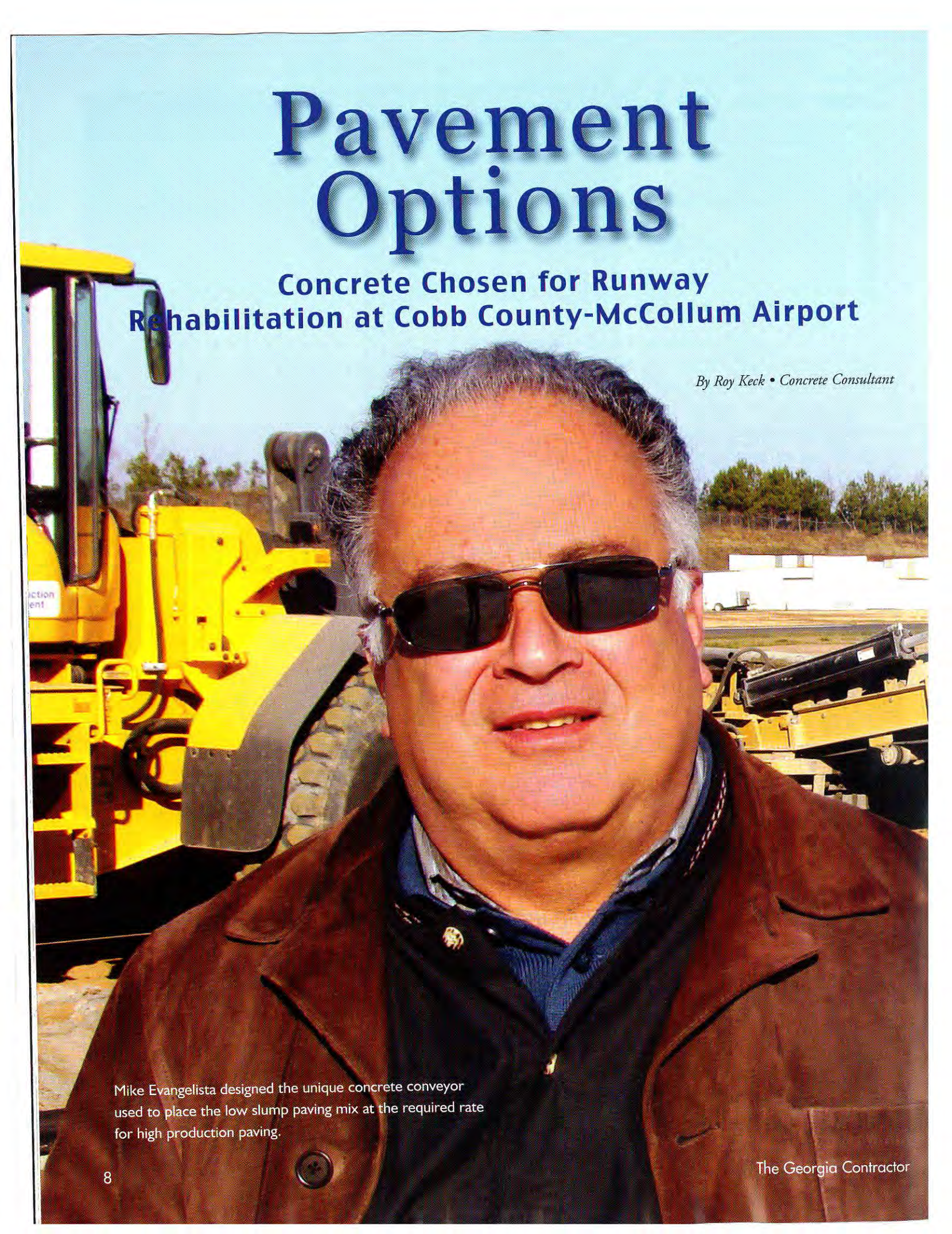


# Pavement Options

## Concrete Chosen for Runway Rehabilitation at Cobb County-McCollum Airport

*By Roy Keck • Concrete Consultant*



Mike Evangelista designed the unique concrete conveyor used to place the low slump paving mix at the required rate for high production paving.



**G**eneral aviation runway repairs and maintenance typically represent a significant cost item in an airport operating budget. Recognizing this, Cobb County advertised a runway rehabilitation project that also included an option for use of Portland cement concrete whitetopping to remediate the 6,305 foot long runway 9-27 at McCollum Airport. Concrete was chosen for the rehab based on the bid results.



### Unique Concrete Conveyor Played a Role in Achieving Fast Cycle

**Mike Evangelista**, Project Manager for Sis-S, demonstrates a concrete conveyor he designed for high production paving situations such as McCollum. The 20 foot long transfer belt, patent pending, works in tandem with a loader, hooking up to the auxiliary attachment system for hydraulic power to its self-contained motor. Because of its portability and use as an attachment to the loader, it offers significant economic savings. The 20 foot conveyor folds in half, and fits within the path of the loader when being moved around. When transported between project sites, it fits within an 8 and 1/2 foot-wide path, thus eliminating the need for oversize load permits. Mike designed this system to increase the placing rate on his projects. He can be contacted for more information at 248-982-2141 or [mike@tonyangelo.com](mailto:mike@tonyangelo.com)



Aerial View of  
Pavement  
Construction  
Progress



Whitetopping is a Portland cement concrete overlay placed over existing asphalt pavement. It can be used as a paving surface course when traditional materials have failed due to general deterioration or even rutting. Whitetopping can be placed at depths ranging from two to eight inches, depending on the application. Whitetopping does not rut or washboard and works with milling so that the grade can be maintained. As a bonus feature, concrete pavement surfaces have high albedo and can be used in LEED projects to reduce heat island effect. Whitetopping is price competitive with other resurfacing materials, and is an excellent option for pavement rehabilitation projects.

#### Runway 9-27: Perfect Candidate for Whitetopping Remediation

When runway 9-27 at McCollum Airport needed major work, Cobb County took a long hard look at the material choices available in the marketplace. McCollum's runway was extended in 2006 to accommodate light commercial jets, and runway shut-downs are a serious consideration. The high takeoff count now demands high quality, long lasting materials to minimize downtime for repairs, and a long-lasting concrete alternative was included in the bidding for this important Georgia transportation link.

#### Quick Schedule a Requirement by Cobb County

The concrete option was within three percent of the asphalt bid, according to Karl Van Hagel, Airport Manager for Cobb County. Following the awarding of the repair contract, Van Hagel announced the construction schedule to be a 21 day closure for the runway, beginning November 10th, and reopening on December 1st. Upon reopening, the 6,305 foot runway will be 100 feet wide, up from 75 feet, and the deteriorated asphalt surface will be replaced with concrete. The runway was closed at night for two months prior to paving as crews did grading work in preparation for





*Pavement was placed in 25-foot-wide strips—with subsequent infilling between.*

the concrete work. “One hundred feet is the standard width for new runways,” Von Hagel said, “and the concrete should last longer than the asphalt. The asphalt was repaved about 20 years ago, but the concrete should last at least 30.”



*A Gomaco 2800 paver places concrete, with dowels and baskets in place, at a rate of 1800 cubic yards of concrete per day.*

### Commercial Jet Center Management Optimistic About Upgrade

Opened in 1960, the airport is named for the late Herbert McCollum, who served as the one-man commission of Cobb County from 1957 to 1963. With more than 119,600 takeoffs and landings in 2007, McCollum is the fourth-busiest airport in the state. The improved runway will likely change that, according to airport executives. Andrew Ash, the general manager of Preferred Jet Center, told the Marietta Daily

Journal he has heard favorable comments about the project at events such as the National Aviation Business Association convention. The upgrade “shows potential clients the forward thinking and momentum at the airport.” When it re-opens on December 1st, it will not only be one of the biggest general aviation runways in metro-Atlanta but one of the safest as well. We anticipate this runway to play a significant role in our ongoing effort to gain the attention of flight departments to our facility.”

### Project Open House Held on November 20, 2008

An open house was held during the construction process to showcase the innovation while concrete was actually being placed. Speakers for the open house and demonstration included Van Hagel, Airport Manager; Michael Reiter, designer; Mike Evangelista, concrete contractor; and John Wood, Quality Control Manager for Six-S. Following a presentation by each, the group went out to the paving site for a close-up look at the construction process.

Michigan-based Six-S Inc., paving contractor, will place a total of over 70,000 square yards of P-501 concrete at seven inches thick, at a rate of 1800 cubic yards of slip-formed mix each day. This is the first project for them outside of their home base

of Michigan, where they have been successful concrete pavers for over 25 years. The widening operations took place entirely from the south side of the runway and required shifting the centerline crown and overlay along the entire runway length.

According to project manager Mike Evangelista, cold weather was the most difficult aspect of his operations, and this was easily corrected by the use of heated batch water and an alternate concrete mix design. The concrete achieved the desired 550 psi flexural strength in three days, and will achieve the ultimate design of 650 psi flex at 28 days. Traditional flexural testing beams were made for quality control checks. A total of ten dump trucks and two “Agitors,” or agitating hopper trucks, were used for placing in front of a Gomaco GHP 2800 paver. Control joints were cut at 12.5 foot spacing, with corresponding dowel bar baskets. Concrete was placed in strips 25 feet wide, leaving a space between parallel strips for subsequent pours. Evangelista stated the 21 day schedule was a challenge, but was the best plan for everyone to place the 15,000 cubic yards of concrete.

According to Greg Dean, ACPA-SE Airport Programs Director, “Over 50 airport designers, contractors, suppliers, and government officials attended the open house, hosted by Van Hagel and McCollum-Cobb County Airport. This project is an outstanding example of how concrete whitetopping is the right choice for runway rehabilitation, even more so today. Speed of construction, exceptional life cycle cost, contractor availability and support—all of these goals have been achieved. The businesses that rely upon this airport will receive benefits from this decision for decades into the future.” ❖

Additional information on this project can be obtained by contacting Greg at ACPA-SE: 919-772-6648 or e-mail to [gdean@pavementse.com](mailto:gdean@pavementse.com)