Reflective Cracking Construction Notes

Date: December 17, 2014

Project: Reflective Cracking Indoor Phase IV

Weather:

	6:54 AM	3:54 PM
Temperature (°F):	41.0	50.0
Dew Point (°F):	39.9	35.1
Humidity (%):	96	57
Visibility (Miles):	3.0	10.0
Wind (MPH):	6.9 W	13.8 W
Conditions:	Clear	Overcast

Working Hours: 7:00 AM – 4:30 PM

Sub-Contractor(s): ARA, United Concrete, JBT Contractors

Personnel: (1) technician (ARA), (1) form carpenter (United), (1) supervisor, (1) operator, (1) laborer (JBT)

Equipment: (1) backhoe, (1) tandem dump truck, hand tools

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JBT hauled away the stockpiled high strength subgrade material that had been excavated to construct the lead-in area slab.

United completed the installation of the formwork for the Phase IV paving. The formwork was constructed to accommodate the placement of (2) lifts of P-401 on the North test section and (3) lifts on the South test section with a 2 foot wide gap in between. The forms for the lowest lift were braced against the sides of the test rig. The planks that were set to create the center gap were stabilized via kickers that spanned between the planks and the South edge forms. The forms for each of the upper lifts were constructed as separate elements that could be installed atop the lower lift forms (via wood screws) as the paving operation progresses. The (2) sets of forms along the North edge of the test rig were constructed at heights of 3 inches and 2.5 inches to accommodate the 3" loose lift thicknesses of P-401 for the first and second lifts, respectively, and ultimately provide compacted lift thicknesses of 2.5 inches for both lifts on the North test item (5-inch total test section thickness). The (3) sets of forms for the center gap and the South edge of the test rig were constructed at heights of 3 inches, 2.5 inches and 2 inches to accommodate the 3-inch, 3-inch, and 2.5-inch loose lift thicknesses of P-401 for the first, second and third lifts, respectively, and ultimately provide compacted lift thicknesses of 2.5 inches, 2.5 inches, and 2 inches for the (3) lifts on the south test item (7-inch total test section thickness).

United also re-patched the surface of the test rig slabs along the edges of the joint using Rapid Set Cement All® repair cement, shown in Figure 1.

Subsequent to the completion of the formwork and edge patching, SRA and ARA personnel installed the Dynatest asphalt strain gauges (ASG's) across the joint on concrete surface of the

test rig, shown in Figure 2. (4) ASGs were installed on each test item (8 total) by setting the anchor points of each gauge in a thin layer of asphalt binder prepared by the NAPTF laboratory. The binder was also used to secure the gauge lead wires to the concrete surface at numerous points. Please note that the (2) outer ASGs on each test item were set approximately 11 inches from the edges of the forms in an effort to locate these ASG's as closely as possible to the center of each track of the IR Blaw-Knox PF-545 pathway paver, where the stresses imparted by the tracks tend to be lowest.

Glasgow, Inc. delivered an IR Blaw-Knox PF-545 pathway paver to the NAPTF in the morning. This paver will be used to pave Phase IV of Reflective Cracking tomorrow (12/18/2014). The IR Blaw-Knox paver, shown in Figure 3, has a track width of 15 inches and an out-to-out dimension of 52 inches.

Figure 1. Patching of Test Rig Slab Joint Edge.

Figure 2. Finalizing Instrumentation Installation.

Figure 3. The IR Blaw-Knox Paver.