BURNS McDONNELL

CASE STUDY / **DODGE CITY RUNWAY 14-32 RECONSTRUCTION**

PREPARING FOR SMOOTHER ARRIVALS AND DEPARTURES WITH RUNWAY REPLACEMENT

Dodge City Regional Airport sees many aircraft fly in and out every day. Safe runways are paramount to providing high quality service, so when one was nearing its end of life, the city of Dodge City quickly sought help to reconstruct it.

COMPREHENSIVE SERVICES LAND SUCCESSFUL RESULTS

Ongoing collaboration lays the foundation for a runway with staying power.

PROJECT STATS

CLIENT
City of Dodge City

LOCATION
Dodge City, Kansas

COMPLETION DATE
July 2020

6,899
FOOT RUNWAY

CHALLENGE

Dodge City Regional Airport (DDC) serves the aviation community with a wide array of operations, from recreational flights and flight training to large corporate aircraft and commercial service. With small and large cabin business jet aircraft operating at DDC on a daily basis, it's important for all aspects of the airport to function efficiently and safely, including the runways.

As Runway 14-32 at DDC approached 40 years of service, the asphalt pavement could no longer support the usage required and smaller rehabilitation repairs weren't providing sufficient results. Major repairs were needed.

SOLUTION

Burns & McDonnell was selected to perform design, bidding and construction services for the Runway 14-32 project. From project initiation to construction closeout, we worked with the city of Dodge City every step of the way, including assisting with the capital improvement program to working with the Federal Aviation Administration (FAA) on project funding and to justify the runway's length.

We analyzed how aircraft use the runway to determine the appropriate length to propose to the FAA.

Based on our recommendation, the FAA approved the runway length justification to maintain the runway at 6,899 feet long and 100 feet wide.

New 8-inch Portland cement concrete pavement on a 6-inch aggregate base with a stabilized subgrade was determined to be the most suitable foundation for the runway. The design also included regrading the runway safety areas to meet current FAA standards, along with providing drainage upgrades. Runway electrical items were updated with new LED medium-intensity lights, signage and end identifier lights.

Throughout the duration of the project, three different essential air service companies utilized the airport. This entailed working with companies during the design process to determine the necessary length of runway for their aircraft and configuring a new design for construction phasing each time to meet their needs. Our team coordinated with the airlines of the airport that use the runway to provide

a construction phased design with a displaced threshold. This allowed airport operations to continue during construction of the south portion of the main runway through the intersection with the crosswind Runway 2-20.

Construction took place in two phases over two years with separate FAA grants. Our team coordinated the initial award of the project with the contractor, followed by assisting the city in preparation of a supplemental agreement to add the second phase to the contract after additional funding was awarded by the FAA.

RESULTS

After ongoing collaboration across all phases of the project, the completed 6,899-foot runway successfully met all needs for operations. By utilizing new concrete pavement for Runway 14-32, the runway will last longer and require less maintenance. The airport is now a safer and more reliable place for landing and takeoff for the aircraft that operate at DDC.

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