

Wal-Mart Supercenter Relies on STRUX[®]

Advanced STRUX[®] 90/40 synthetic macro fibers develop hard-wearing, crack-resistant surfaces at high-traffic facility



Owner

Wal-Mart Concrete Supplier: Jack B. Parson Companies, Inc. Engineer: Carl Walker, Inc.

GCP Solution

STRUX[®] 90/40 synthetic macro fibers, ADVA[®] 100 Superplasticizer

Project

Finding a creative parking solution

Shopping structures in urban areas may attract more customers, but they have less space for parking. Such was the case with the Wal-Mart Salt Lake City Supercenter at 1300 South 300 West. As a structural solution, they decided to double their parking capacity with a one-level parking terrace.

"When STRUX[®] was first introduced, we jumped on the bandwagon for slab-on-ground applications. One of the reasons we like STRUX[®] so much is that it reduces the possibility of corrosion that would result from use of welded wire mesh (WWM) or other secondary steel reinforcement in the concrete. Additionally, we have gotten feedback that STRUX[®] is easier to work with from the contractor's perspective, since it eliminates the issues surrounding proper placement of WWM."

Robert McConnell, Vice President Regional Manager,

Carl Walker Denver Office

Choosing proven concrete additives

Carl Walker, Inc., the structural engineer for the project, was given the task of rapidly installing hard-wearing, crack-resistant concrete in high-traffic areas such as the slab-on-ground concrete, the pedestrian ramp, and the loading docks. As the designer of more than 1,000 multi-level parking facilities, they had successfully used STRUX®90/40 synthetic macro fibers in a number of previous jobs requiring fatigue resistance and high strength.

Working with representatives from Jack B. Parson Companies, GCP developed a concrete mix incorporating STRUX® macro fibers. The team created a 611 lb. mix consisting of 490 lb. cement and 120 lb. fly ash. STRUX®90/40 was added at a rate of 4.5 lbs. per cubic yard to provide the residual strength required for the project.

The mix also incorporated ADVA®100 Superplasticizer. This high range water-reducing admixture produces a low water/cement ratio and promotes high slump, extremely flowable concrete that achieves high strengths while providing superior workability.

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Saving construction time and labor

Jack Parson's Quality Control and Technical Sales Representative Rod Higley reported on a 13-yard test pour. "It worked beautifully," he says. "We ended up pouring 3400 yards of concrete. The concrete was 6" thick in the parking terrace, and 8-10" thick in the loading docks to accommodate the heavy trucks. We found that STRUX®90/40 worked very well. STRUX 90/40 prevented cracking and really enhanced the performance of the concrete," says Higley.

Higley also commented on other benefits of using STRUX® macro fibers. "STRUX® comes in a concrete-ready bag, so it is easy to handle, and it disperses evenly throughout the concrete matrix. By using STRUX®, we also saved time and labor, because we could drive our trucks directly on grade to pour the concrete. In all, STRUX®90/40 passed the test with flying colors."

Blue360SM Product Performance Advantage.

Because every project, large or small, deserves the best level of protection.

"STRUX® 90/40 passed the test with flying colors."

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