

Road S-36 crossing the Reedy River in Laurens County, South Carolina – Sample 1A

EFA Testing of Sample 1A (driven)

Test data: 04-11-2004

Observation during the testing:

1. In first step, velocity of testing was 0.2m/s. No scour was found after about 40 minutes.
2. Then velocity was increased to 0.28m/s. Erosion rate was very low and a small worm could be seen on the surface of the sample.
3. When the velocity was increased to 0.37m/s, erosion rate increased largely. Fine particles were removed by the flow and only larger particles remained.
4. With 0.5m/s velocity, some small plant roots could be seen in the sample.
5. When the velocity was increased to 0.57 m/s, no obvious change of erosion rate could be observed.

Table 1 Shear Stress, Velocity, and Erosion Rate in EFA testing of Sample2 (pushed)

Velocity (m/sec)	0.19	0.28	0.37	0.51	0.58	2.54	3.20	4.69
Shear Stress (Pa)	0.13	0.28	0.44	0.78	0.96	12.86	19.27	37.61
Erosion Rate (mm/hr)	0.10	1.60	31.23	160.71	155.84	284.21	400.00	1200.00







