

PERFORMANCE EVIDENCE BRIEF

Roadway Safety Strip™

Sustained friction under accelerated NCAT traffic loading

Roadway Safety Strip was developed by the National Center for Asphalt Technology (NCAT) at Auburn University. This brief summarizes locked-wheel friction performance for the Version 3 - Run 2 production installation at the NCAT Test Track.



NCAT Pavement Test Track | Opelika, Alabama

10.2M

ESALs accumulated

28

friction measurements

58.9

average friction
number

53.0

final friction number

The final friction reading was approximately **4.8% below the initial reading**. Across the monitoring period, measured friction remained between **53.0 and 65.7**, with no abrupt loss of friction observed.

EXECUTIVE SUMMARY

The installation was monitored from October 2, 2023 through July 20, 2026 while accumulating approximately **10.2 million equivalent single axle loads (ESALs)**. An ESAL expresses cumulative traffic loading as the equivalent number of standard 18,000-pound single-axle applications. Testing used a locked-wheel friction tester with a standard ribbed tire. The resulting series documents initial performance and friction retention under concentrated traffic loading.

In brief

Across 28 measurements, the surface recorded an average friction number of 58.9 and remained above 53 after approximately 10.2 million ESALs. The final measurement remained within approximately 5% of the initial reading.

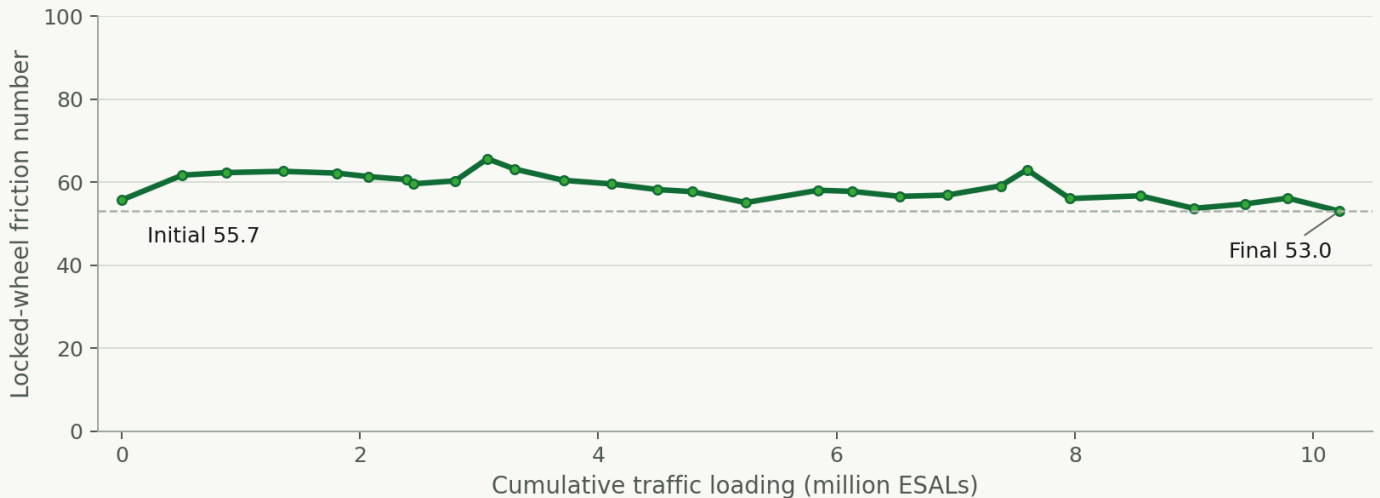


Prefabricated flexible binder with a polish-resistant calcined bauxite surface.

MEASURED FRICTION PERFORMANCE

Friction remained consistently elevated

Twenty-eight measurements show the relationship between accumulated traffic loading and locked-wheel friction performance from installation through approximately 10.2 million ESALs.



Source: Tracking for Version 3.xlsx, Friction Simple worksheet. Values shown at each recorded test date.

WHAT THE RESULTS DEMONSTRATE

REPEATABILITY

All 28 measurements remained between 53.0 and 65.7; the average was 58.9.

TRAFFIC-LOAD DURABILITY

The surface retained a friction number above 53 after approximately 10.2 million ESALs.

FRICTION RETENTION

The final measurement was approximately 4.8% below the initial installation reading.

FULL-SCALE EXPOSURE

Testing occurred under repeated truck loading on an operating pavement test facility.

TECHNICAL QUALIFICATIONS

- ESAL exposure is a traffic-loading measure, not a warranty or direct prediction of calendar service life.
- Field performance depends on pavement condition, environment, drainage, geometry, traffic operations, installation quality, and maintenance.
- Friction comparisons should use compatible test tires, speeds, equipment, surface conditions, and procedures.
- Continued monitoring remains appropriate to document environmental durability and calendar-age performance.

Performance conclusion: After approximately 10.2 million ESALs, Roadway Safety Strip continued to produce a friction number above 53. No abrupt or premature loss of friction was observed.

SOURCES

Tracking for Version 3.xlsx (Summary and Friction Simple); NCAT Performance Narrative, through July 20, 2026; and FHWA LTPP traffic-load guidance.