



## Orlando International Airport Crossfield Taxiway Simulation Analysis



**Client Name:** Greater Orlando Aviation Authority (GOAA)

**Date Started:** December 2012

**Date Completed:** March 2013

Orlando International Airport (MCO) and its prime contractor Schenkel Shultz commissioned TransSolutions to conduct an airfield simulation analysis to assist with evaluating Master Plan Update (MPU) alternatives. The purpose was to determine the need for the proposed south crossfield taxiways (south of the proposed terminal complex) or whether an additional midfield taxiway would provide sufficient taxiway capacity. This analysis compared aircraft delay and taxi times and identified any areas of the airfield prone to congestion for three scenarios:

- Dual north crossfield taxiways and dual midfield taxiways
- Dual north crossfield taxiways and trip midfield taxiways
- Dual north crossfield taxiways, dual midfield taxiways, and dual south crossfield taxiways

The MPU 2031 traffic demand and a projected 2051 traffic demand were simulated in both south- and north-flow visual meteorological conditions (VMC). Utilizing the previously developed simulation model, the study showed that in regards to south-flow operations, the three taxiway alternatives perform almost identically. In north-flow operations, the south crossfield taxiways provide a small departure taxi time savings of approximately 0.4 – 0.6 minutes compared with the other two taxiway scenarios.

In conclusion, the south crossfield taxiways provide little benefit to overall aircraft taxi times and delays. There are no significant congestion areas on the airfield in any of the scenarios except for departure queuing due to insufficient runway capacity to accommodate the 2051 traffic demand. However, this analysis did not include any technology or procedural enhancements (e.g., NextGen) that might be implemented at MCO during the next 40 years.