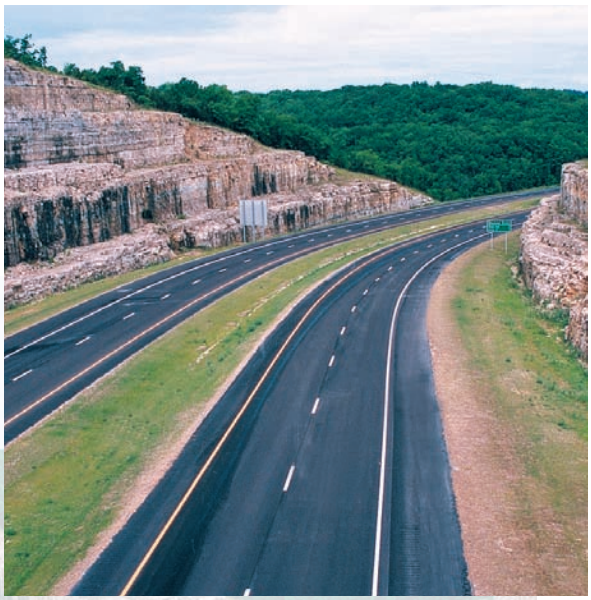
Roadway Visibility

Tangible Result Driver – Don Hillis, Director of System Management

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.



Roadway Visibility

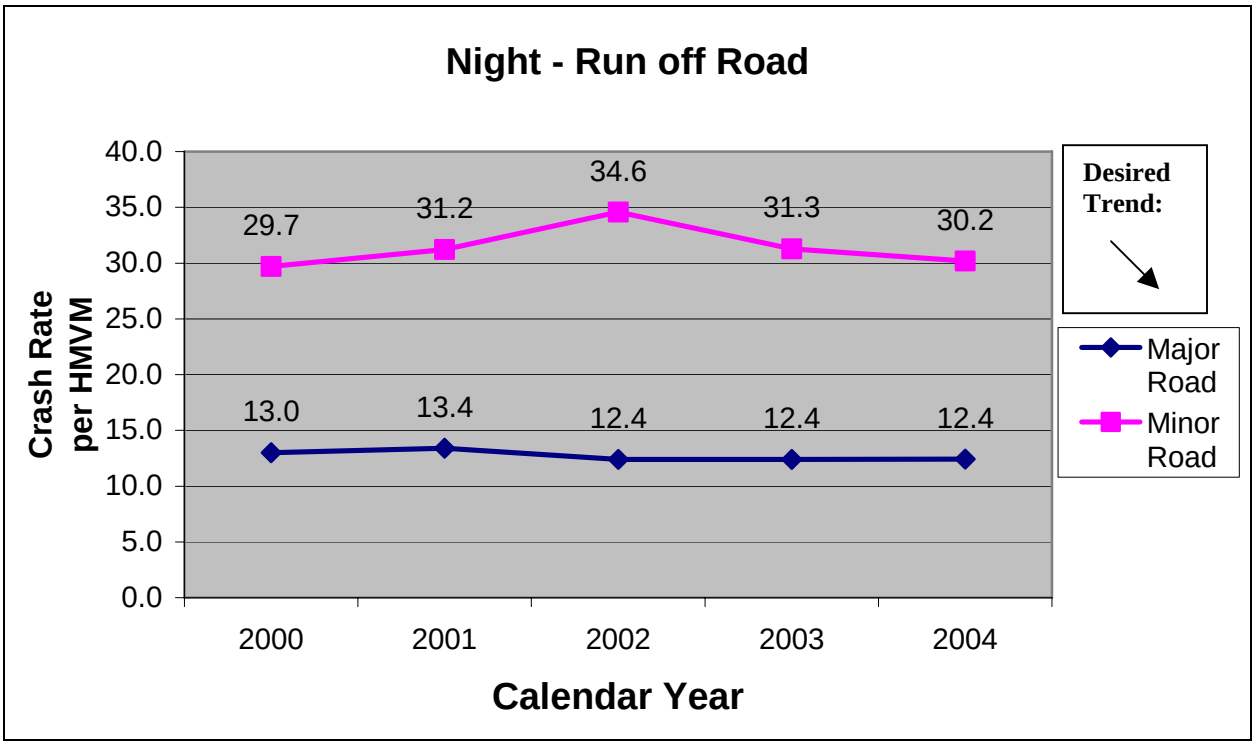
Rate of nighttime crashes

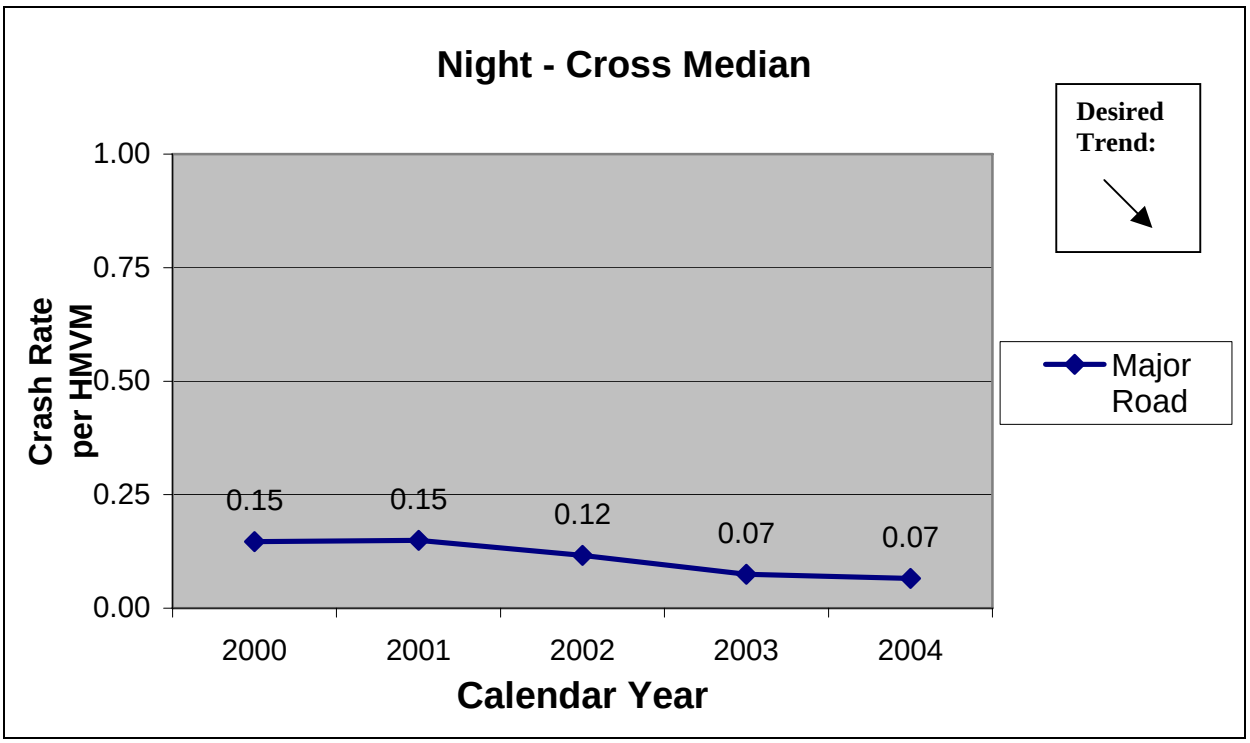
Result Driver: Don Hillis, Director of System Management
Measurement Driver: Michael Curtit, Assistant State Traffic Engineer

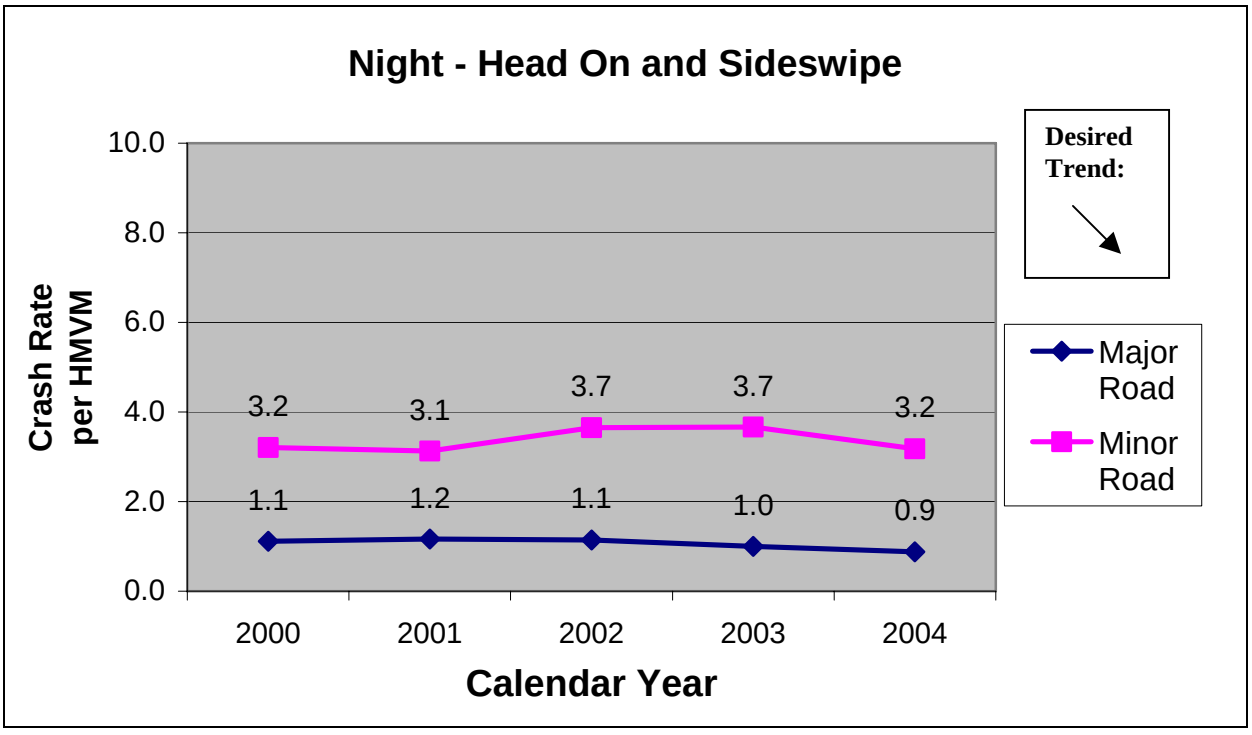
Purpose of the Measure:
This measure tracks the types of crashes where visibility of stripes and signs may be a contributing factor.

Measurement and Data Collection:
Data is collected from the statewide crash database. This data is filtered to identify crashes that occur during night conditions. Further filtering of the data divides these night crashes by major and minor roadways. Major roadways are those that are used generally for statewide or interstate travel. Minor roadways are those used typically for local traffic needs. From there crash rates for the different types of crashes are calculated. The crash rates are calculated using the Average Annual Daily Traffic counts and are expressed in the unit, per 100 million vehicle miles (HMVM), which is the national standard for expressing crash rates.

Improvement Status:
All three crash types had a slight decrease from the previous years rate. Major roads had a slightly decreasing trend over the previous 5 years. Minor roads had virtually a flat trend. There has been a decline in night – run off road crashes since 2002, which corresponds to the time frame where we installed edgeline striping to additional lower-volume roads.




Night - Cross Median
Desired Trend:
Crash Rate per HMVM
1.00
0.75
0.50
0.25
0.00
0.15
0.15
0.12
0.07
0.07
Major Road
2000
2001
2002
2003
2004
Calendar Year


Night - Head On and Sideswipe
Desired Trend:
Crash Rate per HMVM
10.0
8.0
6.0
4.0
2.0
0.0
3.2
3.1
3.7
3.7
3.2
1.1
1.2
1.1
1.0
0.9
Major Road
Minor Road
2000
2001
2002
2003
2004
Calendar Year

Roadway Visibility

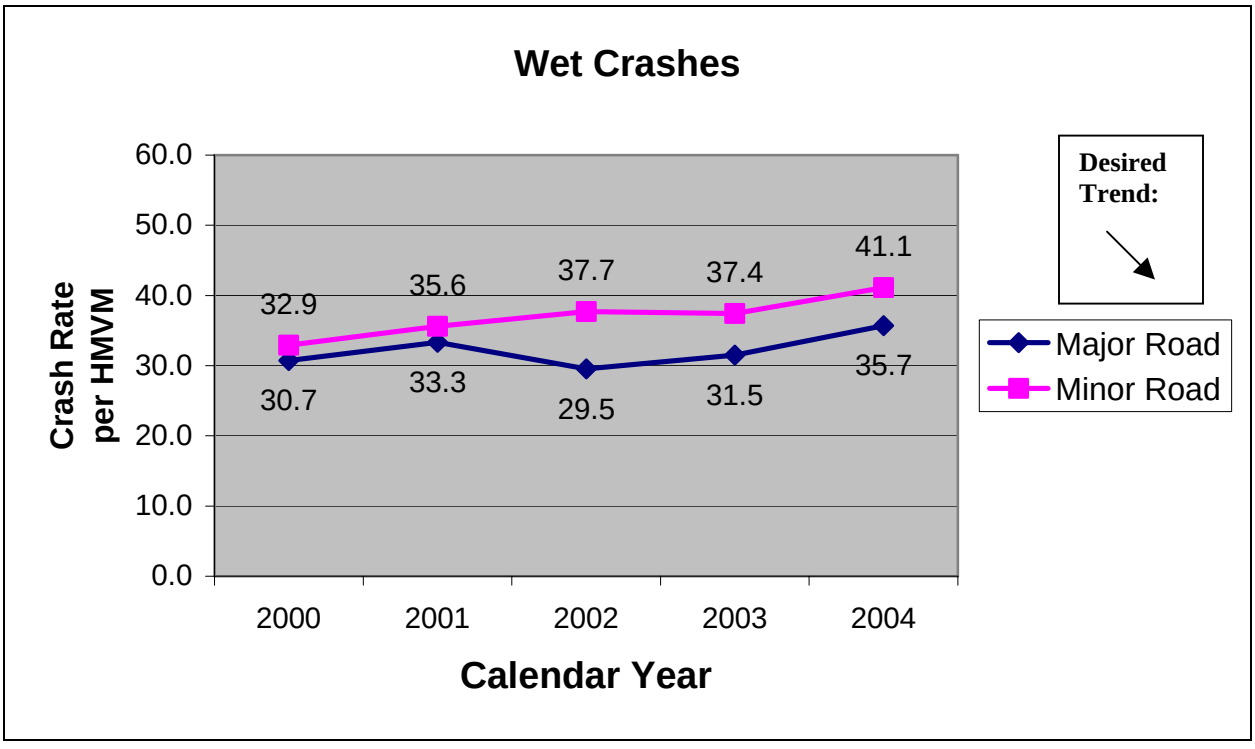
Rate of wet weather crashes

Result Driver: Don Hillis, Director of System Management
Measurement Driver: Michael Curtit, Assistant State Traffic Engineer

Purpose of the Measure:
This measure tracks the rate of crashes that have occurred on the state system during wet weather conditions.

Measurement and Data Collection:
Data is collected from the statewide crash database. This data is filtered to identify crashes that occur during wet weather conditions. Further filtering of the data divides these wet weather crashes by major and minor roadways. Major roadways are those that are used generally for statewide or interstate travel. Minor roadways are those used typically for local traffic needs. The crash rates are calculated using the Average Annual Daily Traffic counts and are expressed in the unit, per 100 million vehicle miles (HMVM), which is the national standard for expressing crash rates.

Improvement Status:
The rate of wet weather crashes increased over the previous year and the 5-year trend has also been increasing. Wet weather crashes on most of the roadway types remained stable except for two-lane roadways. The rate of wet weather crashes on two-lane roadways, over the last 5-year period, is contributing most to the increase in wet crashes.



Roadway Visibility

Percent of signs that meet customers' expectations

Result Driver: Don Hillis, Director of System Management
Measurement Driver: Jim Brocksmith, Technical Support Engineer

Purpose of the Measure:
This measure will track whether the department's sign policy and the design standards, and sign replacement policy is resulting in visible signs that meet customers' expectations.

Measurement and Data Collection:
To date a list of sign quality attributes has been developed and approved based on an industry-wide literature review. The attributes selected for this measure will be used to develop a quality assurance checklist for signage. Data collection for this measure will be based on randomly generated road segments and collected on an annual basis beginning Fall 2005. MoDOT Maintenance employees will be responsible for data collection and analysis.

Improvement Status:

Measure is Under Development

Roadway Visibility

Percent of stripes that meet customers' expectations

Result Driver: Don Hillis, Director of System Management
Measurement Driver: Jim Brocksmith, Technical Support Engineer

Purpose of the Measure:
This measure will track whether MoDOT's striping policy and processes and materials used are resulting in visible stripes that meet customer's expectations.

Measurement and Data Collection:
To date a list of striping quality attributes has been developed and approved based on an industry-wide literature review. The attributes selected for this measure will be used to develop a quality assurance check-list for road striping. Data collection for this measure will be based on randomly generated road segments and collected on a bi-annual basis beginning Fall 2005. MoDOT Maintenance has contracted the collection of this data.

Improvement Status:

Measure is Under Development

Roadway Visibility

Percent of work zones that meet expectations for visibility

Result Driver: Don Hillis, Director of System Management
Measurement Driver: Scott Stotlemeyer, Technical Support Engineer

Purpose of the Measure:
This measure will help the department meet the expectations of MoDOT customers concerning the visibility of work zones.

Measurement and Data Collection:
Using a formal inspection checklist, selected senior engineering staff from Construction and Materials, Maintenance and Traffic perform inspections on the flow of traffic in any work zone they travel through. Data collection began on June 1, 2005.

Improvement Status: This is the first quarter that results for this measure are being presented. The bar graph indicates the percent of work zones inspected by MoDOT engineering staff that received an acceptable overall rating for visibility of work zones. The visibility rating is based on a work zone meeting current traffic control standards and providing adequate instruction for motorists to travel safely through the work zone. As education and awareness on proper work zone visibility increases the percent of work zones receiving an acceptable rating should also increase.