



Driving to be the Best

Keys to Success
2011-2013





We are a state with low debt, low taxes and a history of fiscal responsibility. I am proud that we are carrying on that commitment to our taxpayers especially in the Tennessee Department of Transportation where we have no debt and a highway infrastructure ranked among the best in the nation. Our goal is to become the No. 1 location in the Southeast for high quality jobs, and our transportation system is critical to moving goods and services and attracting new business to our state. I am proud of the progress we have made in the last three years with a more efficient and accountable government working to provide the best service to the people of Tennessee at the lowest possible cost.

Bill Haslam, Governor



It is with great pleasure that we publish our successes, *Driving to be the Best*, a summary of this administration's first three years with the Tennessee Department of Transportation. In his inaugural address to Tennesseans on Jan. 15, 2011, Gov. Bill Haslam set the tone for all of us, saying, "state government will live within its financial means, and a 'Top to Bottom' review will set priorities and establish measurable goals...our measure of effective state government is whether our citizens are served well and at the lowest possible cost."

Over the last three years that is what we have done in TDOT. We reviewed our agency from "Top to Bottom" and we set priorities that we believed were attainable. From reorganization to refocusing we have made changes that simply make sense and are the keys to success.

Bringing our construction and maintenance forces together was contemplated for years, but we made it happen in 2012. Expediting the delivery of projects made sense for a long time, but we initiated the process in 2012. Having offices whose sole focuses are on transportation in communities and traffic operations is

an obvious initiative and we created the Office of Community Transportation and the Traffic Operations Division in 2012.

As we shift from an agency with declining resources compared to the needs, our focus has shifted to preservation of our system. As we look at ways to efficiently use our revenues, we are giving new construction a second and third look, making certain that we meet our transportation obligations as well as our obligations to taxpayers. The changes we've made will serve to make a more efficient agency for years to come and will increase and maintain our status as having one of the best transportation systems in the nation.

John Schroer, Commissioner



www.tn.gov/tdot



TABLE OF CONTENTS

OUR SYSTEM	1-2
KEYS TO BUILDING AND PRESERVING OUR SYSTEM	3-19
• Pavement Preservation	Pages 3 - 5
• Bridge Program.....	Pages 6 - 10
• Projects.....	Pages 11 - 18
KEYS TO PROVIDING MOBILITY CHOICES	19
KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY	20-24
• Road Fatality Awareness	Page 20
• ITS System Growth	Page 21
• Quick Clearance.....	Page 22
• Help Program	Page 23
• TDOT SmartWay Application.....	Page 24
KEYS TO OPERATING EFFICIENTLY	25-27
• Top to Bottom Review.....	Pages 25 - 26
• LEAN.....	Page 27
KEYS TO CREATING LOCAL PARTNERSHIPS	28-31
• Project Tours	Page 28
• Transportation Alternative Grants	Page 29
• Office of Community Transportation.....	Page 30
• Economic Development.....	Page 31
GOING FORWARD	32



OUR SYSTEM

The Department of Transportation provides citizens of Tennessee and travelers with one of the best transportation systems in the country. In fact, our mission is to serve the public by doing just that. We consistently rank high and win awards for our projects, highway design and our innovative approach to transportation.

In the 20th Annual Highway Report, Tennessee's bridges ranked 8th in the nation, even though we have more bridges to maintain than all seven states ranked above it.ⁱ In terms of infrastructure investment, Tennessee ranks 8th, a testament to our emphasis on keeping our transportation system safe and well-maintained.ⁱⁱ A prime example is the Tennessee section of Interstate 40 with 452 miles. Tennessee has more miles than any of the eight states it runs through, and is consistently recognized as the best interstate section in the nation.ⁱⁱⁱ

Our successes are based on public demands and input to our system. To meet those demands into the future, we are creating a new long-term vision for transportation in Tennessee. This 25-Year Long-Range Transportation Plan will provide the foundation for prioritizing transportation investments across the state. The plan will aid in accomplishing TDOT's mission to serve the public by providing the best multimodal transportation system in the nation.

www.tn.gov/tdot



ⁱ Ranks 8th in the nation in bridges, but has more traffic on our bridges than the seven states ranked above us. <http://t4america.org/resources/bridges>

ⁱⁱ Ranks 8th on infrastructure investments: http://reason.org/files/20th_annual_highway_report.pdf

ⁱⁱⁱ Top ranking: <http://www.overdriveonline.com/the-good-the-bad-the-better>

OUR SYSTEM

By The Numbers

TDOT is a multimodal agency with responsibilities for aviation, public transit, waterways, railroads and bicycle and pedestrian facilities.

The Numbers:

Interstates: 1,104 miles

State-maintained highway miles: 13,884

Total highway miles: 95,523

Bridges: 19,721

Waterways: 946 navigable main channel miles

Airports: 74 general aviation, 5 commercial, 142 heliports

Railroads: 18 shortlines (842 miles), 6 class 1 railroads (2,177 miles)

Transit: 28 systems serving all 95 counties

Bicycle: 4,497 miles

Pedestrian: 270 miles of greenways, sidewalks and trails

Annual Transportation System Usage

Freight Shipments Value: \$433,000,000

Rail Shipments Brought to TN: 17.3 million tons

Passengers Boarding Planes: 10,664,103

Rural *VMT annually: 28,177,000

Urban VMT annually: 42,952,000

Total VMT annually: 71,129,000

www.tn.gov/tdot/transportationsystem.htm



*VMT Vehicle Miles Traveled

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Pavement Preservation

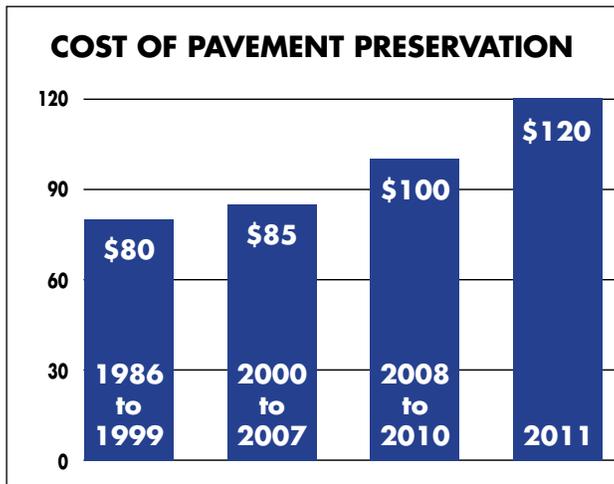
Tennessee continues to have one of the top road systems in the nation. In the last decade, TDOT received eight national awards for perpetual pavements from the National Asphalt Pavement Alliance. Media surveys and reports have rated Tennessee's highway network as one of the best. National research projects have shown TDOT has the smoothest interstates in the nation. In 2011, TDOT received the Sorenson Award for National Leadership in Pavement Preservation. Our infrastructure is well built and able to stand the test of time and the repetitive loading that moves our nation's economy.

In the future, many challenges face Tennessee. With the increases in oil and construction material costs, TDOT's purchasing power is eroding. Business and manufacturing have streamlined and are more efficient with "just-in-time" logistics increasing the number of trucks on our system. Since 1970, traffic has nearly doubled.

Instead of reactive or routine maintenance, preventive maintenance has been TDOT's strategy for cost-effective pavement treatments to an existing roadway to extend the life or improve the serviceability of the pavement. The purpose of TDOT's Pavement Management Program is to protect the pavement structural integrity, maintain functional characteristics, slow the rate of pavement deterioration and correct pavement surface deficiencies.

In 2008, TDOT took a bold step by directing each of the four regions to spend 10% of their maintenance budgets on pavement preservation. In 2014, each region will spend 75% on Traditional Hot Mix Asphalt, 25% on Alternative Treatments and Pavement Preservation.

www.tn.gov/tdot/pavement



In millions



Microsurfacing project

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Pavement Preservation: Open-Graded Friction Course

With the safety of Tennessee motorists a priority, the new generation Open-Graded Friction Course (OGFC) is gaining popularity with TDOT pavement engineers. The back spray from vehicles in fast moving traffic is drastically reduced by using this strong, stable, porous mix that allows water to travel through the pavement to the edge of road and down the side instead of collecting on top of it. OGFC mixtures have long been noted for reduction in back spray, prevention of hydroplaning, improved wet weather visibility of traffic stripes, and reduced headlight glare. These mixes are also gaining wide appeal due to noise reduction characteristics. TDOT engineers are now including OGFC in pavement plans on four-lane, high speed routes such as interstates. TDOT views these mixtures as effective tools providing motorists with a safe, durable, and quiet riding surface.

Where You Can Find OGFC

- I-40 Williamson, Cheatham, Wilson, Smith, Benton, Haywood counties
- I-24 Rutherford, Davidson, Hamilton counties
- I-65 Giles County
- I-75 Hamilton County
- I-81 Greene County
- I-26 Sullivan County
- SR 840 Rutherford County
- SR 386 Sumner County

www.tn.gov/tdot/pavement



Highways with and without OGFC

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Pavement Preservation: I-440 Widening, Nashville Open to Traffic: September 2013

This project widened I-440 and rebuilt and lengthened both on-ramps from Nolensville Road to I-440 eastbound. It was done to alleviate the daily traffic back-up at the I-440/24 interchange. TDOT widened I-440 from two to three lanes, added new shoulders, upgraded the drainage, built retaining walls, widened and coated the bridge over Glenrose Avenue/CSX Railway. The original plan included spot repairs on the old concrete roadway, but it was in such bad shape that the department replaced both existing travel lanes. Interstate-440 was closed on nine weekends to do the work allowing the contractor to remove old concrete and replace it faster than could have been done with the roadway open.

AT A GLANCE

- \$10.2 Million Spent
- 21,336 Square Yards of Concrete Replaced
- 6 Retaining Walls Built
- 1 Mile of New Travel Lane Added
- 2 Entrance Ramps Rebuilt and Lengthened

www.tn.gov/tdot



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Bridge Program

"These rankings affirm TDOT's effort in the last two and half years to be innovative, efficient, and responsible. Prioritizing and maximizing our investments will continue to provide economic benefits to communities across the state."

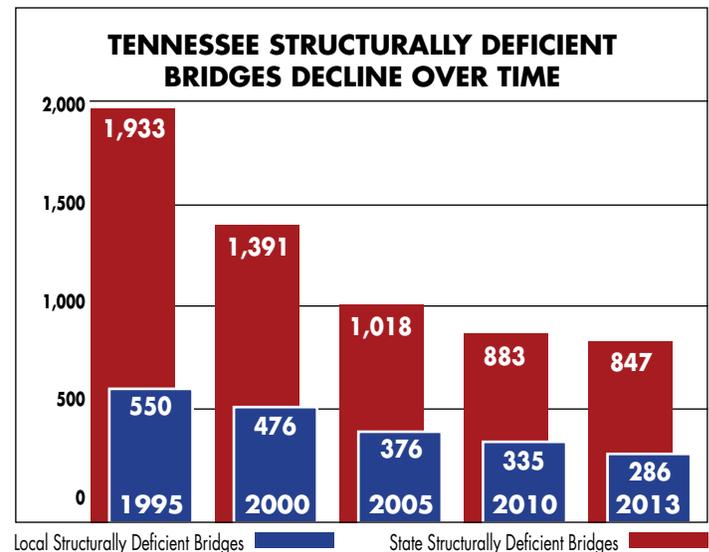
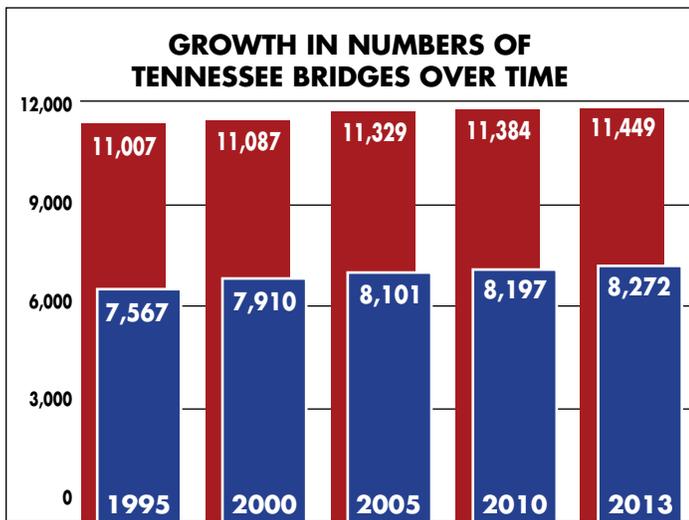
Commissioner John Schroer

TDOT's bridge program is one of the best in the nation. In the last three years we've reduced the number of structurally deficient bridges to 5.9 percent bringing Tennessee far below the national average of 11 percent deficient. The number is even lower (3.3 percent), when you look only at state bridges. State bridges (8,272) are those maintained, owned and operated by the state. Off-system bridges (11,449) are those on roads owned, maintained and operated by local governments. In the last four years, through our Better Bridges Program, TDOT has replaced, repaired or rehabilitated 193 of the 200 state-owned structurally deficient bridges. A testament to the focus we place on maintaining our infrastructure, we aggressively repair and replace aging bridges and increase safety. The future, however, holds a new challenge for Tennessee and all states. Congress recently passed legislation that changed funding for bridges in the federal transportation program, MAP-21. The bridge program must now compete with other transportation funding needs. States will be required to meet maintenance standards set under performance measures.

AT A GLANCE

- 19,721 bridges on public roads in Tennessee
- 17 inspection teams
- 3 bridges a day inspected by each team, on average
- 8th Best in U.S.ⁱ
- 2nd Best in U.S. in "Transportation and Infrastructure"ⁱⁱ

www.tn.gov/tdot/bridgeinfo



ⁱSource: Reason Foundation 2013 Report "Are Highways Crumbling? State Performance Summaries"

ⁱⁱCNBC in 2013 Ranked Tennessee 2nd in "America's Top States for Transportation and Infrastructure"

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Bridge Program

I-24 Bridges Rehabilitation, Nashville - Open to Traffic: August 2012

"Processes TDOT used to accelerate the project eliminated months of construction that would have impacted our football fans which come from all over the United States. As a result, the project was completed on time and the potential for major traffic problems was never realized, despite the project's proximity to LP Field."

-Walter Overton, GM of LP Field, Home of the Tennessee Titans

"Instead of using conventional techniques, which would have required lane closures for months, TDOT used a new and innovative approach in order to save time and reduce the impacts on the public."

-Mayor Karl Dean, Nashville

The successful \$8.7 million renovation of the I-24 bridges in 2012 was the first use of Accelerated Bridge Construction (ABC) in a high traffic location in Tennessee. The project replaced two bridge decks on I-24 over Main and Woodland Streets, two of the most heavily traveled bridges in the state. Located near downtown Nashville and LP Field, home of the Tennessee Titans, this section of I-24 carries an average daily traffic (ADT) of more than 140,000 vehicles. Because stopping traffic during the week was not an option, TDOT used the ABC process in order to avoid a complete shutdown. Thirteen weekends (April – August) were allowed for construction for full bridge deck replacement as 277 prefabricated panels, some weighing over 11 tons, were guided and placed onto the bridges creating a new section each weekend. This was the first time prefabricated deck panels were placed on pre-stressed concrete instead of steel beams in the U.S. This new process provides other transportation agencies with experience and knowledge they can use in their bridge replacement programs.

www.tn.gov/tdot

ABOUT ABC

- 88 Days with conventional construction (3 months)
- 32 Days with Accelerated Bridge Construction (60 hours, 13 weekends)
- 56 Days Saved* • \$22 Million Saved*



*Note: This calculation was based on the MNDOT calculation on user cost of I-35 bridge at \$400,000, 2007.

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Bridge Program

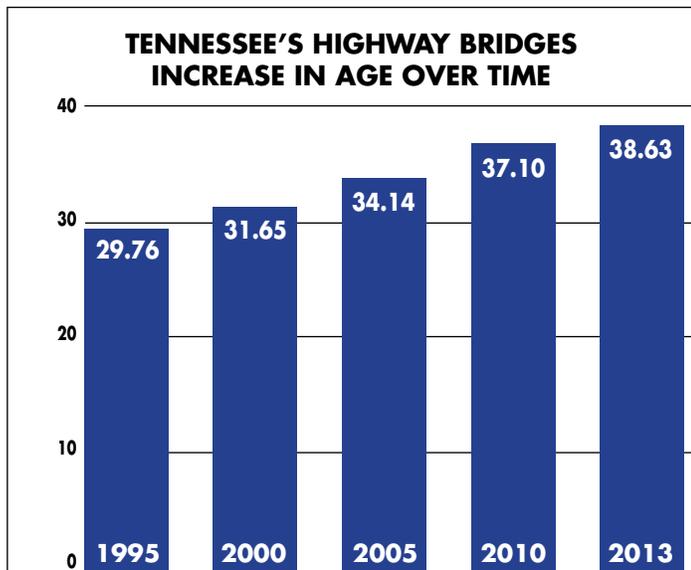
Hurricane Bridge - Open to Traffic: August 2013

This \$28 million bridge rehabilitation project on the State Route 56 Bridge over the Caney Fork River in DeKalb County is another success story from TDOT's Better Bridges Program. This bridge, commonly referred to as the "Hurricane Bridge," was constructed in 1954. The structure has undergone a full rehabilitation, including truss strengthening, steel repair, painting, and bridge deck removal and replacement.

www.tn.gov/tdot



Construction of Hurricane Bridge in the early 1950's



Average Age in Years

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Bridge Program

Henley Bridge, Knoxville - Open to Traffic: October 2013

The historic Henley Bridge in Knoxville is nearing the end of an extensive \$31 million rehabilitation that is adding another 50 years to the life of the bridge. The 80-year-old structure had deteriorated concrete, decks and floor beams. Only the main arches and some piers were salvageable. The rest was dismantled and reconstructed. The bridge now has four lanes with a center turn lane, wider sidewalks and a bike lane in each direction allowing traffic to move in and out of the downtown area more efficiently. Currently it's open to one lane of traffic in each direction. The due date for total project completion is June 2014.

www.tn.gov/tdot/henley



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Bridge Program

I-40 Hernando DeSoto Bridge Seismic Retrofit, Memphis

Estimated Completion Date: August 2015

The seismic retrofit of the Hernando DeSoto Bridge is designed to protect this bridge and its approaches in the case of an earthquake of up to 7.7 on the Richter Scale. Located less than 100 miles from the New Madrid Fault Line, the same fault that led to the 1811 earthquake, it is estimated that a \$4.5 billion economic impact to the U.S. would occur if the bridge were lost in a major earthquake. In the early 1990's TDOT partnered with the Arkansas State Highway and Transportation Department to begin the seismic retrofit of the bridge. The first project began in 2000 and several phases have been completed.

AT A GLANCE

- \$264 Million
- 9 Phases
- 7 Phases Complete
- 15-Year Project

SEISMIC RETROFITTING FEATURES

- **Strengthening:** Certain items such as the footings, piers and columns are being strengthened to withstand a major earthquake.
- **Isolating:** Isolation-type bearings are used to prevent ground motion forces from passing through to the bridge deck and superstructure.

www.tn.gov/tdot/i40hd



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

I-75 Slide Repair - Open to Traffic: August 2012

Rockslides and landslides are common occurrences on Tennessee roadways. TDOT works aggressively to mitigate rockfall areas before an event occurs. However, in March 2012, a major slide occurred on the southbound side of I-75 in Campbell County. Within days, a southbound crossover to the northbound lanes was built and over the next four months crews rebuilt the two southbound lanes. It opened to traffic a month early.

AT A GLANCE

- \$11,892,599 construction cost
- 213,500 cubic yards excavated
- 366,000 tons of graded and solid rock placed to rebuild lanes

www.tn.gov/tdot



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

State Route 840 - Open to Traffic: November 2012

"This project will benefit citizens across Tennessee and the entire region by providing better access to dozens of communities and three interstates...and continue to make Tennessee an attractive location for business."

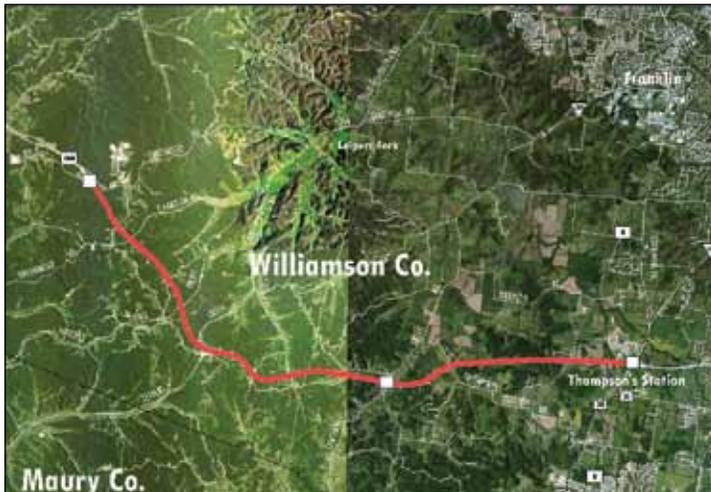
Governor Bill Haslam

The 78-mile southern route called State Route 840 around Nashville was an active TDOT project for over 26 years. It connects Wilson, Rutherford, Williamson, Hickman, and Dickson counties and provides access to I-40 both east and west of Nashville, I-65 and I-24. The last 14-mile section in Williamson County from US 31 (Columbia Pike) to SR 46 (Pinewood Road) marked its completion in November 2012. Valuable time is saved by taking 840 and avoiding the congestion in downtown Nashville. The numbers aren't in yet, but commercial vehicle traffic in downtown Nashville is expected to decrease with the opening of the final stretch.

www.tn.gov/tdot

AT A GLANCE

- 154 bridges
- 15 stream crossings
- 681 tracts of land purchased
- 5,170 acres of land acquired
- \$757.4 million



The grand opening on Nov. 2, 2012 was attended by four governors, five former and current TDOT commissioners and more than 1,000 people.



A few weeks before the grand opening of SR 840, Governor Haslam led nearly 1,500 cyclists on a bike ride along the newly completed stretch. A 5k/10k was also held that day.

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

Rebuild U.S. 27, Chattanooga - Open to Traffic: February 2015

This \$102.5 million project to rebuild U.S. 27 in Chattanooga is the most expensive TDOT project to date in that area because of the number of retaining walls and bridges needed along this 1.62 mile stretch. The area has seen considerable population and business growth and the existing highway system is not conducive to efficient movement of people and goods. U.S. 27 will be widened to three lanes in each direction beginning at the Olgiate Bridge over the Tennessee River to SR 8 (Signal Mountain Boulevard). Additional acceleration and deceleration lanes are being added to improve traffic flow. When complete, the entry into downtown Chattanooga will be a much improved section of highway that will benefit all motorists.

AT A GLANCE

- 6 bridges
- 33 retaining walls
- Widen route from two to three lanes in each direction
- Ramp acceleration and deceleration lanes at interchanges
- 1.62 miles long

www.tn.gov/tdot/RebuildUS27



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

State Route 66: Great Smoky Mountains Parkway Project

Open to Traffic: 2016

Tourism provides a large portion of revenues and jobs in Tennessee. The “Smokies” get 9.6 million visitors a year making it the most visited national park in the country. The main artery into the Great Smoky Mountains, through Pigeon Forge and Gatlinburg, is State Route 66, also known as Smoky Mountains Parkway. While most people have come to expect the congestion on this road, TDOT is making improvements. The work started in 2009. We are now in phase three of a four-phase project. The entire project from I-40 to downtown Sevierville will widen the existing highway from 4-lanes to 6-lanes improving congestion and enhancing safety for the traveling public.

AT A GLANCE

- Start to Finish: 2009 to 2016
- Cost: \$125 million
- Length: 9 miles

www.tn.gov/tdot/highway66



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

I-40/240 Interchange Reconstruction, Memphis

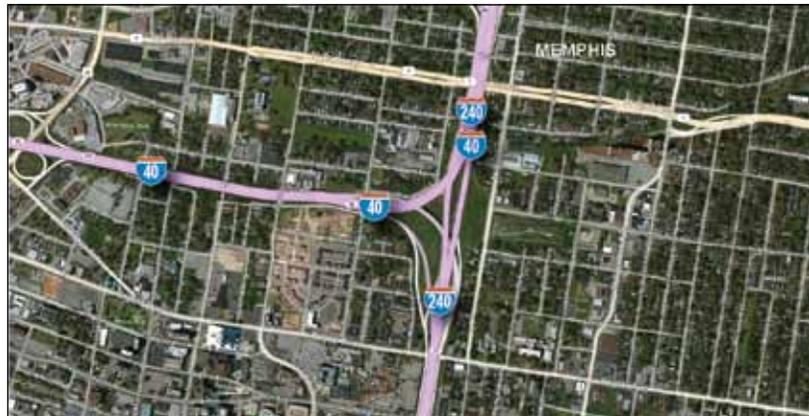
Open to Traffic: Summer 2017

The I-40/I-240 interchange on the east side of Memphis is considered to be a chokepoint where growth has caused congestion to increase rapidly in recent years. Originally designed and built in 1964, I-40 was planned to go through Memphis, while I-240 was to serve as a loop around the city. Since litigation stopped I-40 west of the interchange, it was never finished through Memphis and the interchange became overburdened with westbound I-40 traffic using I-240. Projections show the interchange could be handling well over 300,000 vehicles daily by the year 2015. This interchange reconstruction project will improve traffic flow on I-240 and I-40, as well as local roads that feed into the interstate system. The first phase of the I-40/240 Interchange project is complete. The second phase was let in the fall of 2013 and is expected to take 42 months to complete. The cost of the project is estimated to be around \$109 million.

I-40/240 FEATURES

- 4-level interchange
- The only similar interchange in Tennessee is in Nashville
- Fourth level structure will rise more than 75 feet
- The bridge is designed to withstand earthquake forces

www.tn.gov/tdot/I40-240memphis



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

U.S. 64 - Open to Traffic: 2016*

The work on this 266-mile corridor connecting Memphis with I-24 near Chattanooga is entering the final phases. The corridor travels through 10 Tennessee counties. Studies in the 1970s revealed a need to provide a four-lane route across southern Tennessee that would enhance public infrastructure and safety as well as facilitate growth and economic development opportunities in this rural and economically distressed area. Bypasses have been built around some towns. There is a major Tennessee River crossing and several smaller rivers along this corridor. Interchanges were built at the Natchez Trace Parkway, I-65 and I-24. Projects are complete in McNairy, Giles, Lincoln, Franklin and Shelby counties. The remaining projects are in Fayette, Hardin, Hardeman, Wayne and Lawrence counties.

AT A GLANCE

- \$1.192 billion
- 266 miles
- 57 project sections
- 55 contracts let
- 10 counties

www.tn.gov/tdot/US64



*Six miles in Hardin County will be let to contract in summer 2014 thus no firm completion date has been set.

KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

I-24 Corridor Study - Study to Conclude: January 2014

Interstate 24 is a strategic corridor which is a route the state considers critical to statewide mobility and regional connectivity. Stretching 185 miles from Kentucky to Georgia, through 15 counties in Tennessee, I-24 is fundamental to the state's economic development. Currently TDOT is studying how this vital corridor can be improved. The study is investigating a range of multimodal solutions to address future travel demands, with emphasis on managing congestion, improving safety, maximizing the potential for freight diversion, and preserving/enhancing the corridor's economic benefits. TDOT hopes to identify short and long-term solutions for improving problem spots along the entire I-24 corridor.

www.tn.gov/tdot/i24



I-24 Montgomery County (TN-KY Line)



KEYS TO BUILDING AND PRESERVING OUR SYSTEM

Projects

State Route 1, Murfreesboro - Construction Begins: Early 2014

Murfreesboro is home to one of the busiest intersections in the state. Nearly 60,000 vehicles pass through Broad Street (SR 1) and Memorial Boulevard/Old Fort Parkway (SR 96/SR 10) every day. It causes extreme congestion and by 2034, the average daily traffic (ADT) is projected to be 72,740. TDOT plans to separate the intersections by creating a single point urban interchange. This separation calls for a new bridge on Memorial Blvd. that will create an overpass over Broad Street. There are also plans for enhanced lighting, landscaping and aesthetic treatment of the retaining walls. Other improvements to SR 1 and SR 96 will include sidewalks and curb and gutter. TDOT hopes to begin construction in early 2014. Construction is estimated to last three years.

www.tn.gov/tdot/sr1



Interchange Rendering



KEYS TO PROVIDING MOBILITY CHOICES

Alternatives are key in providing an efficient transportation system. While Tennessee's highway transportation system has heavy freight movements, Tennessee ranks first in U.S. cargo throughputs at Memphis International Airport. With 4.4 million tons of cargo loaded and off-loaded each year, Memphis beats out the number two cargo airport (Ted Stevens Anchorage International Airport) by over 1.5 million tons.

In moving freight by rail, Tennessee ranks 12th in the nation in total freight moved which includes originating, terminating and pass-through. The American Association of Railroads reports that 15.2 million tons of rail freight originated in Tennessee and 28.5 million tons of rail freight terminated in Tennessee. Tennessee's 74 general aviation airports are the front door to hundreds of communities across the state.

With public transportation serving all 95 counties, ridership is increasing. Memphis had the highest rate of growth of all U.S. light rail systems in early 2012. Nearly 35 million trips were taken on public transportation in Tennessee, an 11 percent ridership increase since 2011.

Providing adequate facilities for cyclists is also important. In our highway resurfacing program, TDOT includes these facilities where possible. Since 2010 a partnership with TDOT's region offices has resulted in the installation of 43 miles of bike lanes and seven miles of shared lane markings on state routes during resurfacing projects, with an estimated additional 14 miles of bike lanes to be added by the end of 2013.

www.tn.gov/tdot



KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY

"It's my hope that seeing this number will be a sobering reminder to all motorists and will help change the behaviors that contribute to these deadly crashes."

Commissioner John Schroer

ROAD FATALITY AWARENESS

In 2012, TDOT became the first state to use overhead Dynamic Message Signs (DMS) to post motorist fatality numbers daily. This measure was taken after preliminary reports showed 288 people died on Tennessee roadways in the first four months of 2012, an increase of 27 fatalities over 2011. The attention-getting campaign worked as we slowed our fatality rate in 2012 by posting safety messages with the daily fatality numbers reminding motorists to wear their seatbelts, obey the speed limit, and no texting and driving. By fall 2013, traffic fatality numbers were nearly equal to 2012 and once again TDOT decided to take action by a daily fatality posting. These reminders do change driving behaviors. One person emailed TDOT to say, "none of us ever wore seat belts until we saw those signs. We are all in our 50s and did not grow up wearing seat belts. Since we saw your signs, we kid each other on how ALL of us always wear them now." Preliminary numbers show Tennessee ended 2013 with 27 fewer fatalities than in 2012.

www.tn.gov/tdot



KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY

ITS SYSTEM GROWTH

TDOT's Intelligent Transportation System (ITS) called TDOT SmartWay, is designed to improve safety and mobility. We are expanding ITS statewide by adding more cameras, dynamic message signs and traffic sensors. TDOT SmartWay uses cameras to monitor highways from Traffic Management Centers (TMC), sensors to gauge traffic flow and large electronic message boards to provide urgent traffic notices to drivers and the Highway Advisory Radio system. Nashville, Knoxville, Memphis and Chattanooga have fully integrated TDOT SmartWay systems.



ITS Total Miles = 417 • ITS Expansion Miles = 155

www.tn.gov/tdot/trafficoperations/its

ALL TDOT SMARTWAY COMPONENTS AND PROGRAMS



- Four Transportation Management Centers (TMCs): Chattanooga, Knoxville, Memphis and Nashville
- 1,221 Roadway Traffic Sensors report traffic counts, speed and travel time
- 425 Traffic Cameras
- 151 Dynamic Message Signs providing traffic information
- 88 HELP trucks (urban Freeway Service Patrols) help reduce congestion quickly addressing incidents
- TDOT SmartWay Mobile application assists motorists via smartphones
- Tennessee 511 provides motorist information by landline or cellular telephone
- 23 Twitter feeds provide incident information to followers
- 24/7 TMC operation

KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY

"It only took one incident of young children stranded for hours on our interstate system for me to realize how critical it was to come up with a plan to reduce clearance time on our highways."

Commissioner John Schroer

QUICK CLEARANCE

TDOT and the Tennessee Department of Safety & Homeland Security signed a new agreement in 2012 to ensure public safety and restore Tennessee roadways to full capacity as soon as possible following highway incidents. The agreement states the goals and objectives when a serious crash occurs, clearly defines the responsibilities of those responding to the incident and includes a number of new procedures such as classifying events and mandating continual reassessment of the situation. One of the most important goals is clearing the roadway within 90 minutes.

www.tn.gov/tdot/incident/help



KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY

"The TDOT HELP Program has a tremendous impact on highway safety and operation across the state. By going to a 24/7 operation, we have the potential to provide an even safer highway system in Tennessee."
Commissioner John Schroer

HELP PROGRAM

For 14 years, TDOT's HELP program has worked to reduce traffic congestion, improve safety and assist motorists who may be stranded on roadways. Eighty-eight trucks are in service each day in the four largest urban areas. A new initiative by Commissioner Schroer creates an aggressive 24/7 state of readiness and response.

HELP drivers have responded to more than a million calls for various types of assistance, including one driver who helped deliver a baby. The gratitude shown by motorists gives them a sense of enormous pride in what they do.

www.tn.gov/tdot/incident/help



KEYS TO REDUCING CONGESTION AND IMPROVING SAFETY

"The 100,000 downloads of our app in the first few months shows how much motorists are looking for good highway information."

Commissioner John Schroer

TDOT SMARTWAY APP

Launched in December 2012, the TDOT SmartWay mobile app has improved the delivery and availability of timely and relevant information on traffic and road conditions to every driver in Tennessee with a smartphone. The data is refreshed via an RSS feed updated every few minutes so users have the latest information as soon as it hits TDOT's system. In 2013, TDOT was presented the Digital Government Achievement Award for its innovative mobile app.

www.tn.gov/tdot/tdotsmartway/mobile



**Avoid trouble
on Tennessee
highways!**

Now available on iOS and Android

KEYS TO OPERATING EFFICIENTLY



Soon after taking office in 2011, Gov. Bill Haslam called for a Top-to-Bottom review of the executive branch of state government. With input from our customers, stakeholders and over a thousand employees, TDOT's leadership determined that organizational structure, processes and systems could be improved. Some could be eliminated and some could be added to improve operational efficiency. After approval by the governor on the agency recommendations, several government-wide changes were initiated including a change in the civil service system.

Ultimately, agency goals were undertaken with the overarching objectives of delivering more efficiency and increasing customer service. Those goals have already resulted in TDOT organizational changes.

SEVEN TOP-TO-BOTTOM GOALS

- Merger of construction and maintenance functions
- Increased role of Information Technology
- Improving plans quality/emphasizing project management methods in project development
- Improve quality and timeliness of planning process and products
- Ensure effective and efficient multimodal planning and program management
- Increase inventory consistency across all garage facilities
- Continue to evaluate organization for operational efficiency opportunities

www.tn.gov/tdot

KEYS TO OPERATING EFFICIENTLY

NEW TRAFFIC OPERATIONS DIVISION

Because transportation mobility is increasingly becoming a focal point for our constituents, the focus of this division is to bring all the components of motorist travel under one umbrella. Its goal is to maximize the capacity of Tennessee's existing highway infrastructure using technological innovations, standardized traffic management procedures and practices, and strong strategic partnerships with other agencies.

CONSTRUCTION AND MAINTENANCE FUNCTIONS MERGED

This merger was initiated to provide efficiency through cross training. The construction team has a larger workload in the summer months, while the maintenance team has a larger workload in the winter months. Cross training will reduce the amount of overtime needed and allows personnel to take on more work done by consultants in construction administration, resulting in annual cost savings.



TDOT Maintenance preserves nearly 14,000 miles of Tennessee's highway system.



TDOT Construction staff design and build \$800-900 million in projects annually.

EXPEDITED PROJECT DELIVERY

With a backlog of \$8 billion in either requested and/or needed projects, Expedited Project Delivery (EPD) has been successful in reducing some of the buildup. Thirty-six projects were initially evaluated to confirm that transportation needs were being met with the most effective design solution. Five projects addressing critical needs while reducing the cost burden to TDOT were placed into the three-year program to yield more logical and justifiable improvements. TDOT will construct these five projects for one twentieth of the cost of the original project estimated cost. With over 800 projects in development, almost all will be evaluated to determine how to deliver the best project that meets needs in the most effective manner.

www.tn.gov/tdot

KEYS TO OPERATING EFFICIENTLY

LEAN

The LEAN Focus on Tennessee state government was initiated in August of 2012 with a focus on TDOT's business processes to maximize customer value and minimize roadblocks for efficiency in government. It is a time-tested way to engage the creativity of every employee to improve processes. LEAN at TDOT has focused on five processes and has become a perpetual business management process.

TDOT's Excess Land Sales and Lease process allows the state to convey excess property it has purchased that is no longer necessary for the future roads or highway purposes. A change in late 2012 resulted in a 33% reduction in elapsed time to process one application through the entire sales transaction.

TDOT's Programmatic Categorical Exclusion process relates to projects which do not have any significant environmental impact. TDOT gained efficiencies in this area by standardizing work which uses request forms and document templates. Time was saved in processing customer requests to TDOT's technical areas and external agencies in completing the environmental review.

TDOT's Section 130 Highway-Railway Grade Crossing is federally funded for the improvement of railroad crossings. A review resulted in benefits by including a speedier process, fewer hand-offs, better quality, cost reductions and increase in public safety.

TDOT's Commodities Purchase process began in April, 2013. In early August, TDOT's Finance Division learned it would be the pilot agency for a new process for purchases under \$2,000. The division is no longer required to create requisitions, purchase orders, or vouchers for purchases under \$2,000, saving this division five full-time equivalent staff members.

TDOT's Oversize and Overweight Permitting System (TOOPS) is a new system that will now automatically issue several permit types without requiring agent reviews. Due to statutory limits, over-dimensional vehicles are issued permits in Tennessee for public safety and for the preservation of our highways. External customers (permit service companies and carriers with escrow accounts) can now run their own Escrow Detail Report on demand, as necessary. Auto-approval has improved efficiency by 75%.

www.tn.gov/tdot

KEYS TO CREATING LOCAL PARTNERSHIPS

"These regional project tours have provided me and other staff members an invaluable opportunity to meet face-to-face with local and state leaders and have productive discussions about improving Tennessee's transportation system."

Commissioner John Schroer

PROJECT TOURS

The annual tours to each of the four TDOT regions are designed to give local, state and transportation officials an opportunity to view projects under construction in their areas and to learn more about future projects announced in TDOT's Three Year Program. These tours were extremely successful in 2011 and 2012. In 2013, as TDOT began updating its 25-Year Long-Range Transportation Plan, the tours gained a new focus in order to provide an opportunity for input in an informational summit setting in each of the four regions.

2011 and 2012

- 7,100 miles traveled
- 233 projects visited
- All 95 counties visited
- 120 city/county mayors attended
- 90 state lawmakers attended

2013

- 8 Long-Range Plan Summits
- 8 Cities
- 300 Attendees
(local and state officials)

www.tn.gov/tdot/tour



KEYS TO CREATING LOCAL PARTNERSHIPS

"This program has assisted communities all over the state in their efforts to revitalize downtowns, highlight historic areas, provide alternative means of transportation, and increase opportunities for economic development."

Commissioner John Schroer

TRANSPORTATION ALTERNATIVES / GRANT INFORMATION

Through these grants, TDOT has funded more than \$294 million in non-traditional transportation projects. These can include downtown revitalization projects, Safe Routes to Schools, litter grants, transit programs and aeronautics grants, to name a few.

Grants awarded under Commissioner Schroer:

2011 - \$10,829,801

2012 - \$12,075,017

2013 - \$6,196,821

Total - \$29,101,639 50 Counties

www.tn.gov/tdot/grantinfo



KEYS TO CREATING LOCAL PARTNERSHIPS

“Having strong partnerships with local municipalities allows TDOT to better identify the transportation needs in each community and to invest in projects that have the most positive impacts, not only for these cities and towns but for the entire state.”

Commissioner John Schroer

THE OFFICE OF COMMUNITY TRANSPORTATION

Launched in the spring of 2013, the Office of Community Transportation (OCT) collaborates with local partners to establish a presence to aid communities when developing and implementing their future visions as they pertain to state routes. With staff in Knoxville, Nashville, Chattanooga and Memphis, OCT is committed to working specifically with the communities within each region. By working directly with community partners, the OCT is capable of eliminating potential transportation difficulties with future local projects such as new schools, subdivisions, and major activity centers like shopping centers and industrial parks. Other outcomes and benefits of this coordination include:

- Expedited project delivery through more efficient front-end analysis of local community policies and decisions and how they impact the statewide transportation network
- Awareness of questions, concerns and implications of transportation choices for purpose and need before developing a Transportation Planning Report (TPR) or project
- Positive impact on economic development by working with local partners on improvements to the statewide transportation system

www.tn.gov/tdot/longrange/oct.htm

KEYS TO CREATING LOCAL PARTNERSHIPS

ECONOMIC DEVELOPMENT

Transportation plays a key role in providing better access for business and industry resulting in more jobs and a thriving economy. Our successes in this area have been well-documented over the last several decades.

TDOT has two main economic development support roles: our State Industrial Access (SIA) road program and support of the Tennessee Department of Economic and Community Development efforts in recruiting major corporate prospects through improvements on the state highway system. Thanks to TDOT's infrastructure commitments on projects in 2013, new and/or expanding industries made capital investments in Tennessee totaling \$2,761,300,000. TDOT is on track in 2014 to exceed the growth experienced in 2013.

AT A GLANCE

2011

- \$19 million invested
- 12,758 jobs created
- 9 SIA road projects

2012

- \$21 million invested
- 6,177 jobs created
- 14 SIA road projects

2013

- \$27 million invested
- 9,114 jobs created
- 13 SIA road projects



State Industrial Access Road, Bradley County / Whirlpool



State Industrial Access Road, Roane County/VW Group of America



State Industrial Access Road, Marshall County / Imperial Foods Plant Construction

GOING FORWARD

Although concern for funding at the federal level is a major concern, the future is bright for Tennessee transportation and the travelers it serves. As we continue to build on the new initiatives, there are many more ideas that both leadership and our 3,600 employees will implement.

We have grown from data processing to information technology and we know we are data rich, but sometimes information poor. The vision of the next generation of Information Technology, called **NextGen IT**, will break down the silos so that our massive amounts of information are accessible to all those who need it.

With the **studio concept** we are initiating a process focused in the four TDOT regions rather than centralized in headquarters. A project development director will oversee a multi-disciplinary team and all aspects of project development each region. These studios will be able to deliver all aspects of project development.

TDOT is now working on a new **Long Range Transportation Plan** with a focus on providing a roadmap to guide investment decisions. The blueprint will have a planning horizon of 25 years. Associated with this plan will be a 10-year fiscally constrained investment program. This means it will be fiscally realistic and will address how we can reach our goals with available funding.

Protecting the Queue is a new initiative to protect motorists. While we can't control driving behaviors that often lead to crashes on the interstates, we can manage what happens next. Secondary crashes, those which occur after the initial incident, are often the worst and most deadly. "Protecting the Queue" puts a new emphasis on making sure the drivers waiting for the road to clear are safe. TDOT will warn motorists about traffic ahead "early and often" with overhead dynamic message boards, portable message signs and big yellow TDOT HELP trucks.

www.tn.gov/tdot

