

Bicyclist Safety on Grooved Thermoplastic Edge Lines

SUMMARY

Grooving what appeared to be standard raised thermoplastic edge lines on highways to alert motorists to potential run-off-the-road conditions provided little to no hazard or discomfort to bicyclists traveling the road shoulder.

DETAILS

US 246 south of Franklin Tennessee has raised thermoplastic edge and center lines. Although the specifications for this application were not available, the lines appeared to be four inches wide, about 1/8-inch thick, and consistent with standard TDOT treatment. The highway had approximately a two-foot wide shoulder. According to a 1/12/11 email from Jessica Wilson, the road was lined about six years ago.

-----Original Message-----

From: Jessica.L Wilson, January 12, 2011
Subject: Bicycles and Profile markings

Just to make it clear, we put this test strip down 6 years ago, and haven't used them since because they cost a bit more than traditional rumble strips. There are no plans to start putting these down, but I'm continually looking for possible solutions that both drivers and cyclists are happy with. This may not be an acceptable solution, but it's worth getting feedback on.

Thanks all for your help!
Jessica L. Wilson, TDOT Bicycle & Pedestrian Coordinator
James K. Polk Bldg, Suite 900

The test strip ran for about a mile south from the intersection of US 246 and Southhall Road.



On 1/15/11 Bruce Day (shown in picture to the left) and Tom Evans rode this test strip on road bikes with 700-25mm tires to ascertain its impact on bicycle traffic. The road temperature was estimated to be about 36-degrees F.

They rode on the strip, along the strip, and criss-crossed it numerous times. Although the treatment can be felt by the bicyclist, it caused minimal discomfort and presented no safety issues. The results were summarized by Bruce below.

-----Original Message-----

From: Bruce Day, January 16, 2011
Subject: Bicycles and Profile markings

Jessica,

The strips on Carters Creek are absolutely no problem for cyclists. Tom and I rode the entire stretch weaving over and back across the strips several times and riding right on the strip as long as we could hold a line. There was the slightest vibration transmitted while on the strip and

no sensation whatsoever during the transition. It would appear these have been down a while. Newly applied strips might be more of a problem for a while but I can't imagine they would be appreciably different from the standard smooth strips which can be slick when wet. That is just part of road riding. I road my skinny tired bike today.

One picture shows the center lines are also corrugated. I didn't notice till reviewing my images at home and did not feel a thing when crossing them to turn onto Southall Road.

Thank you for asking for our evaluation.

Bruce



Pictures and report submitted by
Tom Evans, 1/16/11
Bike Walk Tennessee