CENTERLINE

AUGUST 2010

A SEMI-ANNUAL REPORT ON THE PERFORMANCE OF OUR TRANSPORTATION SYSTEM

NEW JERSEY DEPARTMENT OF TRANSPORTATION

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Welcome to CENTERLINE

The New Jersey Department of Transportation (NJDOT) prepared this document to report a variety of performance and accountability measures to its customers, local stakeholders, and all who care about transportation in New Jersey.

This publication is the first in a series of semi-annual performance reports, which will expand as performance and accountability measures are added.

The first issue of Centerline focuses on four key areas: infrastructure, mobility, safety, and departmental performance. Within each of these areas are accountability measures. We will maintain these four areas as benchmarks, and future editions of Centerline will focus more acutely on specific aspects of these benchmarks. For instance, future editions of Centerline may focus on pedestrian safety, capital program delivery, or winter storm response.

NJDOT, along with state transportation departments across the country, faces increasing challenges in funding transportation improvements. It is critical, therefore, that we take an asset management approach to preserving and improving the transportation system. Asset management is a systematic process of maintaining, upgrading and operating our physical assets cost-effectively. NJDOT in 2008 formally adopted it as our institutional approach to managing assets and making capital investment decisions.

In light of the current economic challenges facing New Jersey, the nation, and the world, it is incumbent upon us to ensure accountability, performance measurement, and transparency. Transportation is a way of getting from point A to point B, but it also creates jobs, improves quality of life, and enhances communities.

Therefore, Centerline is our way of demonstrating what NJDOT is doing, and how well we're doing it.

We look forward to keeping you apprised of our efforts every six months.

Sincerely,

James S. Simpson

James S. Simpson
Commissioner
New Jersey Department of Transportation

Key Performance Measures

✓ Goal has been met. ↑ Performance trend if moving in a favorable direction ↔ Trend is holding. ↓ Performance trend is moving in an unfavorable direction

Policy goal/performance measure	Previous Reporting Period	Current Reporting Period	Goal	Progress	Comments
Safety					
Number of traffic fatalities statewide (annual update)	590 (2008)	586 (2009)	20% reduction over 10 years	↑	
Infrastructure Preservation					
Percentage of State highway pavement in acceptable condition (annual measure)	47% (2008)	50% (2009)	80%	↑	
Percentage of State-owned bridges 20 feet or more in length in acceptable condition (annual update)	88% (2008)	88% (2009)	94%	↔	
Percentage of State-owned bridge deck area in acceptable condition (annual update)	85% (2008)	87% (2009)	93%	↑	
Mobility					
I-78 Eastbound p.m. peak period travel time from Berkeley Heights to Bayonne in minutes (quarterly update)	39 min. (2008)	12 min. (2009)	maintain 6/2008 travel time	✓	
I-78 Westbound a.m. peak period travel time from Bayonne to Berkeley Heights in minutes (quarterly update)	17 min. (2008)	14 min. (2009)	maintain 6/2008 travel time	✓	
I-287 Southbound p.m. peak period travel time from NJ 28 to Garden State Parkway in minutes (quarterly update)	21 min. (2008)	20 min. (2009)	maintain 6/2008 travel time	✓	
I-287 Northbound a.m. peak period travel time from Garden State Parkway to NJ 28 in minutes (quarterly update)	21 min. (2008)	20 min. (2009)	maintain 6/2008 travel time	✓	
Average incident duration in hours and minutes (quarterly update)	1:01 min. (2008)	:60 min. (2009)	:60 min. or less	✓	
NJDOT Performance					
Percentage of planned construction awards that have been awarded (FY2010)	N/A	87%	100%	↓	
Percentage of annual pavement crack sealing inventory completed	43%	69%	100%	↑	No activity in winter months of January and February
Electrical asset emergency responses - percent of responses in which crew arrived within 90 minutes	86%	87%	85%	✓	
Average departmental bill processing time frame for capital payments	FY09 35.38 days	FY10 to date 30.06 days	Under 60 days	✓	

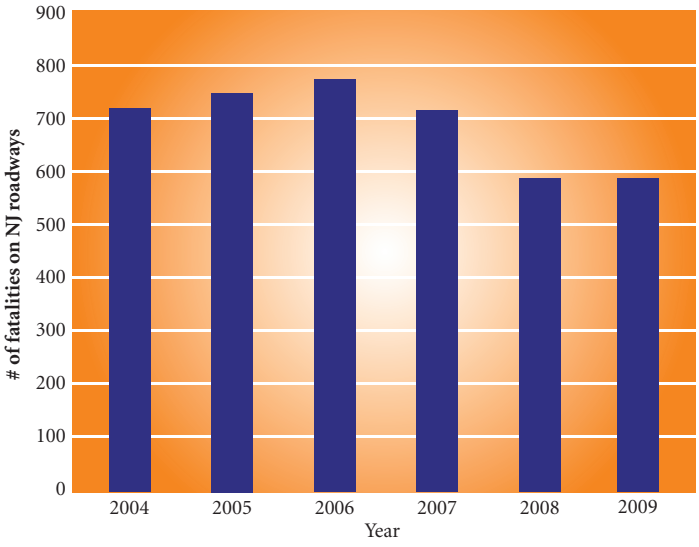
Highway Safety

traffic fatalities decrease

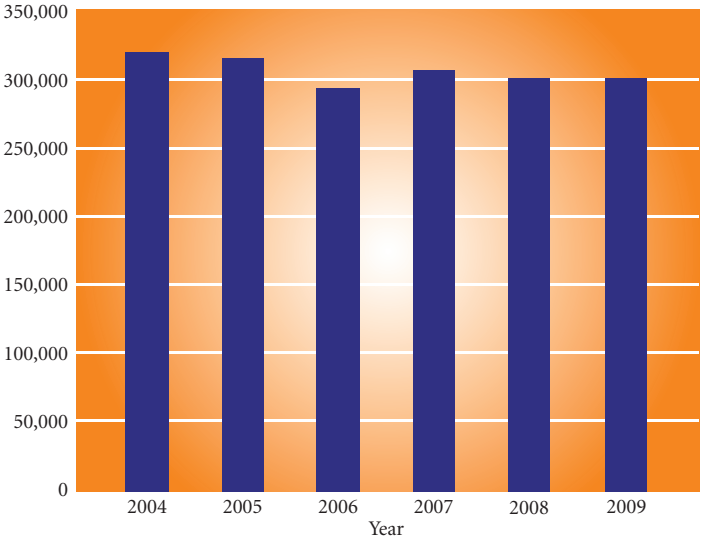
Over the past five years, traffic fatalities on New Jersey's public roads increased and subsequently decreased. New Jersey experienced a drop in fatalities in 2003 and 2004 and experienced an increase in fatalities in 2005 and 2006. Fatalities then decreased in 2007 and 2008. In 2007, fatalities decreased to 720, and in 2008 fatalities dropped to 594. Fatalities for 2009 totaled 586.

These reductions are due in part to new state laws that increase enforcement, as well as significant investments in highway safety projects. These projects include median barriers, rumble strips, and intersection modifications.

Fatalities



Total Crashes

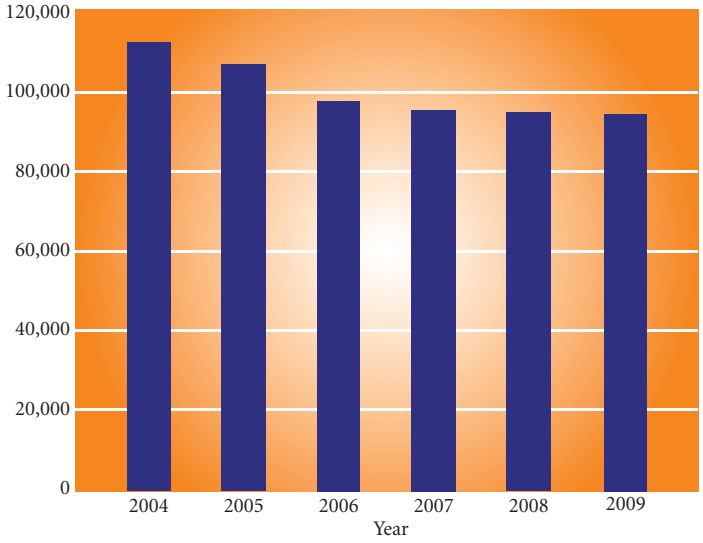


New Jersey reaches national goal: One fatality per 100 million VMT

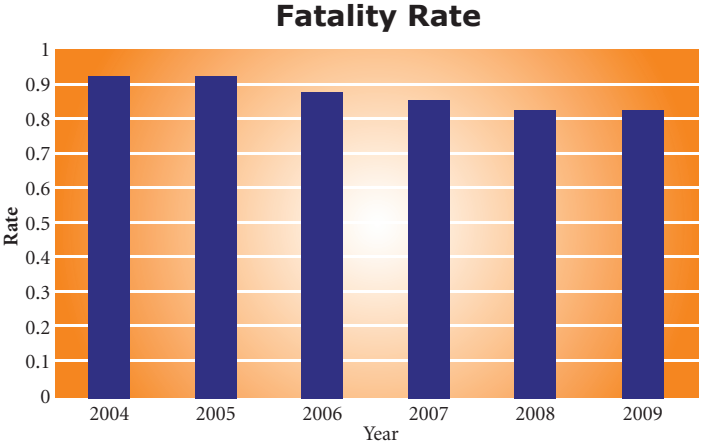
Traffic fatality rates are commonly expressed as deaths per 100 million VMT. The most recent national target, set in 2003 by the United States Department of Transportation, is one fatality per 100 million VMT for 2008.

New Jersey has one of the lowest rates in the country, under 1 fatality per 100 million VMT.

Injuries



Fatality Rate



Keeping motorists safe is NJDOT's priority. The State of New Jersey strives to develop, promote, and implement education, enforcement, and engineering strategies to reduce the frequency and severity of crashes. NJDOT implements a number of safety programs that focus on achieving these goals.

highway safety programs

safe corridors

In 2003, New Jersey lawmakers passed legislation designating a number of Safe Corridors in which fines are doubled for speeding and aggressive driving. The goal of the Safe Corridors program is crash reduction. Revenue from these fines is dedicated to increased enforcement and education.

In addition, NJDOT implemented a Safety First sign program, an aggressive driver hotline, and safety improvements on these corridors.

In the three years in which the program has been implemented and its results measured, consistent crash reductions are not apparent. In the first year of measurement, crashes increased by eight percent. In the second year, crashes decreased by two percent. They increased again, by two percent, in the third year.

NJDOT will continue to aggressively pursue and implement safety improvements on all of the State's Safe Corridors. It should be noted that it will take time for the impact of safety improvements to be measured and assessed.

median crossover prevention

NJDOT identified a number of locations throughout the State which have a history of, or the potential for, crashes resulting from vehicles crossing the median. NJDOT is installing preventive treatments such as concrete barriers in these locations. We have constructed 103 miles of median barrier and have seen dramatic decreases in crossover crashes.

intersection improvement program

Since 2003, safety and operational improvements have been implemented at intersections that have a higher than average accident rate.

Since the program began, projects have been completed at 65 intersections throughout the state. Reductions in crash rates have been realized at these intersections. The intersection improvement program has had varied results since 2003. The majority of intersections that were improved have experienced a significant reduction in crash rates, with some as high as an 86 percent reduction in crash rates.

pedestrian safety

In 2006, the Department began a five year, $74 million initiative to improve pedestrian safety throughout New Jersey through engineering, education and enforcement. The initiative encourages motorists to share the road with pedestrians and includes $15 million over five years for the Safe Routes to Schools program and $5 million for the Safe Streets to Transit program. Subsequent to the implementation of the program, pedestrian fatalities declined in 2007 and 2008.

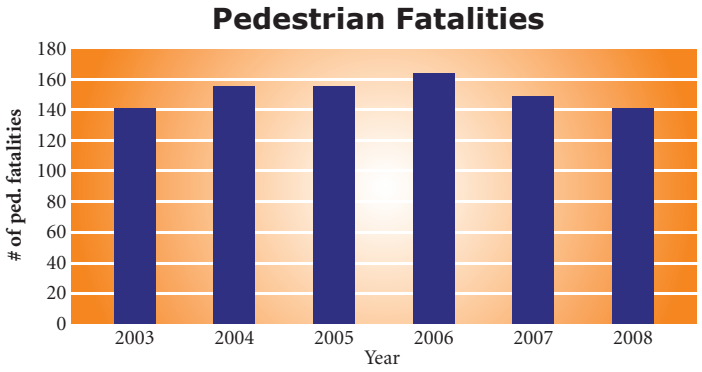
Since 2007, the Department has built 101 pedestrian safety projects and spent $12 million of Transportation Trust Fund monies to make the improvements. These include; sidewalks, crosswalks, signage, pedestrian countdown signals, new pedestrian crossing signals, etc. A total of 164,560 linear feet of sidewalk has been constructed statewide.

To date, the NJDOT has achieved the following:

- 7 corridors with high pedestrian crash incidents were assessed, and improvements were completed or are underway at:

Route 21, Newark
Route 71, Bradley Beach
Route 27, Roselle
Route 70, Cherry Hill
Route 82 Union
Route 37 Toms River
Route 93 Ridgewood

- 101 pedestrian safety projects have been completed. They added 164,560 linear feet of sidewalks along State highways.
- 20 Safe Streets to Transit project grants have been awarded.
- 104 Safe Routes to School project grant have been awarded.



Pavement

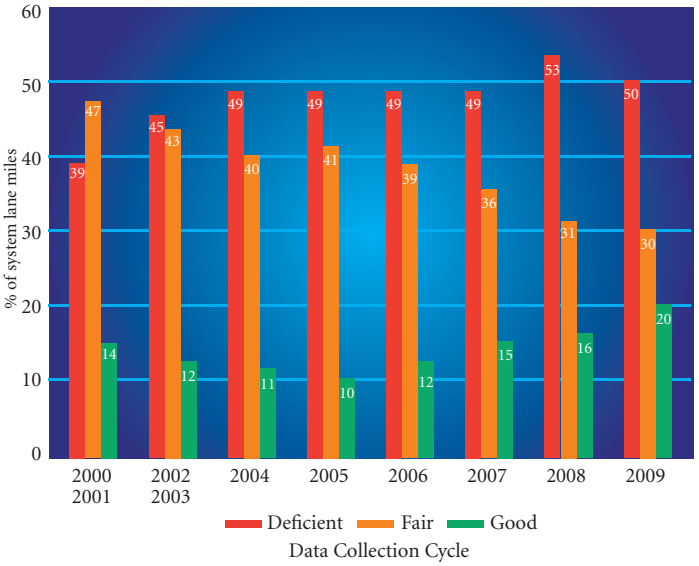
Nearly half of all of New Jersey's mainline state highway pavement is in acceptable condition. The Department has established a 10 Year Goal to bring the percentage of pavement in acceptable condition to 80 percent.

In order to achieve the 80 percent goal, the Department plans to employ a systematic approach. NJDOT developed an innovative Pavement Preservation Plan that focuses on reducing the substantial backlog of deficient pavement through a multi-year prioritization approach containing a mix of fixes for pavement in various conditions.

NJDOT uses sophisticated engineering and economic analyses that consider pavement performance, costs versus benefits, user delays, and long-range system optimization under limited funding scenarios.

The Pavement Preservation Plan is designed to maintain pavement in acceptable condition by using preventive maintenance treatments that retard pavement deterioration. These treatments are completed at a fraction of the cost of rehabilitation or reconstruction, which makes funding available for deficient backlog reduction.

Multi-Year Status of State Highway System



The Pavement Preservation Plan includes the following mix of fixes:

preventive maintenance (lower cost repairs):

- Concrete diamond grinding
- Concrete slab stabilization using urethane grout injection
- High performance thin overlays
- Microsurfacing
- Joint repairs and crack sealing

resurfacing projects (moderately expensive projects):

- Milling and resurfacing the surface course of asphalt pavement

rehabilitation and reconstruction (expensive projects for serious problems):

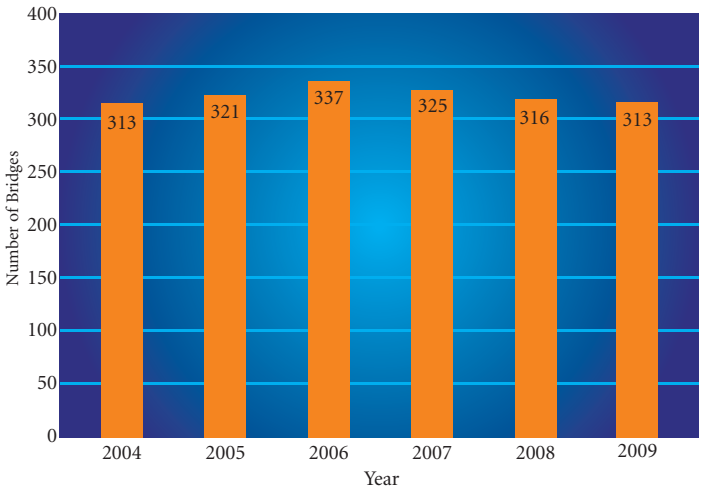
- Rubblization of old concrete pavement followed by thick asphalt overlays
- Use of the Reflective Crack Interlayer system, which delays reflective cracking when concrete pavement is overlaid by asphalt
- Substantial milling and resurfacing of asphalt pavement, including removal and replacement of seriously deteriorated sections

Bridges

acceptable versus deficient bridges

In order to explain the condition of our bridges, NJDOT uses the term "acceptable condition." Acceptable condition means that a bridge functions and is safe, although it may have physical deficiencies and may be rated Structurally Deficient by the Federal Highway Administration. Regardless of their condition or rating, bridges open to traffic are regularly inspected to ensure the safety of motorists.

State Bridges in Deficient Condition



Note: figures do not include Minor Bridges.

2009 bridge data

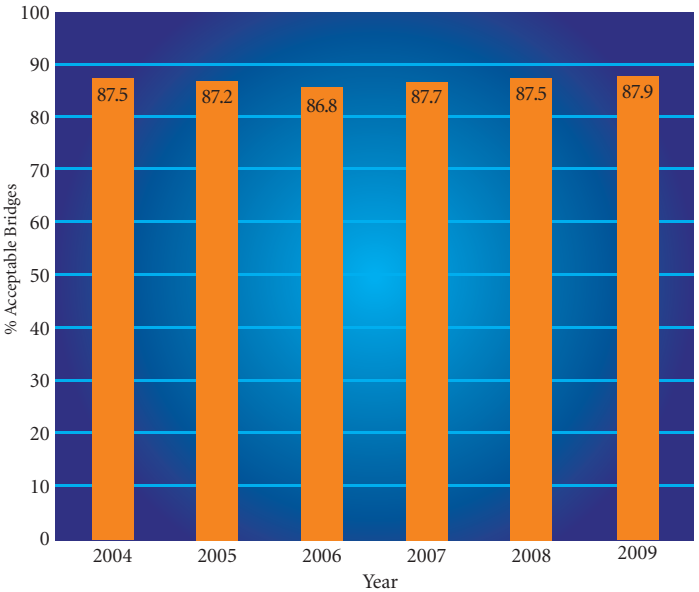
NJDOT uses a Bridge Management Information System to manage its inventory of bridges. NJDOT classifies its bridges in the following categories:

- Standard Bridges are greater than 20 feet long and have large deck areas. NJDOT owns 2,417 of these bridges.
- Moveable Bridges are greater than 20 feet in length and have a movable span that permits marine traffic. NJDOT owns 22 of these bridges.
- Major Viaducts are bridges greater than 20 feet and have an extraordinarily long or large deck. NJDOT owns 76 of these bridges.
- Minor Bridges are less than 20 feet long and are typically known as culverts. NJDOT owns 952 of these bridges.

bridge management

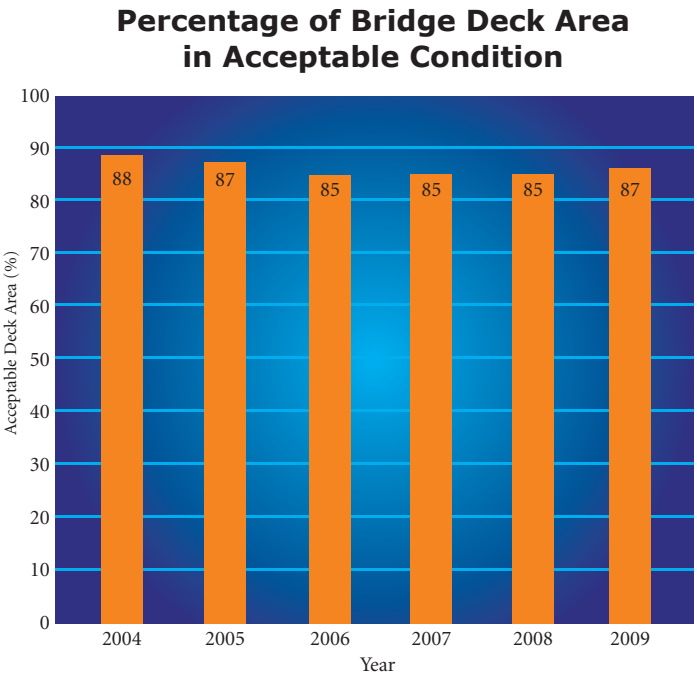
NJDOT's approach to managing the condition of its bridges focuses on maintaining the bridges that are already in acceptable condition. Ensuring that bridges in Acceptable Condition are maintained in this condition is an efficient and cost-effective approach to bridge preservation. It helps to mitigate the need for more expensive repair or replacement costs that accrue when a bridge becomes deficient.

Percentage of State Bridges in Acceptable Condition

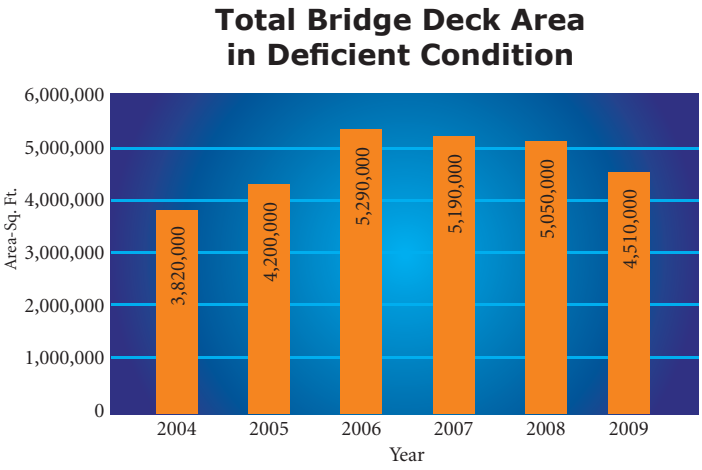


Note: figures do not include Minor Bridges.

In order to prevent the costly replacement of bridges, NJDOT instituted a number of programs that focus on preservation, such as painting, deck patching, and scour countermeasures.



In addition to preventive maintenance, the Department is aggressively advancing a bridge rehabilitation and replacement program. New Jersey owns one of the nation's most mature transportation systems, and its age requires a significant level of investment to ensure that it is kept in the best possible condition. Over the next 10 years, the Department intends to invest approximately $6 billion in the repair and replacement of bridges.



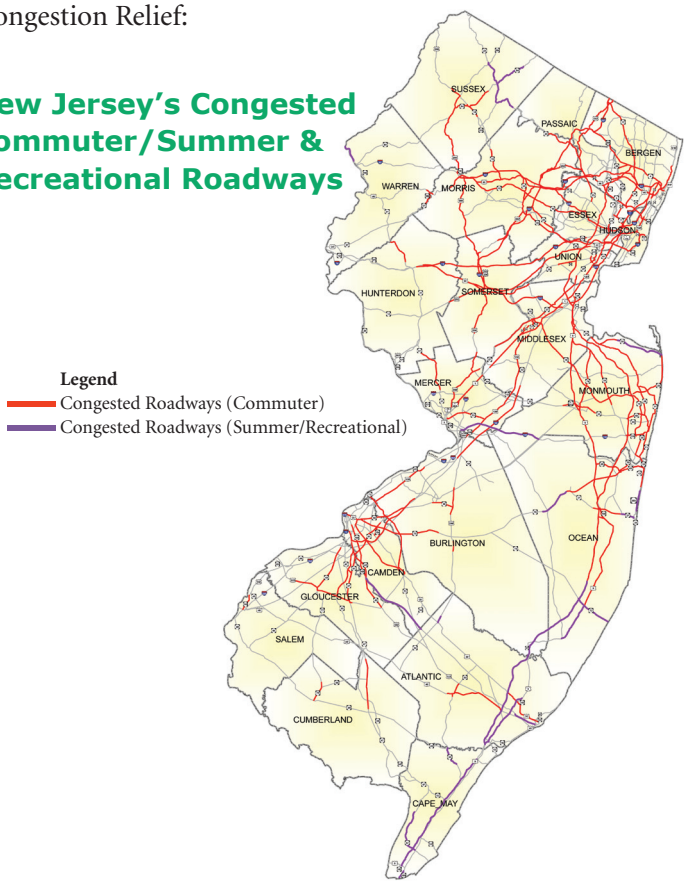
Congestion

Although the State and Authority roads (NJ Turnpike, GSP, ACE) constitute about 7% of the total road miles in New Jersey, they carry about two-thirds of the traffic. And given New Jersey's geographic location (within the Northeast Corridor and directly between Philadelphia and New York City), rich diversity (shore, mountains, villages, cities) and key economic generators and industries (ports, airports, warehousing, pharmaceuticals) these roads carry significant commuter, recreational and freight traffic. Key to maintaining (and improving) the State's economic vitality and competitiveness and quality of life is to ensure efficient movement of people and goods over the State's roadway system. Therefore, reducing congestion and delay becomes paramount.

NJDOT has a proactive program to reduce congestion on our highways. In the NJDOT Fiscal Year 2011 Capital Program, we will spend $437 million to increase our attack on highway congestion. These efforts include bottleneck elimination, selected capacity increases, and intersection improvements, as well as statewide efforts to better manage traffic and respond to incidents.

In October of 2009, the Department's Asset Management Steering Committee (AMSC) formally adopted the following 10-year performance measures and targets for Congestion Relief:

New Jersey's Congested Commuter/Summer & Recreational Roadways



• 10-Year Performance Measures

Peak Hour Travel Time (in minutes) – this measure, applied to AM and PM peak commuter hours, is singularly the most important measure of people and goods movement – unnecessarily long travel times translate to lost productivity and increased costs, lessening New Jersey's economic competitiveness

Duration of Congestion (in minutes) – similarly, this measure, which tallies the times where travel speeds fall below 70% of the posted speed, indicate the overall impact of congested conditions as they build, then dissipate during the AM & PM peak periods. Long durations of congestion lengthen travel times that can extend beyond the commuter peak hour, further degrading mobility and accessibility.

Arterial Signal System Optimization – signal system optimization provides a low cost, yet highly effective method to reduce delays at intersections and improve the overall flow along mainline arterials. We will track the annual number of optimizations put in place.

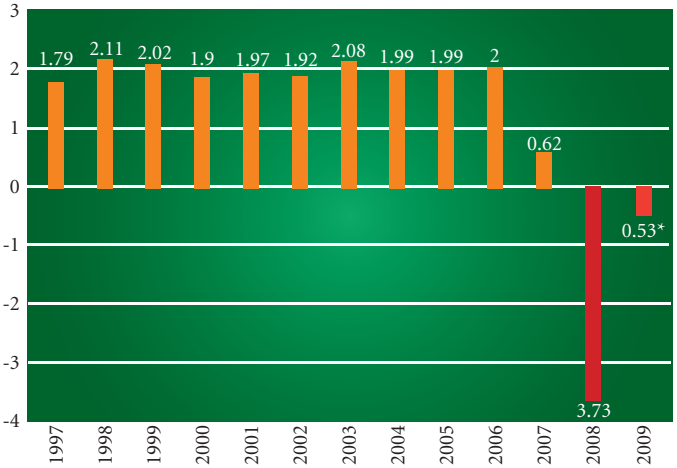
• 10-Year Targets

Peak Hour Travel Time (in minutes) – the 10-year target for peak hour travel time is to maintain the same level of travel time - for selected critical corridors – as was determined in June 2008 (the baseline condition established by the AMSC)

Duration of Congestion (in minutes) – the 10-year target for duration of congestion is to maintain the same level of duration of congestion - for selected critical corridors – as was determined in June 2008 (the baseline condition established by the AMSC)

Arterial Signal System Optimization – the 10-year target for signal system optimization is to optimize the operation of traffic signals on 20 state highway corridors (up to 30 signals per corridor).

% Change (from the previous year) in Annual Vehicle Miles Traveled (VMT) in NJ



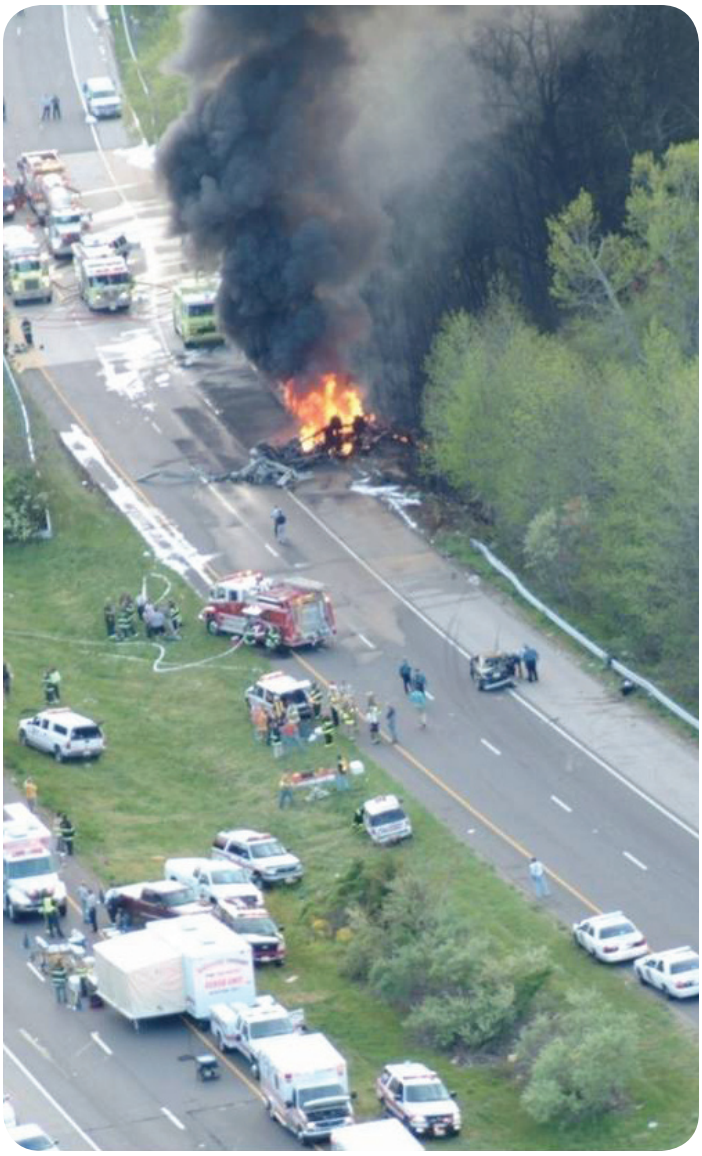
*For 2009, a total of 72,848,890,000 (almost 73 billion) VMT occurred on NJ's Roads

INCIDENTS
timely traffic information

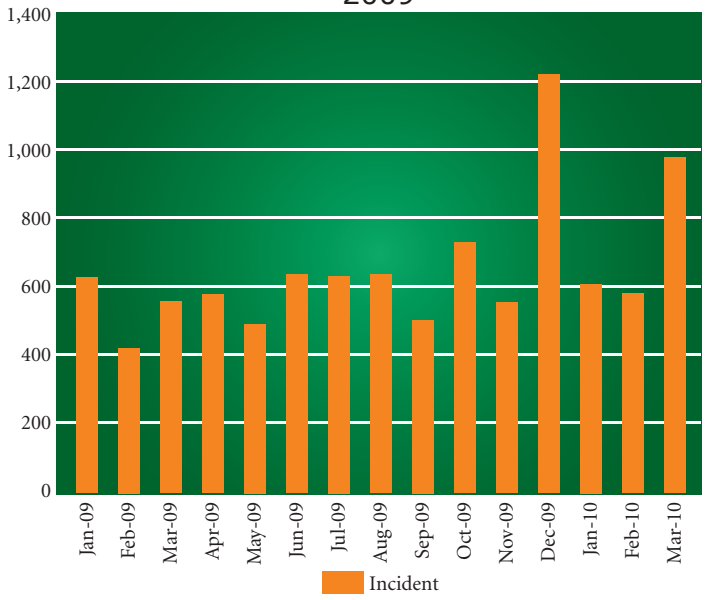
Intelligent Transportation Systems (ITS) are critical to managing New Jersey's transportation system. ITS can reduce accidents by 15 percent and increase roadway carrying capacity by 20 to 25 percent.

ITS technology provides real-time traffic information and enables motorists to choose the most efficient travel route and mode. A system of dynamic message signs installed along major routes statewide and the New Jersey Turnpike currently alerts motorists of upcoming construction activities, travel time and traffic pattern changes.

The NJ511 phone and web systems and real-time data dissemination from the Statewide Traffic Management Center (STMC) greatly enhance traveler information.

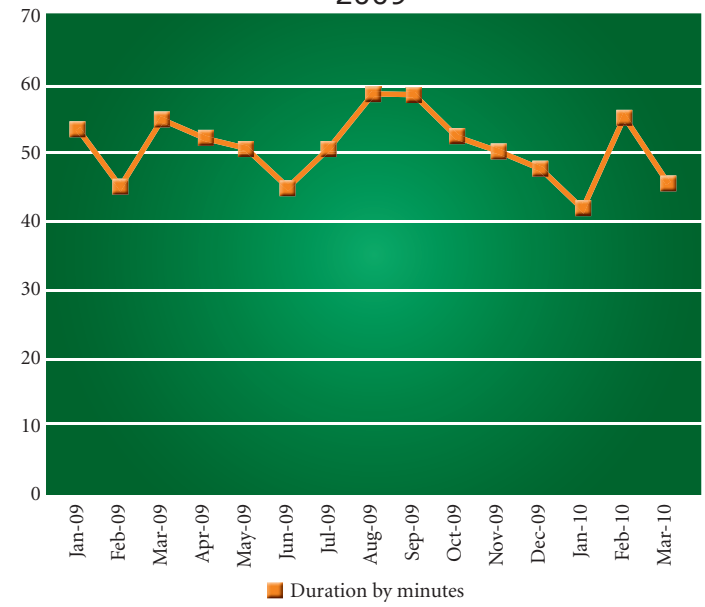


Total Incident Count for the Month
2009



Reported incidents affecting traffic flow on state highways
Note: December has a higher number of incidents due to winter weather conditions.

Average Duration of Incidents
2009



Travel Times

A commuter who travels to work every weekday expects that his or her trip will take the same amount of time every time, and that the road that he or she uses is reliable.

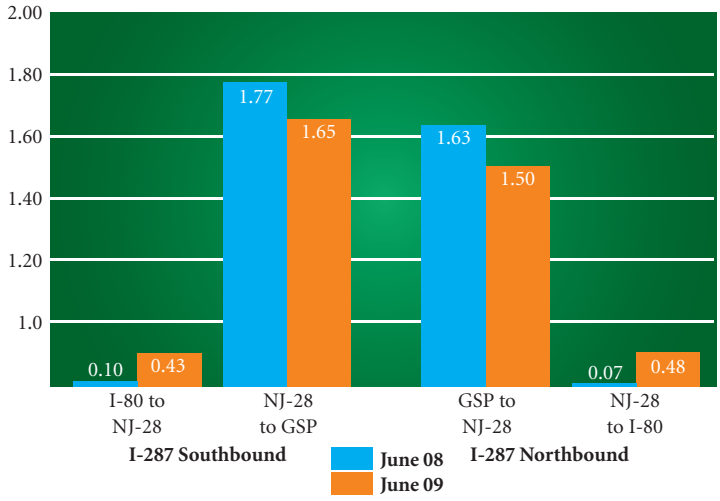
However, travel times are not always predictable. Two factors affect reliability - recurring congestion and non-recurring congestion.

Recurring congestion is most easily recognized during rush hour, when a substantial amount of travel – typically commuters – occurs in a short amount of time. This type of congestion affects reliability when the amount of traffic grows over time (eventually exceeding roadway capacity), and is exacerbated by the lack of necessary roadway improvements or viable travel alternatives to keep pace with growth.

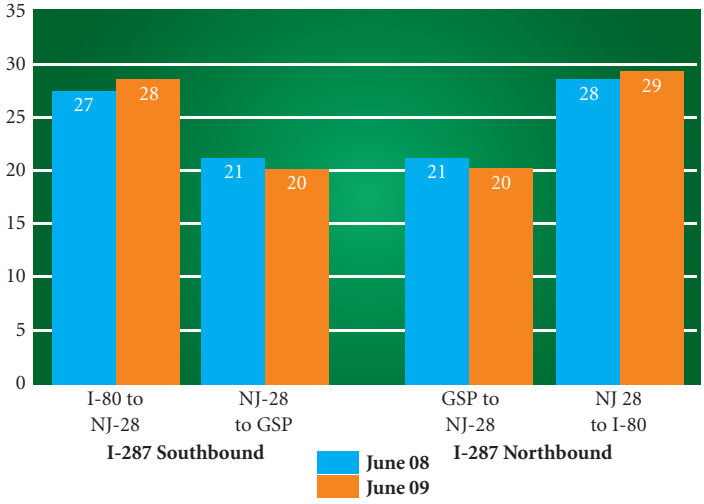
Non-recurring congestion – is congestion that results from incidents, construction zones, special events, weather, etc; further degrading system efficiency and reliability.

Below are performance summaries for June 2008 and June 2009 of travel time data for the I-78 and I-287 corridors – two of the most heavily utilized highways for commuters and trucks – using TRANSMIT real-time data (TRANSMIT is TRANSCOM's SM system for managing incidents & traffic using vehicles equipped with electronic toll-collection tags (E-ZPass) as anonymous probes for transportation management and traveler information).

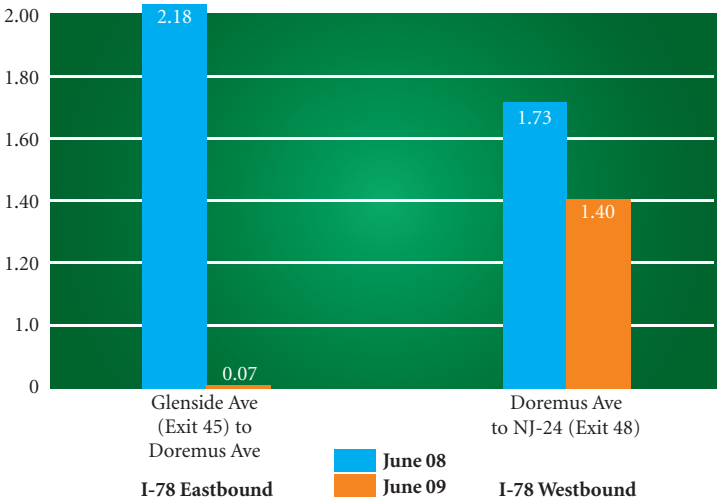
Duration of Congestion (in hours) on I-287



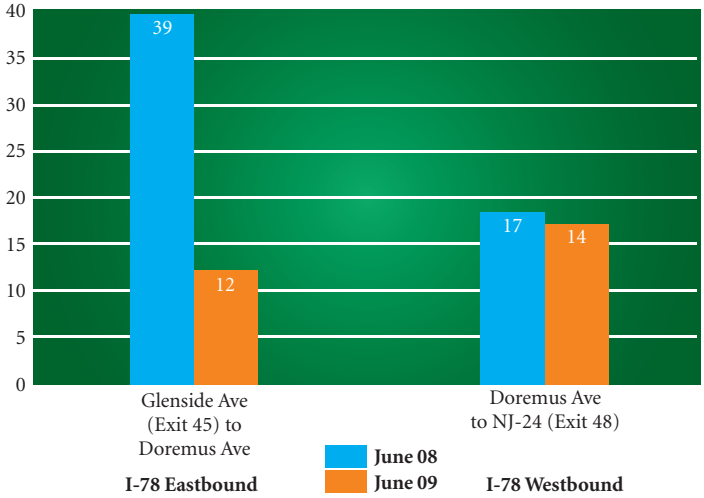
Peak Period Travel Time (in minutes) on I-287



Duration of Congestion (in hours) on I-78



Peak Period Travel Time (in minutes) on I-78



Assessment

From analyses of VMT (and other) data and real-time data for the two TRANSMIT corridors, the following conclusions can be drawn:

- From 1997 to 2006, there has been a relatively steady increase in annual VMT – about 2%/yr. In 2007, however, there appeared a significant reduction in growth, followed by dramatic "negative" growth in 2008, due to steady increases in gas prices followed by a severe economic downturn.
- In 2009, VMT was still decreasing from the previous year, but at a much lower rate, indicating the effects of cheaper gas prices but a still weak economy.
- On I-78, decreases in peak period travel times and duration of congestion occurred between June 2008 and June 2009. This can be attributed to a combination of still decreasing VMT and the completion of a rehabilitation project in December 2008 (that was causing construction delays in 2008).
- On I-287, peak period travel times and duration of congestion remained relatively stable, with the exception of the section from NJ 28 to I-80. Increases in duration of congestion here can be attributed to construction activities for the Rt. 80/287 Safety Project.

Arterial Signal System Optimization

From a comprehensive Congestion Management System assessment (NJ's Congested Places) and other work by NJDOT, a total of twenty-two candidate corridors have been identified for Signal Optimization.

For 2009, these corridors have been completed:

Route: 10
County: Morris
Towns: Roxbury and Randolph
Roads: 46 to Hillside
Amount of signalized intersections: (5)

Route: 9
County: Middlesex, Monmouth
Towns: Old Bridge to Freehold
Roads: Perrine to Schibanoff
Amount of signalized intersections: (16)

Route: 18
County: Middlesex
Town: East Brunswick
Roads: Naricon to Egger Street
Amount of signalized intersections: (11)

The completion of these three corridors will substantially improve mainline flow and reduce intersection delay on the order of 10-20% (based upon results from other before/after studies of optimized signal systems), and exceeds the average annual target of 2 corridors per year.

Project Delivery

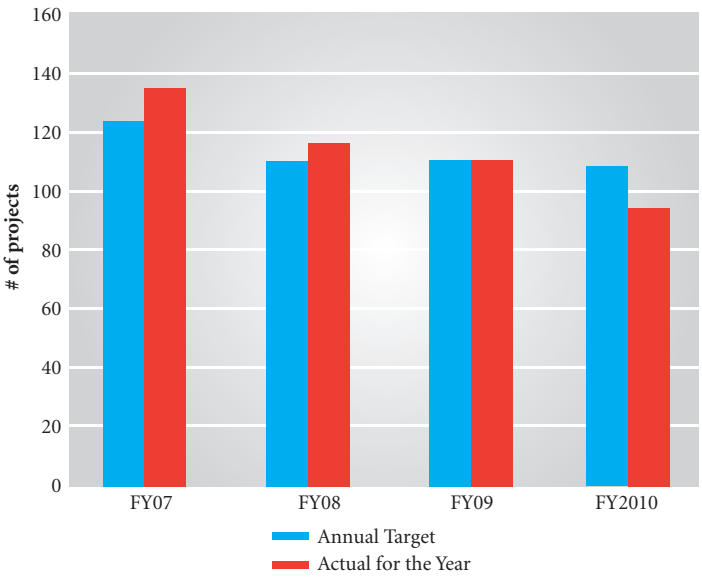
construction contract awards

Construction awards represent physical improvements to the transportation system. Construction awards also are among NJDOT's largest expenditures and result in the creation of jobs that keep our economy moving.

The figures below illustrate NJDOT's planned construction over the last four years in terms of number of projects and total dollar value.

Dollar value of Projects Awarded for Construction

Number of Projects Awarded for Construction



Asset Management

Asset management is a systematic and strategic process that allows for the efficient management of assets in a cost-effective fashion. This process addresses an extended timeframe, draws from economics as well as engineering, and covers a broad range of assets.

the core elements of Asset Management include:

- Well-defined policies that can be related to clear objectives and measures of performance
- High quality information at all stages of infrastructure management, and the capability to develop and continually update this information
- Examination of a range of options for solving infrastructure problems
- A comprehensive decision-making approach that views the transportation system as an integrated whole and considers tradeoffs among modes and categories of investment
- Emphasis on customer service and accountability for system performance and cost-effectiveness

the key goals of Asset Management include:

- Build, preserve and operate facilities cost-effectively and with improved performance
- Deliver the best value for public tax dollars spent
- Enhance the credibility and accountability of the agency
- A focus on performance and outcomes

the benefits of Asset Management include:

- Lower long-term costs for infrastructure preservation
- Improved cost-effectiveness and use of available resources
- Better customer service

NJDOT Asset Management program

- NJDOT instituted Asset Management as its official strategic and policy decision-making framework in 2008
- Created an Asset Management Steering Committee made up of senior staff
- Established overall strategic goals for improving Asset Management practices at NJDOT
- Trained 90 employees in Asset Management principles and practices
- Established 10 Year Performance Targets for improving the condition of bridges and pavement on the State Highway System (see Key Performance Measure page)

Centerline is also available on-line at **http://www.state.nj.us/transportation/**
For information about the Department's Asset Management Program,
please go to:
http://www.state.nj.us/transportation/about/asset/
If you have questions about Centerline or our Asset Management Program, please send us your thoughts.
E Mail: **am@dot.state.nj.us**