, four large cranes were utilized and strategically placed at each of the corners to lift out the old roof systems. The roofing systems were replaced with new watertight insulated single-ply roofs, which served as the foundation for modular vegetated tray systems manufactured by LiveRoof. The new areas consisted of two rows of pavers and pedestal pavers around the perimeter of the vegetation. The pedestal pavers were installed to hide the irrigation systems for the green roof areas.

The project was awarded to a local roofing contractor who worked under the governance of the StructureTec consultants and in close collaboration with the St. Charles Mercy facilities team, and was executed over a period of three months, with minimal disruption to hospital operations and patient care. ■



Roof area after tear-off



Live Roof tray system installation



Roof drain within the new vegetated roof system

FEATURES

- Scientific approach to problem solving
- Green roofing system
- Tie-in detail with existing roof
- “Green” technology
- LEED certification

BENEFITS

- Eliminated the cause of the problem, not just effect
- Environmentally friendly system
- The two systems are well secured and will accommodate long-term watertight integrity
- Aesthetically pleasing
- Good citizenship and energy efficient

Solutions for the Built Environment

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