

Saint Joseph Medical Center Maximises Safety and Efficiency for a Commercial Building



Project	The Saint Joseph Regional Medical Centre
Owner	Saint Joseph Regional Medical Centre
General Contractor	Mortenson/Tonn & Blank
Concrete Contractor	Christman Constructors, Inc.
Engineer	HOK
GCP Solution	STRUX® 90/40 macro fibres

The Overview

The Project

A new, world-class hospital builds in quality from the ground up. With its bold design rising above the New Edison Lakes Medical Campus in Indiana, the Saint Joseph Regional Medical Centre is designed to maximise patient safety and operational efficiencies for a commercial building. Safety and efficiency were top-of-mind in the facility's innovative construction, starting from the ground up with each of the hospital's seven steel decks.

"Using STRUX®, we eliminated the safety concerns of working with wire mesh and saved over 500 man hours on the job. It's an excellent product. I can't say enough about it."

Phil Butterfield, Christman Constructors

The Challenge

That's why rather than traditional concrete deck construction using welded wire mesh, Gayer specified STRUX®90/40 synthetic macro fibres. STRUX® not only met the specification values of commercial building construction, but also was the first approved synthetic macro fibre reinforcement that met the 2-hour UL listing requirement for steel decks.

"Using fibres is safer and eliminates the slips and trips caused by wire mesh", said Joel Gonzales of Mortenson/Tonn & Blank.

The Solution

Working closely with the general contractor, Mortenson/Tonn & Blank, and GCP Applied Technologies, a mix utilising STRUX® synthetic macro fibres was designed for approximately 780,000 square feet of concrete, including the hospital's seven composite decks, topping slabs, and the basement's slab on grade.

"I've used synthetic fibres before with great success, and when I learned STRUX® was UL approved for use on composite decks, it was an easy choice", said Andrew Gayer. "With STRUX® the fibres are uniformly dispersed, so you get a much better reinforcement matrix in the slab than wire can ever provide. STRUX® isn't just a better product, but lower cost, too—a good example of value commercial building engineering really working".

The Final Results

The STRUX® pumped easily with 300 cubic yard pours and ramped up to 600 cubic yard pours with the same size commercial building crew and pump. And the placement went smoothly observed Larry Riddle of Transit Mix, Inc. "While pumping up to seven floors, then horizontally up to 400 feet (121.92 metres) at 100 yards (91.44 metres) per hour, there was no balling or plugging", Riddle explained.

From the commercial building safety advantages to the cost savings, the ease of placement, crack control and the smooth burnished finish, everyone was pleased with the performance of STRUX®. It's a state-of-the-art floor for a new hospital that's designing in quality — at every level.

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Last Updated: 2019-01-08

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