

**CERTIFICATE OF ANALYSIS**

January 28, 2014

**Report For:** Hi-Lite Markings, Inc.  
1849 Hi Lite Dr.  
Adams City, NY 13606

**Attn:** Brad Dunn

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<b>Sample ID:</b> Arcadia Municipal Taxiway	<b>Project #:</b> HILT 09-02-01
<b>Sample Date:</b> Received 01/17/14	<b>Type:</b> Top 3/8" of Cores

**OBJECTIVE:** Evaluate pavement performance in accordance with the FAA P-632 Table 2 (pavement more than 3 years in age) Bituminous Pavement Rejuvenation specifications.

**DATA/RESULTS:**

PROPERTY	TEST METHOD	SPEC. FAA P-632 Table 2	RESULTS:							
			Control	0.05		0.065		0.075		
				Result	% Diff. From Control	Result	% Diff. From Control	Result	% Diff. From Control	
Arcadia Municipal Taxiway Recovered Binder										
Complex Modulus, $G^*$ , kPa	60°C	AASHTO T 315	≥40%	103.8	11.53	-88.9	10.98	-89.4	10.56	-89.8
Viscosity $\eta = G^* / \omega$ , Pa·s			Decrease	103,800	11,530	-88.9	10,980	-89.4	10,560	-89.8
Phase Angle, $\delta$ , °			Report	59.13	75.29	27.3	76.03	28.6	75.17	27.1

**CONCLUSION:** The three application rates are in accordance with the FAA P-632 Table 2 stating samples must be reduced by at least 40% of the control Viscosity.

**PROCEDURE:** All cores were saw-cut removing the top 3/8" layer of the core. The material was broken up and extracted using method ASTM D 2172 (Method A) with toluene and ASTM D 5404 to recover the binder. Complex Modulus, Viscosity, and Phase Angle were tested by AASHTO T 315 using 1 rad/s.

Tested by:   
Elsa Rodriguez, Asphalt Binder Technician

Date: January 28, 2014

Reviewed by:   
T. Christine Feaster, MS, EIT; Pavement Engineer

Date: January 28, 2014