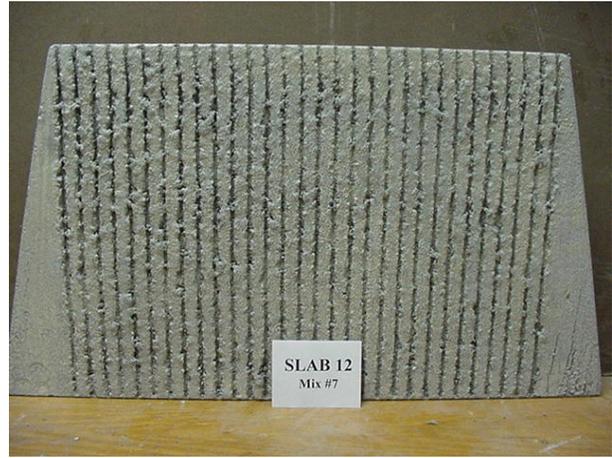
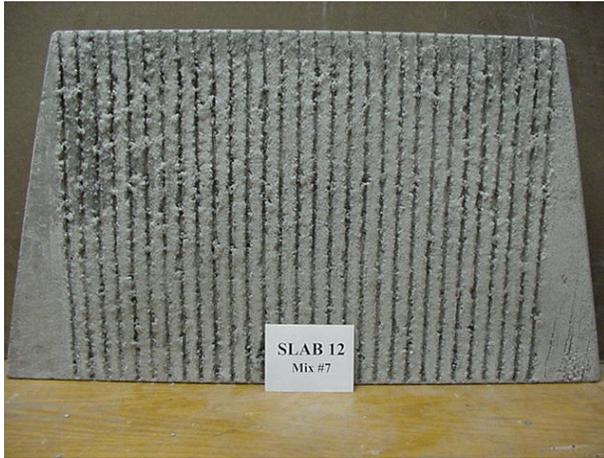


Slab 12

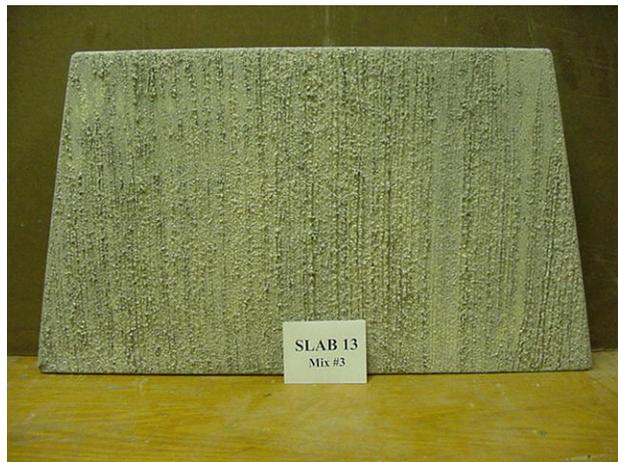


Slab 12 has a tined surface texture (left), and the same slab coated with white pigmented curing compound (right)

Slab 13



Slab 13 with astroturf drag texture



Slab 13 with white curing compound

Slab 14

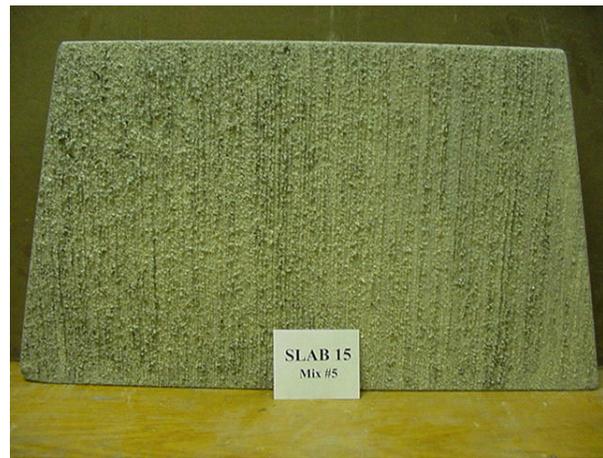
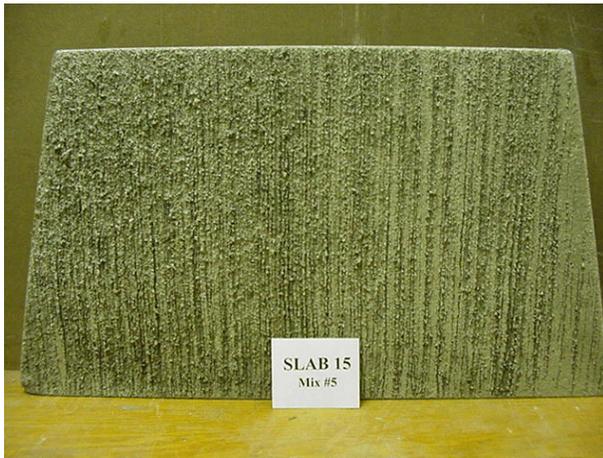


Slab 14 with astroturf drag texture



Slab 14 coated with curing compound

Slab 15



At left is slab 15 with an astroturf drag surface texture, and, at right, is slab 15 coated with curing compound

Slab 16

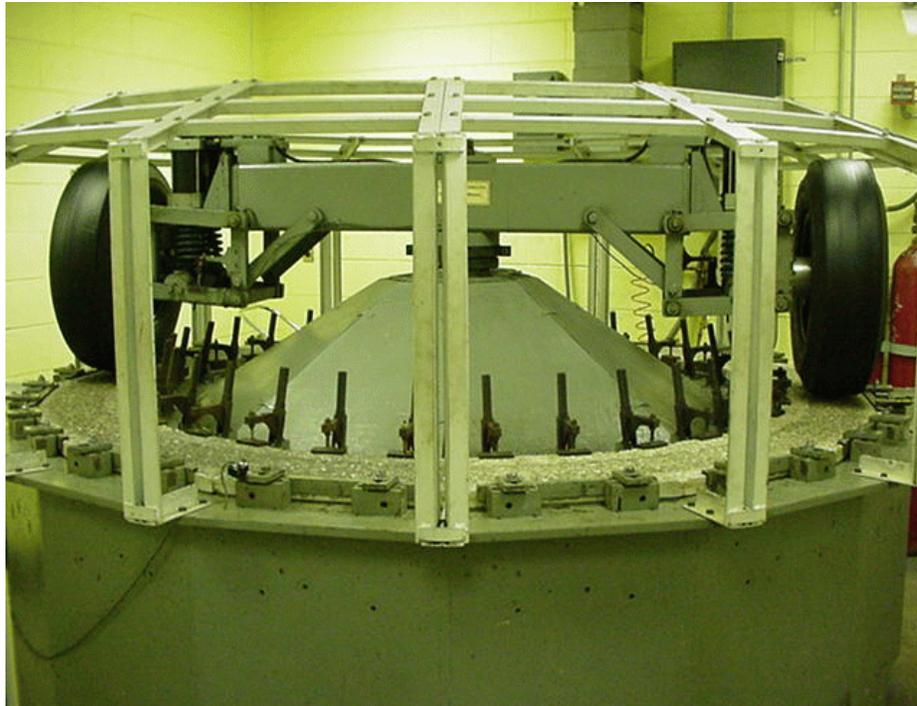


Astroturf drag finish on slab 16 (left), and slab 16 coated with curing compound (right)

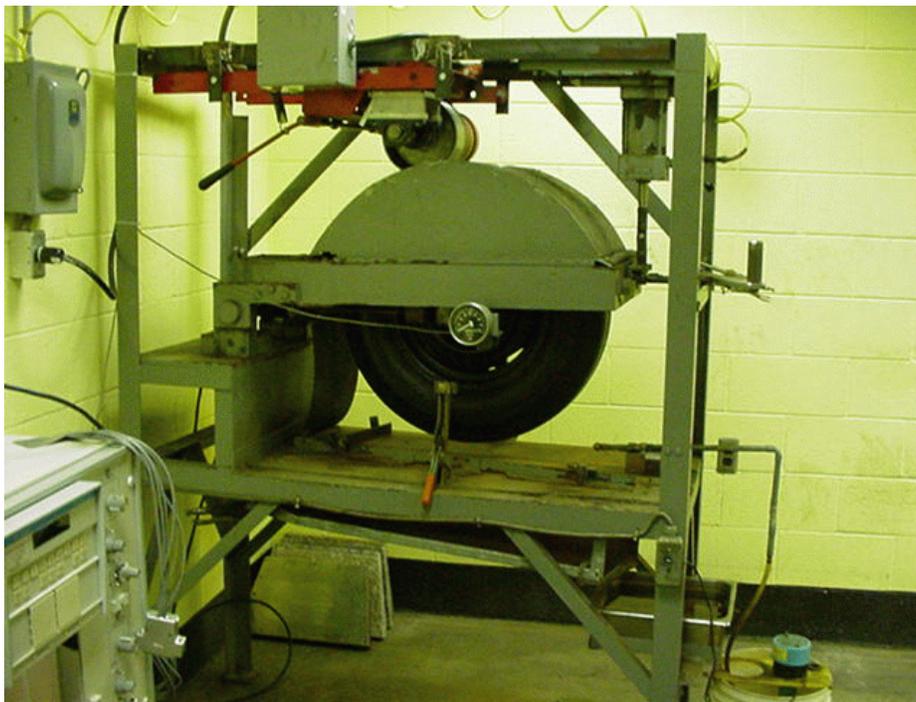
Prior to skid testing, slabs 1 through 16 were tested by the British Pendulum test method. Each slab was again tested by this method after 0.5 million wheel passes, and four million wheel passes on the wear track. Wear track testing progressed in the normal method, with slabs 1 through 16 being tested for skid resistance every 0.5 million wheel passes, until a total of four million wheel passes was reached.



British Pendulum Tester



The Wear Track



The Skid Drop Tester

Wear Track Series 064 - British Pendulum Testing					
<i>Slab Number</i>	<i>Mix Number</i>	<i>Texturing Method</i>	<i>British Pendulum Test Results</i>		
			0.0 Million Wheel Passes	0.5 Million Wheel Passes	4.0 Million Wheel Passes
1	1	None	79	42	32
2	1	None	20	23	26
3	2	Smooth Troweled	20	25	33
4	2	Transverse Tining	33	40	43
5	6	Transverse Tining	64	42	52
6	2	Astroturf Drag	53	40	48
7	6	Astroturf Drag	73	52	57
8	4	Astroturf Drag	56	43	56
9	8	Astroturf Drag	70	47	52
10	3	Smooth Troweled	55	23	31
11	3	Transverse Tining	63	40	49
12	7	Transverse Tining	58	42	44
13	3	Astroturf Drag	76	65	75
14	7	Astroturf Drag	68	51	63
15	5	Astroturf Drag	72	48	60
16	9	Astroturf Drag	83	52	64

Remarks: British Pendulum test results represent the average of five test drops on each slab, following ASTM E 303 Standard Method of Test for Surface Frictional Properties Using the British Pendulum Tester.

All specimens except slab number 1 are coated with Lin-Seal White curing compound.

Control limestone coarse aggregate, and 2SS stone sand fine aggregate are from Inland, ASI 75-005. Gravel 26A coarse aggregate and natural sand 2NS fine aggregate are from New Hudson, ASI 63-048.

Textured slabs were scored transversely with tines or astroturf.

Wear Track Series 064 - Friction Testing Summary

<i>Slab Number</i>	<i>Mix Number</i>	<i>Texturing Method</i>	<i>Friction Test Results At 4 Million Wheel Passes</i>	
			British Pendulum Test	Aggregate Wear Index (AWI)
1	1	None	32	200.6
2	1	None	26	168.9
3	2	Smooth Troweled	33	184.8
4	2	Transverse Tining	43	287.8
5	6	Transverse Tining	52	345.5
6	2	Astroturf Drag	48	333.4
7	6	Astroturf Drag	57	403.3
	4	Astroturf Drag	56	364.5
9	8	Astroturf Drag	52	370.9
10	3	Smooth Troweled	31	220.5
11	3	Transverse Tining	49	408.1
12	7	Transverse Tining	44	421.2
13	3	Astroturf Drag	75	483.0
14	7	Astroturf Drag	63	469.4
15	5	Astroturf Drag	60	501.1
16	9	Astroturf Drag	64	507.6

The following photographs document the condition of the slabs after four million wheel passes.

Slab 1



Slab 2



Slab 3



Slab 4



Slab 5



Slab 6



Slab 7



Slab 8



Slab 9



Slab 10



Slab 11



Slab 12



Slab 13



Slab 14



Slab 15



Slab 16



Conclusions

- Overall, the transverse astroturf drag texture resulted in the highest skid numbers. This held true regardless of the type of aggregates used in the concrete mixture. Both the tined textured slabs, and the astroturf textured slabs had skid numbers well above the 260 AWI standard used in normal wear track testing.
- The tining technique used to texture the transversely tined slabs tended to damage the slab surface and did not represent the actual tining method that is used in actual concrete construction. The tining tool was inserted into the slab surface and then pulled through the concrete, resulting in the tearing of the surface, and a rather inconsistent surface.
- Both texturing methods are very susceptible to proper timing after the concrete is placed. Waiting too long will not allow the tines or astroturf to penetrate the surface resulting in an unsatisfactory final surface texture.
- With the astroturf texturing method, great care must be taken to ensure that the strands of the astroturf do not get clogged with the paste from the concrete surface being textured. This would result in an unsatisfactory final surface texture.
- The slabs with the transverse astroturf drag texture appeared to pond more water during the skid testing than the tined slabs. This assumption is based strictly on visual observation and no scientific method was used to measure the amount of water on the surface of the slabs.