

SAFETY GROOVING FOR SAFER RUNWAYS



Runway 9L – 27R, Fort Lauderdale, FL

>>> DIAMOND GRINDING AND GROOVING ASPHALT PAVEMENT

IT HAS BEEN SAID BEFORE that no matter what the weather, all fixed-wing aircraft require precise, skid-free landings — every time. Even when wet and flooded, runways and taxiways must deliver the best possible overall ground handling and stopping characteristics that today's state-of-the-art technology can provide. This was precisely the case for the Fort Lauderdale Hollywood International Airport (FLHIA) in the spring of 2010. Located in Broward County, Fla. just three miles southwest of Fort Lauderdale, this international commercial airport has been known as the intercontinental gateway since the 1990s. With the asphalt paved Runway 9L – 27R experiencing distress and lost friction, the Broward County Aviation Department decided to form a plan to rehabilitate their airport runway.

According to Gasser Douge, Airport Engineer for the FLHIA, a loss of up to 40 percent of the transverse grooves triggered an investigation of the pavement condition, with concern centering on the pavement's loss of friction. The design

engineer recommended grinding and grooving as the solution to the problem.

The scope of work included patching areas of deteriorated pavement, diamond grinding approximately 110,000 square yards of asphalt runway deep enough to remove the existing grooves, re-grooving the runway in accordance with standard Federal Aviation Administration (FAA) specifications and then re-striping. During the project, high levels of production were required and maintained by the crews during short work windows, seven nights per week. An added challenge was the inconvenience caused by having to evacuate the runway intersection when planes were arriving.

Diamond grinding a major runway is a first for Broward County and possibly for the entire region. The technique should be examined by owners as a viable and cost effective method for rehabilitating asphalt paved runways and highways. While the total project cost was \$1.5 million, the

TEAM MEMBERS

- Broward County Aviation Department (Owner)
- Weekly Asphalt (Prime contractor)
- DMJM Aviation/AECOM (Design engineer)
- Safety Grooving & Grinding, LP (Grinding and grooving)
- RS&H (Inspection services)

diamond grinding and grooving cost was only \$500,000 or \$5 per square-yard. The cost savings were substantial when compared to an alternate repair method such as milling and filling.

Airport officials were quick to take note of the quality of the work and the professionalism of grinding and grooving crews. The project was completed in August, 2010, leaving the facility with a like-new surface and the friction necessary to ensure the continued safety that modern day airports require.