



## Blue Earth Airport Reconstruction

### What was the problem?

The Blue Earth (Minn.) Municipal Airport had experienced serious deterioration of its asphalt runway, taxiway and apron pavements, which were originally constructed in 1991. Bolton and Menk, the city's engineering consultant, along with MnDOT Aeronautics and FAA determined that a total reconstruction of these pavements was necessary.

### What was the solution?

The City of Blue Earth chose concrete over bituminous pavement for this two-phase reconstruction project after receiving alternate bids and reviewing lifecycle cost analyses. Phase 1 involved paving the apron, connecting Taxiway A and a new parallel Taxiway B with approximately 28,000 square yards of six-inch concrete pavement. This phase of the project started in the fall of 2010 and was completed by September 2011. Phase 2 reconstructed Runway 16-34 and the connecting taxiways with approximately 31,000 square yards of six-inch concrete pavement. The new parallel Taxiway B has served as a temporary runway since Runway 16-34 started in the spring of 2012 and will be completed by September 2012.

### Key facts about the project

- Anticipate a 40-year life for concrete pavement.
- All concrete constructed to FAA Specification P-501.
- No cracks or distresses on Phase 1 concrete to date and none during construction of Phase 2.
- Phase 1 cost: \$2.15 million and Phase 2 cost: \$2.2 million. Both were FAA-funded.

### Final comments

Initial bidding to rebuild the entire airport and extend the runway by 1,200 feet with five inches of bituminous pavement except for a concrete apron exceeded the total available funding resources. The City of Blue Earth, FAA, MnDOT and the Engineer determined that the project would consist of reconstructing the existing airport facilities in two phases using life cycle cost analyses (LCCA) to evaluate bituminous and concrete pavement alternatives. The low bid for these alternatives on both phases was below the Engineer's estimate. LCCA demonstrated that the more expensive concrete pavement alternative was the best long-term investment.

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