

Project Title:	Project Number:	Project Manager:	Stakeholders:
Runway 14L-32R Rehabilitation & Lighting	NEW	Miller	Peter Dumaliang, Assets Management; Paul Cook, Maintenance; Davey Pilley, Operations; Morlene Mitchell, Finance; Matt Sykora, Tenant Relations; Tenants and FBOs

Project Description:

This project will rehabilitate Runway 14L-32R and modify several connecting taxiways. The project will be completed in two phases, the first phase consists of planning and concept development, and the second phase involves design and construction. The first phase of the project will conduct an advanced planning study for both runways and a geotechnical investigation for the entire airfield using destructive and nondestructive testing of airport pavements. Geotechnical investigation will include reviewing existing pavement records, taking core samples, conducting SPT/CPTs, FWD tests and performing PCI/PCN evaluations. Recommendations regarding useful life and a life cycle cost analysis will be provided. Additionally, this phase will include performing federal, state and local environmental processes, applications and obtaining necessary permits.

The entire length of Runway 14L-32R and its connecting taxiways will be rehabilitated during the second phase of the project. The project assumes 7" of the existing asphalt will be milled and replaced. It is assumed that 15% of the project area will require sub-base reconstruction due to failing subsurface conditions. Existing runway edge light fixtures will be removed and replaced with LED technology. The first phase of electrical modifications that are needed to separate the mandatory instruction signs, RGLs, PAPIs and wind cones onto individual electrical circuits will be installed. Empty conduit from each facility will be installed up to the project limits. Remaining portions of conduit, electrical cable and switches will be completed in the Runway 14R-32L Rehabilitation and Lighting project. New runway edge, centerline and threshold markings will be painted, and thermoplastic mandatory instruction signs and holding position markings will be installed. Elevated and in-paved runway guard lights will be purchased and installed. In addition, a new aircraft run-up pad with taxiway edge lights will be constructed on the north end of the runway.

Taxiway A2 will be demolished and removed in its entirety, between Taxiway A and Runway 14L-32R. A new full-strength taxiway that meets Taxiway Design Group (TDG) 3 specifications will be constructed. TDG 3 pavement strength will accommodate aircraft that weigh no more than 100,000 pounds. The project will remove asphalt pavement, electrical cable and conduit, taxiway edge lights, runway guard lights, and taxiway designation signs. Twenty-foot-wide taxiway shoulders will be paved, and taxiway edge lights, designation signs, runway guard lights, electrical cable and PVC conduit will be installed. Centerline and edge markings will be painted on the new taxiway, and a portion of the apron will be painted green to address direct apron to runway access. Elevated blue reflectors will be applied with epoxy on the painted green island on the apron directly in front of Taxiway A2.

The existing asphalt pavement at Taxiways A3, A4 and A5 will be demolished and removed in its entirety. Taxiway edge lights, designation signs and runway guard lights along the taxiways will be removed and the electrical system will be modified to provide a continuous circuit. The runway shoulder will be restored and minor modifications to pavement markings will be made.

New taxiways will be constructed to replace Taxiways A4 and A5. The new taxiways will be shifted from their current locations and will be aligned perpendicular to Runway 14L-32R and Taxiway A. Taxiway designation signs along the remainder of the runway length will be modified to maintain consecutive numbering. Runway edge lights will be reconfigured to align with the new taxiways. New taxiway edge lights, designation signs, runway guard lights, and electrical cable and conduit will be installed to connect to the existing circuitry. Drainage modifications will be performed to install new lines under the new pavement and existing drain lines under the demolished taxiway will be removed or abandoned.

Taxiway A8 will be modified to remove the portion of pavement west of Runway 32R, while the section of pavement east of the runway will be rehabilitated. The section of pavement that will be eliminated will be demolished by removing all asphalt and the subbase will be regraded to meet drainage requirements and re-seeded for erosion control. Taxiway edge lights and runway designation signs will be removed, and the electrical circuit will be re-wired to complete the circuitry. The section of pavement east of the runway will be rehabilitated by milling the top 7" and repaving with new asphalt.

Additional work items include, barricades, flagging, paint marking and seeding.



King County International Airport/Boeing Field - CIP Project Definition

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Project Justification:

Runway 14L-32R at King County Intentional Airport is the secondary runway, which allows small general aviation operations to occur while not impacting large jet operations on the primary runway. Runway 14L-32R provides an important safety function by segregating smaller, slower, propeller aircraft from large, high-speed jets. The runway pavement is constructed of asphalt which deteriorates over time and requires periodic maintenance to seal cracks and rejuvenate the surface. The periodic maintenance is required to extend pavement life. The pavement is beginning to unravel and spall which creates foreign objects and debris. The runway was last rehabilitated in 2002. The asphalt is approaching its 20-year life expectancy and requires rehabilitation. In addition, King County International Airport recently completed a master plan study which identified the need to modify certain taxiway connectors as they no longer meet FAA design standards. Modifying and relocating taxiway connectors is necessary to meet current design standards and maintain the level of service of a world class airport.

Project Schedule:

Procurement Start Date	Design Start Date	Design End Date	Construction Start Date	Construction End Date	Project End Date
May 1, 2020	November 1, 2022	November 1, 2023	April 1, 2025	February 1, 2026	June 1, 2025

Budgeted Costs:

Preliminary Planning	Design Services	Construction Services	KCIA Staff Support	NEPA Process:	Contingency / Escalation	Construction / Equipment
				CATEX		
\$ 125,000	\$ 2,360,000	\$ 1,910,000	\$ 458,000	\$ 60,000	\$ 6,897,000	\$ 15,443,000

Funding Sources:

Airport Funds	Programmed AIP: Entitlement	Programmed AIP: Discretionary	Requested AIP	State/Other	Total Funding
\$ 2,725,300	\$ 1,600,000	\$ 15,000,000	\$ 7,927,700	\$ -	\$ 27,253,000

Project Location:

