Temperature: N/A

Reflective Cracking:

In April, the analysis of the trial test data was completed. The focus was placed on actuator forces, horizontal displacements of concrete, asphalt strain gage (embedded and surface) responses. The pavement temperature was continuously monitored. The hydraulic control program was thoroughly revised to account for newly installed vent valves and software flaws, such as cycle time and testbed drifting. A total of 24 HMA cores were taken from the test pavement for fatigue characterization using the Texas Overlay Tester.

The testing of 17" un-cracked pavement is expected to start the first week of May, 2012. During the testing, the performance of a number of installed “crack detectors” will be examined, as well as the exact position of the stationary slab. In addition, the feasibility of conducting full-scale tests in hot weather will be evaluated. For instance, is it possible to control pavement temperature at 32°F? The milling of the existing AC overlay is expected to take place by the end of May.

Procure, Install, and Test Pavement Instrumentation Sensors

Based upon the preliminary data analysis of the trial test, it was concluded that the surface strain gages were not performing satisfactorily due to a demanding testing environment (temperature and moisture). Therefore, on the Reflective Cracking project, the focus was placed on exploring appropriate types of sensors for crack detection. A number of candidates were investigated and evaluated. The final selections include Micro Wire and Crack Detector Gage from Micro-Measurements, Strain gage from Texas Measurements, and Strain Transducer from Campbell Scientific.

During the trial test of reflective cracking, a special version of the TenView program was created for data monitoring.