

ROADWAY VISIBILITY

Tangible Result Driver – Eileen Rackers, State Traffic and Highway Safety Engineer

Good roadway visibility in all weather and light conditions is critical to safe and efficient travel. MoDOT will delight its customers by using top-quality and highly visible stripes and signs.



Percent of signs in good condition-4a **New!**

Result Driver: Eileen Rackers, State Traffic and Highway Safety Engineer

Measurement Driver: Tom Honich, Sign and Marking Engineer

Purpose of the Measure:

This measure tracks whether the department's sign maintenance practices are effective to ensure sign quality meets both MoDOT and Federal expectations.

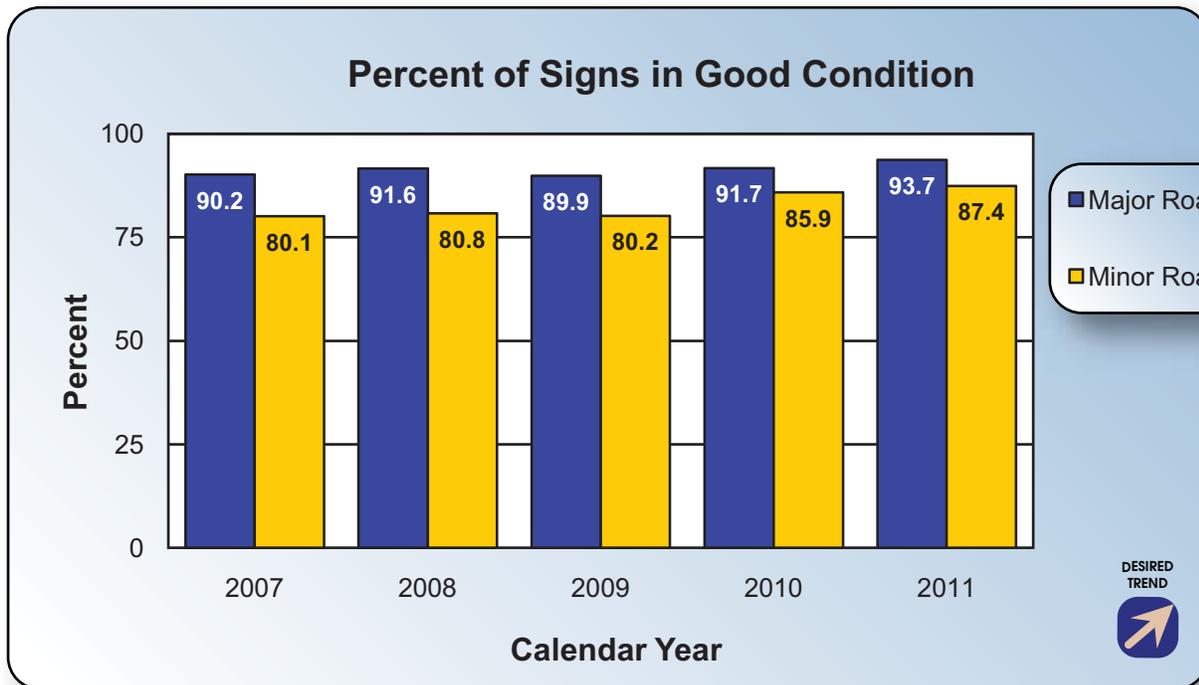
Measurement and Data Collection:

The evaluation process for this measure is achieved through normal annual night sign log inspections. MoDOT employees drive each road at night verifying the existence and condition of all signs in the state, focusing on the visibility and appearance with the use of headlights. This measure will be reported in April of each year.

Improvement Status:

Almost 94 percent of signs on major highways are in good condition while 87 percent of signs on minor roads are in good condition. This represents a 2 percent increase from 2010 for both major and minor roads.

MoDOT's Bolder Five-Year Direction changed the way sign maintenance is performed. Night sign log inspections are conducted each year to identify and replace only poor performing signs to minimize waste. The MoDOT Sign Production Center was closed in March 2012 and sign fabrication for maintenance operations was outsourced as part of MoDOT's move to right-size the department.



Percent of stripes in good condition – 4b New!

Result Driver: Eileen Rackers, State Traffic & Highway Safety Engineer

Measurement Driver: Mike Curtit, Traffic Liaison Engineer

Purpose of the Measure:

This measure tracks whether MoDOT’s striping policy, processes and materials used are resulting in visible stripes that meet customers’ expectations.

Measurement and Data Collection:

Striping quality attributes that define user expectations were developed based on an industry-wide literature review. The attribute selected for this measure is the retroreflectivity of the striping or the visibility of the striping at night. Retroreflectivity is measured as the amount of light from vehicle headlights that is returned to the driver. The measurement unit for retroreflectivity is millicandelas per meter squared per lux (mcd/m²/lux). We have established retroreflectivity benchmarks of 150 for white and 125 for yellow. These benchmarks were chosen because they are at the high end of what research and other states consider minimum acceptable levels. Data is collected by taking retroreflectivity readings on randomly selected road segments in the fall and spring of each year. This data is then compared to the benchmarks. Traffic volumes, winter weather and pavement condition all have an impact on the

performance and durability of striping. Fall readings are taken in September, October and November on the major roads. Spring readings are taken in April, May and June on the minor roads. This measure is updated annually in January.

Improvement Status:

From 2010 to 2011, the retroreflectivity readings on Missouri’s major roads increased from 91.3 to 92.4 percent. This represents a 1.1 percent increase for 2011. Minor roads are at 57.8 percent. This is a 30.4 percent decline from 2010 readings. Since the minor roads are measured in the spring, the previous winter’s weather has a significant impact on the condition of the stripes. The winter of 2010-2011 was extremely hard on striping with a number of significant snow events across the state.

MoDOT restripes its major roadways each year prior to Memorial Day. MoDOT continues to expand the use of wet-reflective markings on major highways through the use of a wet-reflective optics system to provide increased visibility on rainy nights.

