

## ENVIRONMENTALLY RESPONSIBLE

*Tangible Result Driver – Kathy Harvey, State Design Engineer*

MoDOT takes great pride in being a good steward of the environment, both in the construction and operation of Missouri's transportation system and in the manner in which its employees complete their daily work. The department strives to protect, conserve, restore and enhance the environment while it plans, designs, builds, maintains and operates a complex transportation infrastructure.

### Percent of projects completed without environmental violation-10a

**Result Driver:** Kathy Harvey, State Design Engineer

**Measurement Driver:** Gayle Unruh, Environmental and Historic Preservation Manager

#### **Purpose of the Measure:**

This measure tracks environmental violations. MoDOT projects must comply with several environmental laws and regulations. To be in compliance, MoDOT makes commitments throughout the project development process that must be carried forward during construction and maintenance. In addition, the various permits obtained for projects also contain specific requirements for compliance. MoDOT must also comply with the environmental laws and regulations as it conducts its daily work in all areas of the organization.

If a violation is noted, it can result in either a Letter of Warning or a Notice of Violation to MoDOT. Letters of Warning can also be received as simply that, a warning to MoDOT of a special circumstance to be aware of, or for a situation that needs to be monitored so that a violation does not occur. For that reason, LOWs never will be eliminated but should be kept to a minimum. However, it is unacceptable to the department to have an NOV.

#### **Measurement and Data Collection:**

Both LOWs and NOVs are written correspondence to MoDOT or MoDOT's contractors from regulatory agencies, which are tracked in a MoDOT database by location or project number, as appropriate. Where tracked by project, the project with violations received may span several years. The first chart is based on calendar year projects in construction and the number of violations received on those projects. The second chart is a report by calendar year of the LOWs and NOVs received by the department for any activity. The measure is updated quarterly.

#### **Improvement Status:**

The percentage of projects completed without environmental violations is relatively level over the past five years with only 0.5 to 2.5 percent differences from year to year. Through the third quarter of calendar year 2012, 98.7 percent of the projects were completed without environmental violation.

- First Quarter 2012 – MoDOT received one LOW. No NOVs were reported. The LOW was for discharge of sediment to waters of the state on the Route 36 right of way re-contour project.

In addition, MoDOT received three DNR inspection letters where projects were found to be in compliance. A letter of compliance on an erosion control inspection was awarded to the Route 94 Extension project. Likewise, the Lamar maintenance facility in Barton County passed inspection for the recently installed wastewater treatment system. The third DNR letter, on the Route 63 project near West Plains, stated that the project was in compliance, but noted one unsatisfactory Best Management Practice for erosion control.

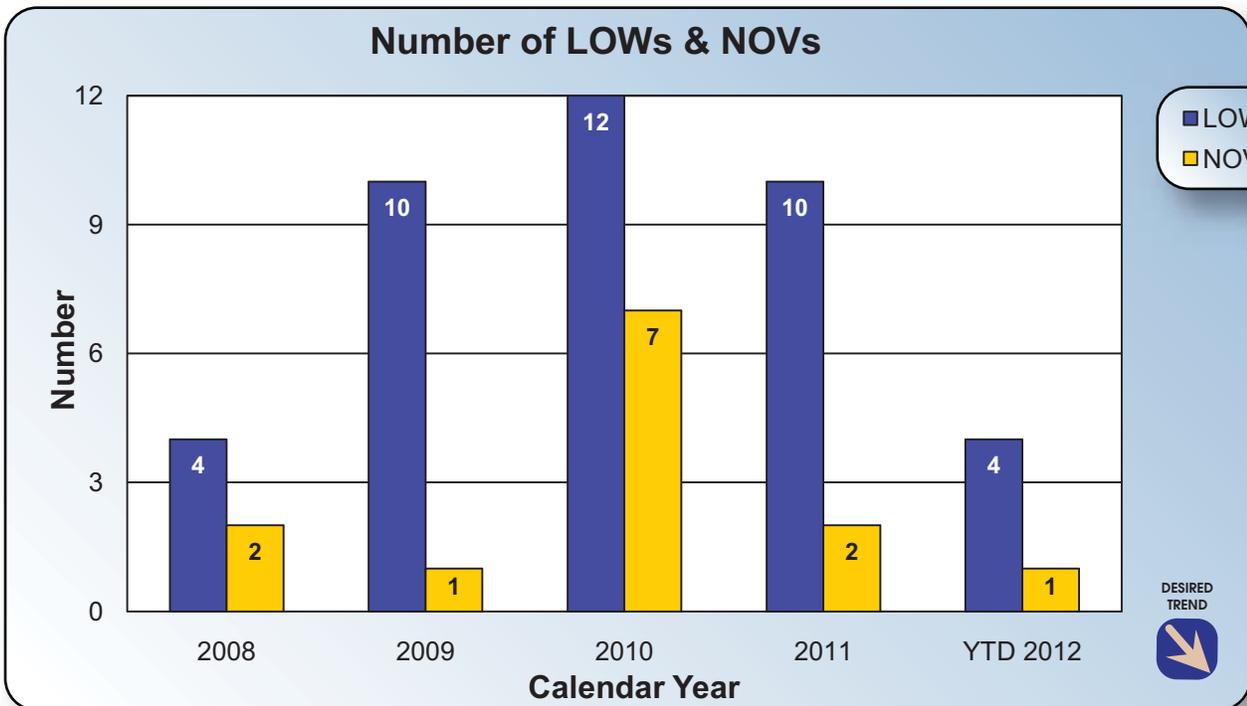
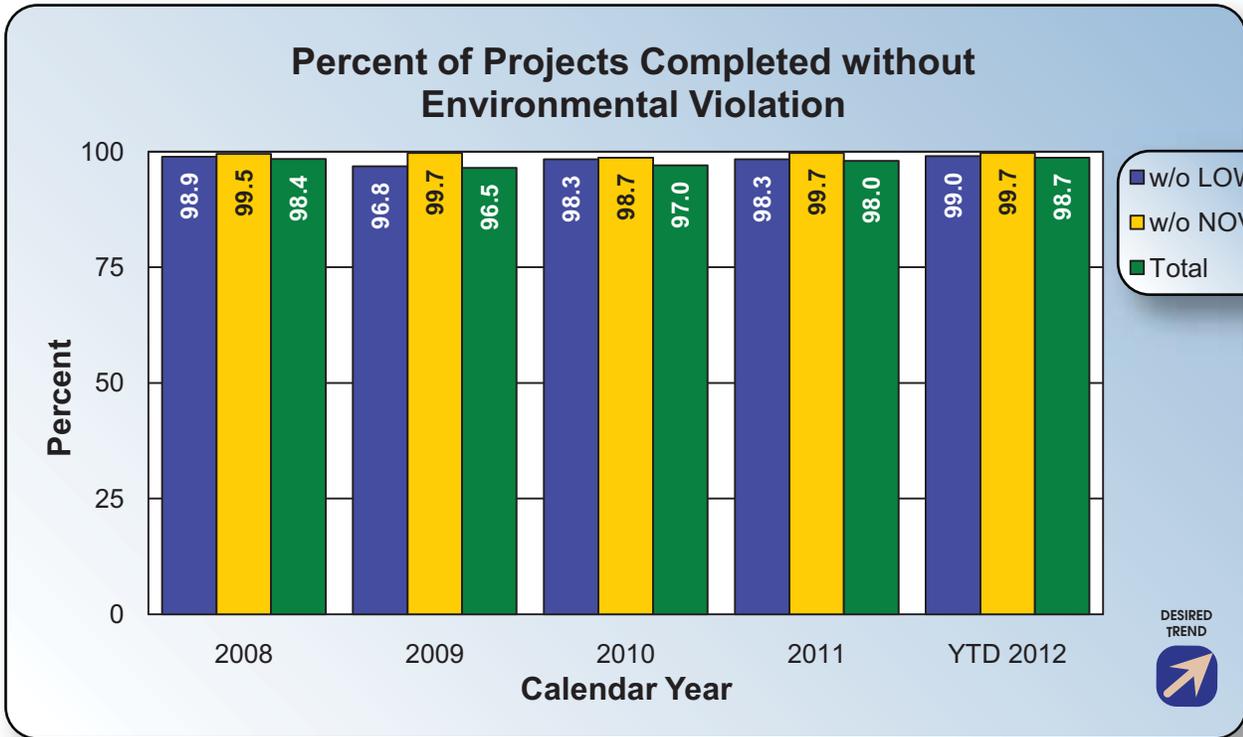
- Second Quarter 2012 – MoDOT received two LOWs this quarter. No NOVs were reported. One LOW from DNR was issued for the Centertown Maintenance lot because it lacked posted emergency information required as a registered hazardous waste small quantity generator. DNR also issued a LOW on the I-29 Dearborn Rest Area for failure to provide warning signs on the perimeter fence, gates and sewage outfall.

MoDOT received four DNR inspection letters where projects were found to be in compliance. Letters of compliance on erosion control inspections were awarded to the Route 54 Expressway, Route 67 lane addition, Hurricane Deck Bridge and the I-55 East Outer road projects.

- Third Quarter 2012 – MoDOT received an NOV from DNR on the Conway Welcome Center for exceeding effluent limits. The Army Corps of Engineers cited MoDOT with a LOW for lack of tree planting survivorship required with the permit special condition of compensatory mitigation.

DNR issued a NOV to the city of Clinton on the Clinton Memorial Airport runway construction project for deficiencies in erosion and sediment controls. Since this is not an NOV issued to a MoDOT project it is not included in the charts below.





Note: There is no benchmark data presented with this measure. MoDOT has a zero-tolerance policy toward NOVs, but recognizes LOWs will never be eliminated due to their nature. Therefore, regardless of what other states are doing, MoDOT's desired results are zero NOVs, because NOVs are usually violations of law and state statute.

## Number of tons of recycled material-10b

**Result Driver:** Kathy Harvey, State Design Engineer

**Measurement Driver:** Jay Bestgen, Assistant State Construction and Materials Engineer

### Purpose of the Measure:

This measure tracks MoDOT’s efforts to be environmentally conscious through the use of recycled/waste material on construction projects.

### Measurement and Data Collection:

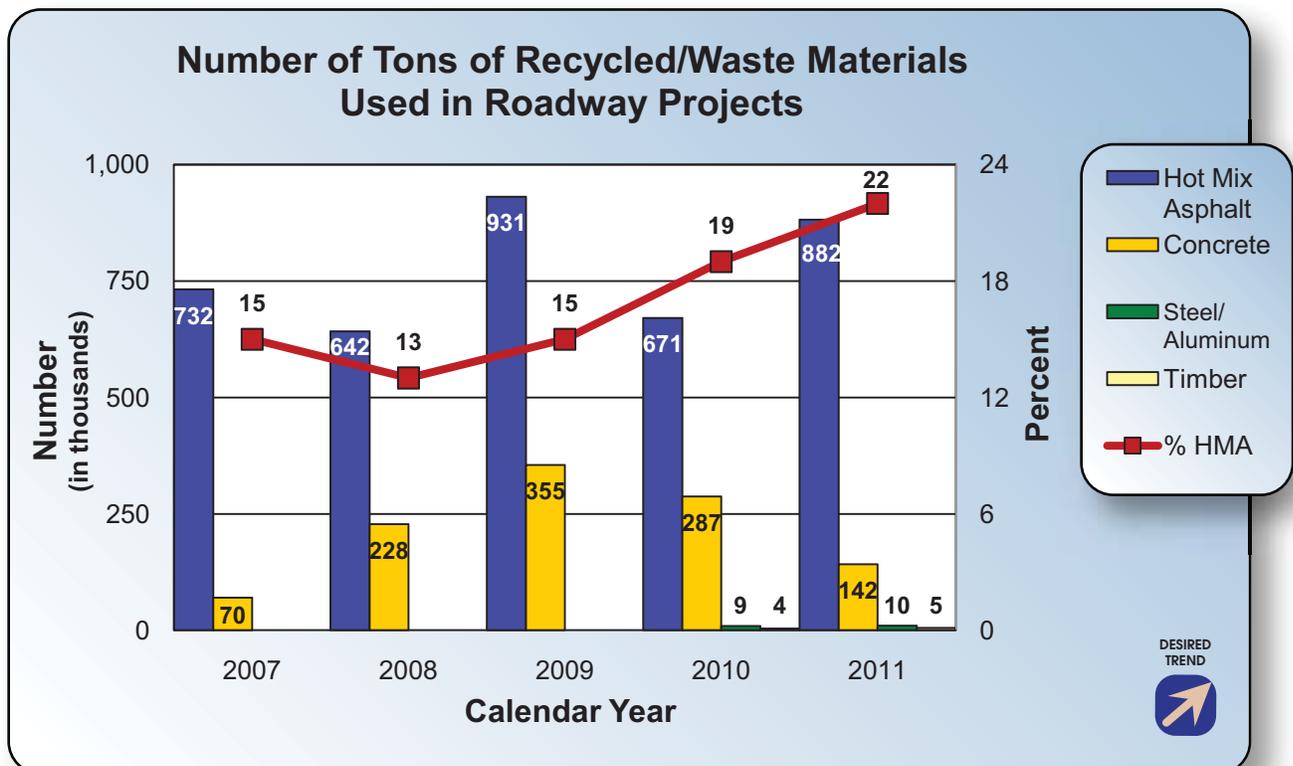
The number of tons of recycled/waste material used in projects is measured through MoDOT’s construction management database, which tracks material incorporated into projects. Data is collected on an annual basis due to the seasonal nature of the construction. This is an annual measure updated in April.

The number of tons of waste material recycled by MoDOT is captured from the annual Missouri State Recycling Program report and from the Maintenance Division. This will be reported in the October edition.

### Improvement Status:

For recycled materials used in projects, reclaimed asphalt products continue to represent the largest portion of recycled materials used as contractors try to find competitive advantages in the mix designs. For the average of the various asphalt mixes used, 22 percent of the weight of one ton of asphalt consists of recycled pavement, shingles and mine chat. There is no limit on the amount of recycled materials that can make up a mix design provided the performance criteria are met.

The major components of MoDOT’s internal recycling operations consists of 1.46 million pounds of rubber/tires, 5.53 million pounds of steel and over 354,000 pounds of motor oil in FY 2012.





# Being Green at MoDOT

## Roofs to Roads

MoDOT is among the first state agencies in the nation to recycle shingles to resurface or rebuild highways.



Shingles are ground up and processed

### Gallons of fuel consumed and miles per gallon-10c

**Result Driver:** Kathy Harvey, State Design Engineer

**Measurement Driver:** Jeannie Wilson, Central Office General Services Manager

#### **Purpose of the Measure:**

This measure tracks the use of fuel and measures fuel efficiency within MoDOT. It shows MoDOT's contribution toward environmental responsibility and conservation of resources. The first chart shows the total number of gallons of fuel consumed. Miles per gallon data is shown in the second chart for the five vehicle classes that accumulate the majority of miles driven.

#### **Measurement and Data Collection:**

This measure is intended to focus on the total fuel consumed and how fleet choices can affect fuel economy. The number of gallons of fuel consumed for each fleet unit is collected in the statewide financial system. Mileage data is recorded in the FASTER fleet management system.

This measure is reported quarterly.

#### **Improvement Status:**

In comparing the first quarter fiscal year 2012 to the first quarter fiscal year 2013, the total fuel consumed decreased approximately 301,000 gallons, or 13.7 percent compared to the same period in fiscal year 2012.

Diesel and biodiesel consumed decreased approximately 167,000 gallons (11.6 percent); while unleaded gasoline and E85 decreased approximately 134,000 gallons (17.7 percent).

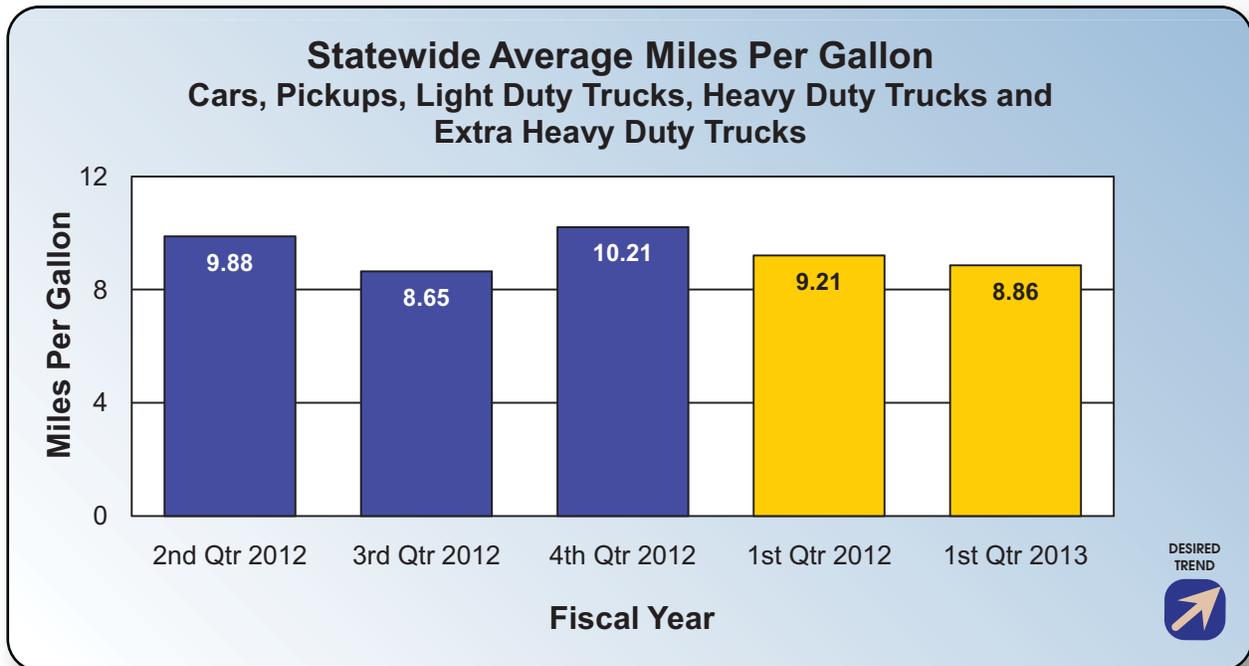
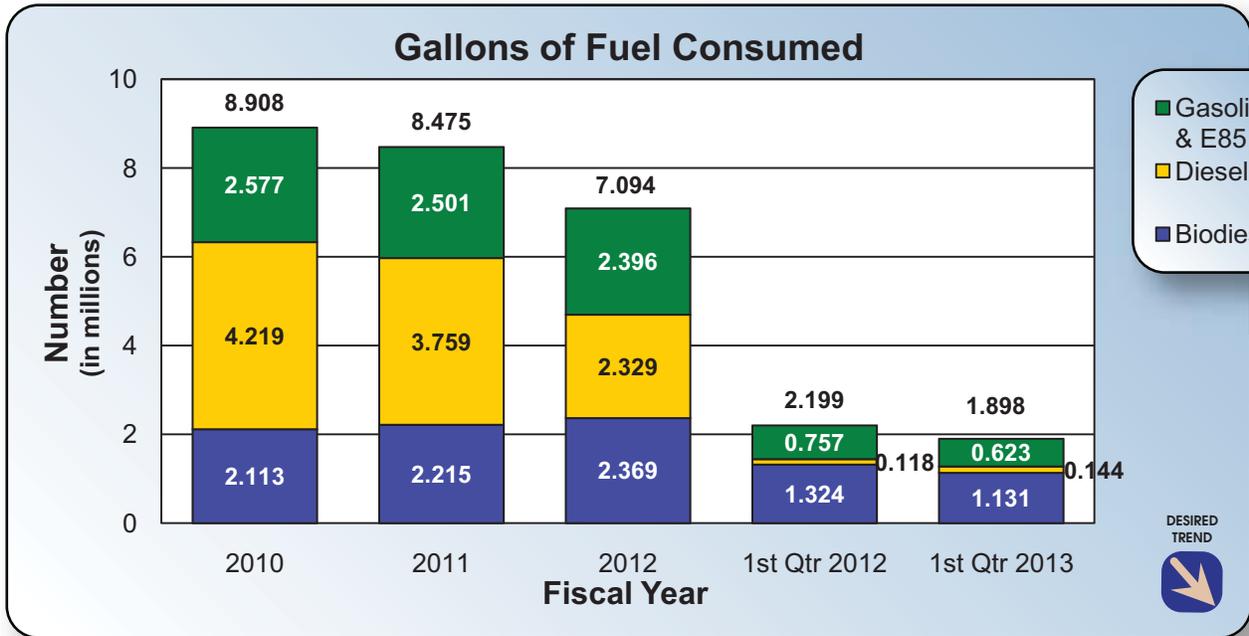
The statewide miles per gallon are calculated based on the total gallons of fuel consumed and the total miles traveled. This quarter, the miles per gallon for the five main vehicle classes is 8.86. This reflects a 13 percent decrease compared to the previous quarter. Activities that required hauling heavy loads increased July-September 2012 compared to April-June. These activities include asphalt repair, chip sealing, and highway/bridge maintenance.

The decrease in the average miles per gallon can be correlated to a 2 percent decrease in car usage, which averaged 25.19 miles per gallon, and an increase in the pickups, light duty trucks and heavy duty truck usage. Dump truck usage increased 8.5 percent, at an average of 5.04 miles per gallon.

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**MoDOT's statewide automated fuel management system helps the department gain administrative efficiencies by providing the ability to track fuel deliveries, fuel dispensed per transaction and site inventory levels.**





### Pedestrian and ADA Transition Plan improvements-10d

**Result Driver:** Kathy Harvey, State Design Engineer

**Measurement Driver:** Ron Effland, Non-motorized Transportation Engineer

#### **Purpose of the Measure:**

This measure tracks MoDOT's investment in pedestrian facilities as well as its progress toward removing the barriers that prevent accessibility for all users. Completion of the improvements listed in MoDOT's 2010 Transition Plan Update will bring the department into compliance with the American's with Disabilities Act. Accessibility applies both to right of way, such as sidewalks and traffic signals, and to facilities such as buildings, parking lots and restrooms.

#### ■ **Investment in Pedestrian Facilities based on Contract Awards**

This measure demonstrates MoDOT's continuing commitment to the pedestrian mode of transportation by tracking the amount of money awarded to contractors for the 20 most common construction elements of a pedestrian project.

#### ■ **Progress toward Completion of Transition Plan – Right of Way**

This measure demonstrates progress toward accomplishing the estimated \$153.2 million of work needed to achieve accessibility for right of way. This estimate has been revised based on the latest inventory corrections to remove listed items that are not on state property.

#### ■ **Progress toward Completion of Transition Plan – Building Facilities**

This measure demonstrates progress toward accomplishing the estimated \$1.9 million of work needed to achieve accessibility for building facilities. Approximately \$539,000 of work to facilities scheduled to be closed with the Bolder Five-Year Direction are included in this amount.

#### **Measurement and Data Collection:**

Data for MoDOT's investment in pedestrian facilities is gathered by querying total award amounts for the 20 most common construction elements of a pedestrian project. The number of projects is estimated based upon the number of projects that include the pay items queried. These numbers have been corrected to include the investment in the Jefferson City Bridge attachment in the 2010 total.

The dollar amounts tracked for the latter two charts are based on unadjusted estimates made in 2008 and may not reflect the actual expenditures in the field. Rather, as each deficient segment is upgraded or reviewed and removed from the Transition Plan, its 2008 estimated total is accounted for and shown here as progress. In this manner, inflation and changing field conditions have no impact on the representation of true progress toward completion. This is an annual measure updated each April.

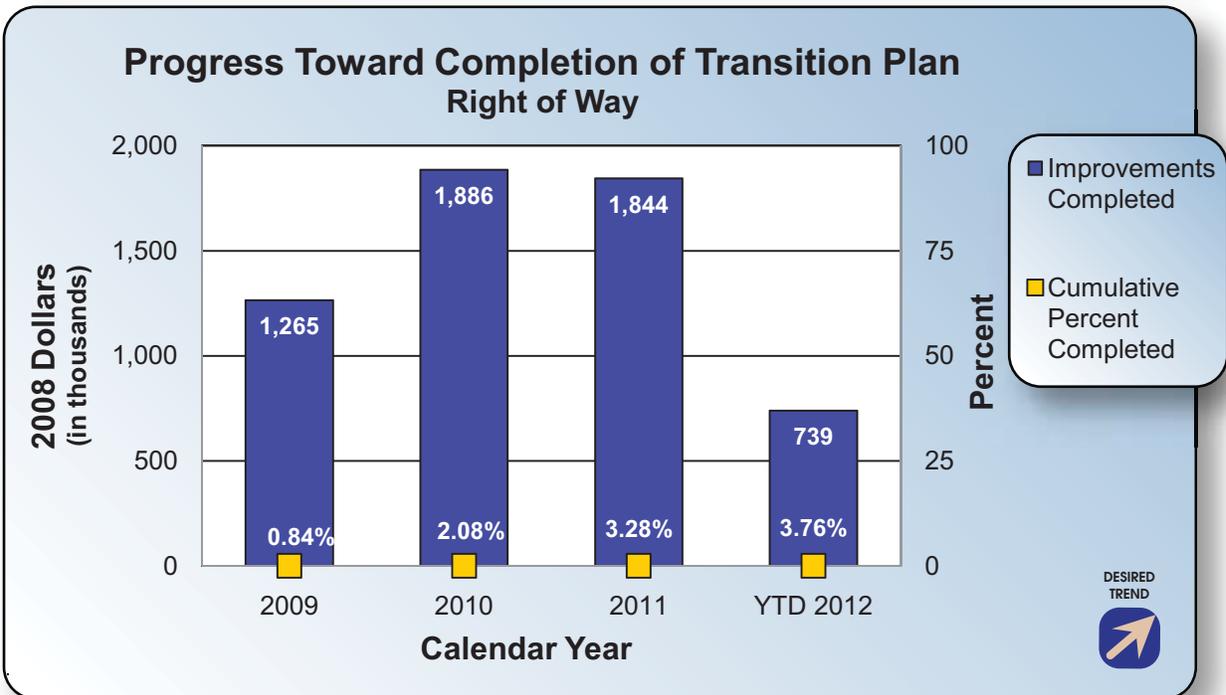
#### **Improvement Status:**

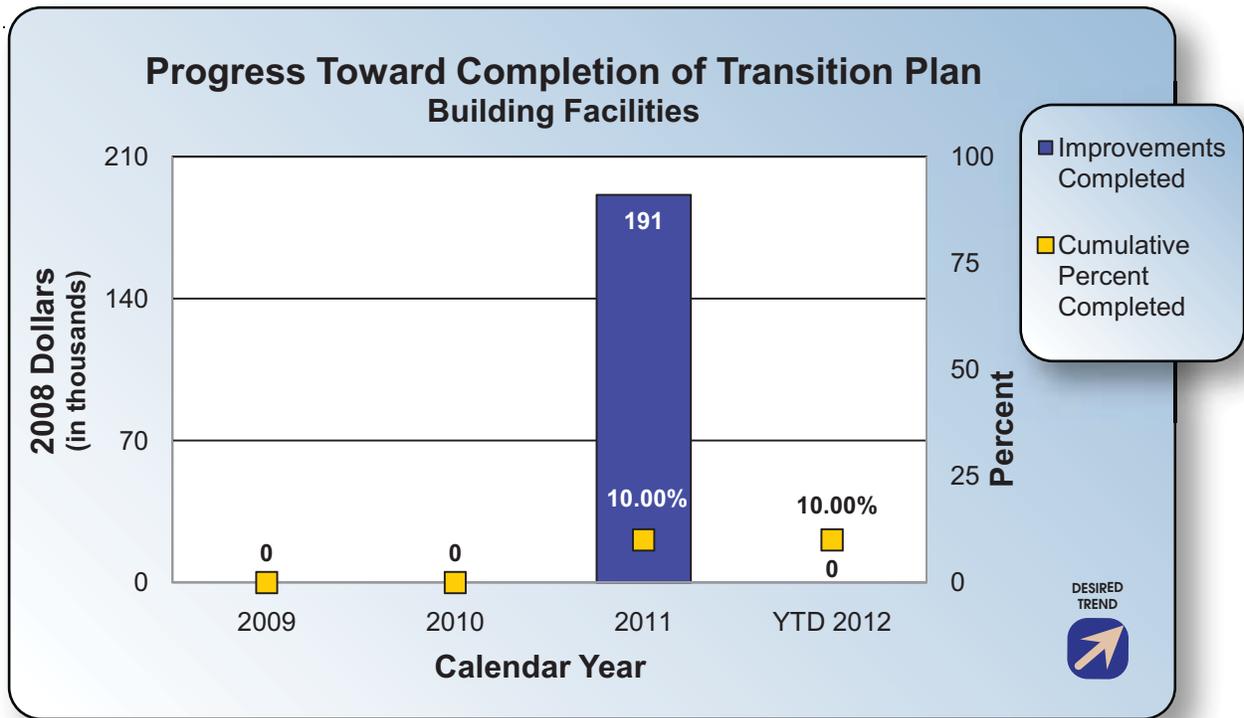
MoDOT's investment in pedestrian facilities reflects its commitment to providing a comprehensive transportation system to meet the needs of all users. Sidewalks are being improved to meet accessibility requirements, and network gaps are being filled in. Customers' needs are being met by adding sidewalks, traffic signals and crosswalks where needed to provide safe transportation options.

In 2009, there was an influx of funding from the American Recovery and Reinvestment Act which provided many ADA improvements. Since that time, MoDOT has continued its efforts to improve pedestrian travel by considering accessibility issues on all projects.

MoDOT's Transition Plan Update was published in 2010. The needs were identified in 2008, and the department has been working to upgrade pedestrian and building facilities with projects since the development of the inventory. The department has been responsive to public requests and has been proactive in many areas to make simple, low-cost improvements when opportunities arise. The data for 2010 and 2011 includes corrections to the pedestrian facility inventory to remove items not on state-maintained property.

To date, a cumulative total progress of \$5.76 million or 3.76 percent of the estimated \$153.2 million right of way needs and \$191,000 or 10 percent of the \$1.9 million building facilities' needs have been accomplished. The desired outcome is completion of the Transition Plan.





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