

Client Contact:
Mr. Jeff Briar
Brannan Companies
720-240-6571

Services Provided:

- **Quality Control Services**
- **Materials Testing**
- **Observation**

Project Summary:

Cesare, Inc. (Cesare) performed quality control services for Brannan Companies during the construction of new shoulders, and milling and paving of a hot mix asphalt (HMA) overlay on runway 8/26. Cesare's services included:

- Moisture and density testing of runway shoulder subgrade.
- Concrete testing for runway light bases and wind cone tower.
- HMA field density testing with nuclear density gauge and cut cores.

During construction of the runway shoulders, Brannan Companies encountered significant problems in achieving compaction on the shoulder subgrade due to unforeseen moisture conditions. Cesare provided valuable assistance by installing monitoring piezometers to determine the presence of groundwater and subsequently making recommendations for treating the subgrade with cement to create a stable platform for paving operations.

