

Orlando International Airport Pavement Management System Implementation & Update



The Orlando International Airport (OIA) is a vital link in the world's transportation system, serving nearly 100,000 passengers daily. The constant demand on OIA's facilities means that any pavement closure has a significant impact on the traveling public, the airlines, the freight carriers, and the thousands of people who serve these industries. Keeping the airfield pavements in good operational condition at all times is of the highest priority for the Greater Orlando Aviation Authority (GOAA). In addition, Federal Aviation Administration and Florida Department of Transportation funding conditions require that grant recipients subscribe to a progressive and continuing pavement maintenance and management process in order to protect the long-term investment in capital airfield projects.

To further the proactive management of their pavements, GOAA retained AVCON, Inc., with Applied Pavement Technology, Inc. (APTech) as a subcontractor, to evaluate the pavements at OIA and to develop a pavement management program in 2000. APTech led the majority of the work on this project, including a thorough records review, pavement condition index (PCI) inspections, establishment of a MicroPAVER database, falling weight deflectometer testing, and determination of the structural remaining life and pavement classification number (PCN) of each pavement section. APTech also assisted in the preparation of a 10-year pavement maintenance and rehabilitation program for GOAA to use as a planning tool.

During 2006, the project team performed a records review to identify all rehabilitation and construction projects completed since 2000 and to update the network definition map accordingly. All airside pavement sections were then re-surveyed in accordance with the PCI procedure. The resulting data were used to update the existing MicroPAVER pavement management database. Although additional structural testing was not performed during this project, the 2001 deflection testing data were re-analyzed using the latest traffic projections to determine the structural remaining life and pavement classification number. Finally, the findings from the various field evaluation and data analysis activities were collectively considered in the development of a new 10-year capital improvement program for OIA.