# WHERE DO WE GO FROM HERE?


## Challenges and Opportunities for Transportation Funding in North Carolina

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**Contents**



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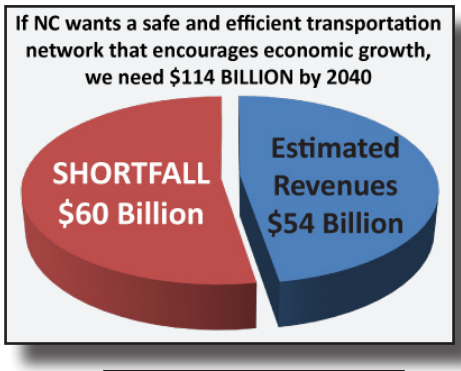
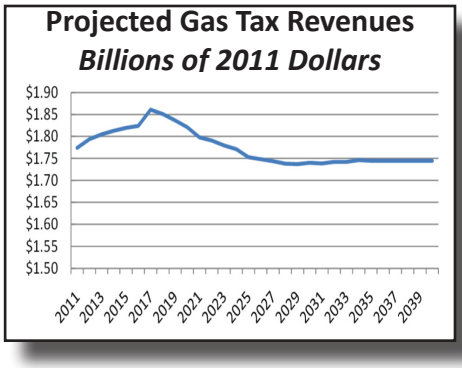
# WHERE DO WE GO FROM HERE?

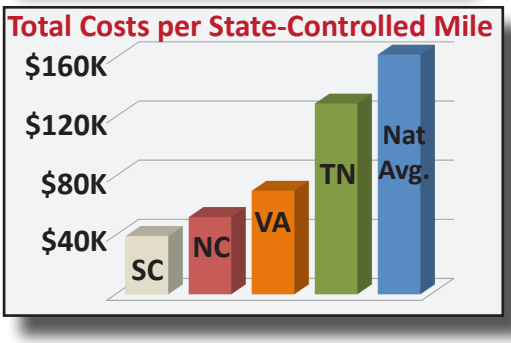
*Summary*

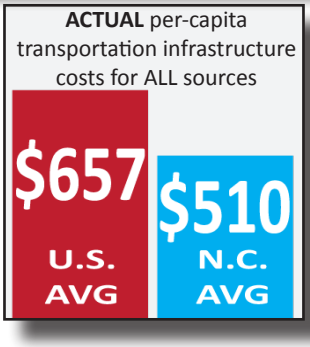
**North Carolina is facing a transportation CRISIS:**

- Our state will see a 43% increase in population - 13.5 million new residents by 2040.
- North Carolina has the 37th **worst** bridge safety in the nation, with 30% of bridges rated as structurally deficient or functionally obsolete.
- 45% of North Carolina's roads are in poor or mediocre condition and cost drivers $241-$340 in extra vehicle repairs and operating costs.
- Our gas tax is a losing model over the long term because of rising vehicle fuel efficiency
- Projected revenue by 2040 will fall **$60 BILLION** short of anticpated needs, if we want a safe, efficient and high-performing transportation network that fosters economic prosperity.


**6,585**

**# of Trafffic Fatalities on North Carolina's highways 2008 - 2012**

In July 2015, the variable rate gas tax will adjust based on the end-of-year wholesale 2014 price of gas. **This could result in a decrease of 6-8 cent/gallon at the pump and a $300-400 MILLION loss in revenue.**

**To avoid this near term catastrophe, *NC Go!* recommends**:

- Proactively LOWER and set a floor for the motor fuels tax
- End transfers of transportation revenue to the General Fund
- Adjust the *Highway Use Tax* by 1% or on par with surrounding states
- Increase DMV/License and resgistration fees

To address long-term funding needs, *NC Go!* urges the legislature to consider a range of options which could result in approximately **$126 Billion in New Revenue by 2040**, to include:

- Auto insurance surcharge
- Tax on auto parts
- Adjust weight-based fees for commercial vehicles
- Expanded interstate tolling
- User-based mileage fees

# Where Do We Go From Here…

*Transportation, Growth and Meeting North Carolina's Future Needs*

***The Good Roads State.*** That was North Carolina's nickname for decades. That's because wise leaders and an engaged public knew that if safety and economic prosperity were important, we had to invest in roads, bridges and all modes of transportation. Fast forward to the new millennium, and we're a growing state, poised to be the 7th most populous state by 2030 – ahead of New Jersey, Ohio and Michigan.

At the same time, at the heart of how we fund transportation, lies an intractable accounting dilemma:

**Expenses > Revenue**

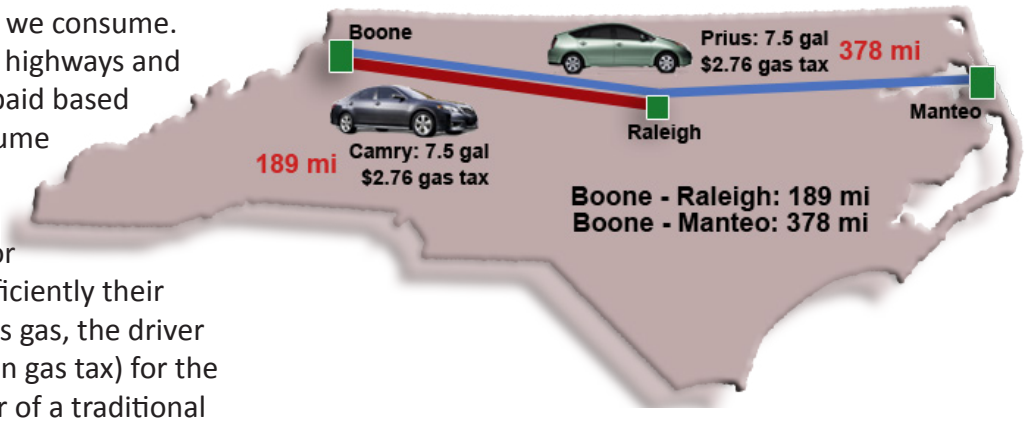
For nearly 100 years, North Carolina has relied primarily on the Motor Fuels Tax (gas tax) to fund the lion's share of transportation needs in our state. But the system is broken. Increased fuel efficiency (mpg) – while a good thing for drivers – means every time our vehicle's mpg increases we go a little further on the same gallon of gas. We pay the same, to go further. Therefore we pay the same amount of tax and **consume** more of the road. Thus, a declining revenue stream.

**Consumption**. For almost every item or utility we use, we are charged on the quantity we consume. For transportation, most specifically highways and bridges, up to now we've primarily paid based on how *efficiently* our vehicles consume every mile. With the exception of some minor tolling in the state, drivers in North Carolina each pay for their consumption based on how efficiently their vehicle operates. Because it uses less gas, the driver of a hybrid Toyota Camry pays less (in gas tax) for the same mile of road used by the driver of a traditional gas-fueled Camry. That's not equitable, but at its root it belies a larger problem.

The cost of building transportation infrastructure isn't declining. The needs our state faces are not declining. Yet, our state is being asked to do more – maintain more transportation infrastructure and build new facilities to address growth – on a shrinking source of revenue.

***What's at stake?*** Under-investing in transportation has very real consequences. Poor safety. Traffic congestion. Vehicle damage and wear. Decreased mobility. Missed economic opportunities. All result from trying to stretch transportation dollars beyond their breaking point.

NC Go! believes that now is the time to act; time to chart our own future in terms of economic prosperity, safety, quality of life and mobility. It will require visionary political leadership, and support from the public that elected them. How we got here and the consequences of inaction will all be laid out in the report that follows.




So too will solutions. Our philosophy is *every idea should be on the table*. Let's consider all funding measures and work backwards to garner support. And as an organization that represents businesses, associations, cities, counties, chambers of commerce and transit agencies throughout the state, we also believe that rather than argue over everyone's slice of the pie, ***we need a bigger pie***.

# Starting Point: The Reality of Transportation in NC

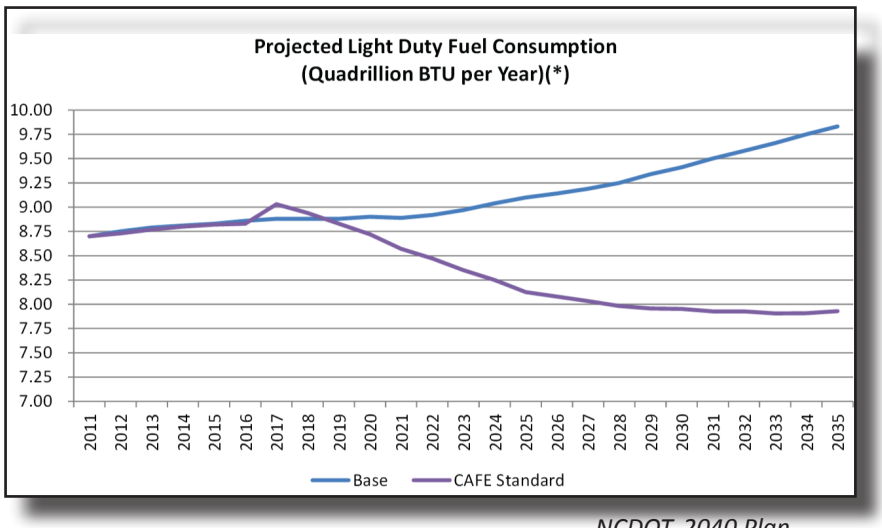
North Carolina is unique when compared to many states – specifically our neighbors. Our department of transportation, NCDOT, maintains almost 80,000 miles of highway statewide. It is second only to Texas in terms of total center-line miles.

But what makes our state truly unique is the combination of the large number of miles NC maintains **PLUS** a centralized ownership/ maintenance of our highways. Nearly a century ago North Carolina opted to retain ownership of its highways, and maintain with state funds - unlike most states which rely on a mix of local and state dollars. So, you don't cross from one NC county to another and experience a dramatic change in road quality, safety, markings or signage. But this scenario requires a statewide, not local, revenue stream.

**Enter the Motor Fuels Tax, or the gas tax**. Begun in the early 1920s, North Carolina's gas tax has remained the major source of transportation funding in our state. Originally 1 cent/gallon, it is currently 37.5 cents/gallon –based on a variable rate. That rate is 17.5 cents per gallon plus 7 percent of the average wholesale price. The variable rate was put in place to address fluctuations in consumption due to pricing. The higher the wholesale price, the less the public consumed, therefore a higher variable component of the tax was levied to keep revenue somewhat neutral. When the price fell and consumption increased, the tax dropped.

For years, this system worked fine – as most vehicles had similar fuel efficiency rates. We all paid about the same in taxes for driving our share of the road. However, gas shortages in the 1970's shifted interest away from a vehicle's power and size to fuel efficiency. Still, the impact of fuel efficiency has only become abundantly clear in recent years as official standards for improved fuel efficiency have become formalized.

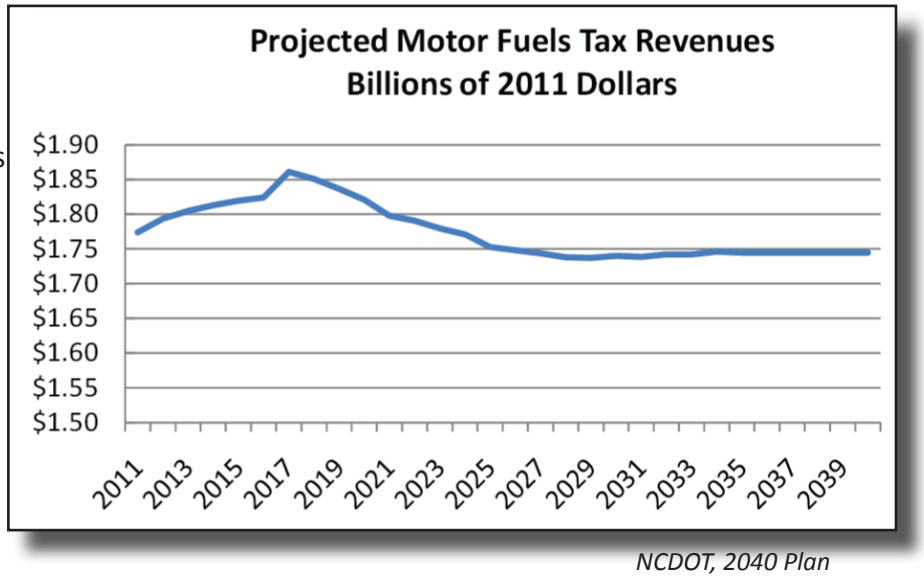
In 2011, President Obama announced an agreement with thirteen large automakers (which account for more than 90 percent of all vehicles sold in the U.S.) to increase fuel economy to 54.5 miles per gallon for cars and light-duty trucks by 2025. That represents a 5 percent increase in fuel efficiency per year, starting in 2012. **That increase in fuel efficiency means we'll all be buying less gas.**




*NCDOT, 2040 Plan*

Increased fuel efficiency is good; good for the environment and for drivers. But, buying less gas also means paying less in gas tax, and now the future of our state's most important transportation source has become starkly clear.

NCDOT projects motor fuel tax revenues to increase slightly until 2018, then decrease until about 2028, and remain flat until 2040. In the face of a growing population, and rising costs to build and maintain transportation infrastructure, our gas tax will only yield about $33.9 billion from 2011-2040.




*NCDOT, 2040 Plan*

Yet the problem remains that we need additional funding. In "*From Policy to Projects: the 2040 Plan*" NCDOT outlines what the financial needs are in the future, to achieve various **Levels of Service (LOS).** Those are:

- Target LOS: A robust transportation system that meets projected needs, addresses growth, ensures safety, offers convenience and accessibility and fosters economic opportunity.
- LOS C: A transportation system which is veering toward wide-spread safety concerns, deferred maintenance, and congestion and land access issues that constrain economic opportunity. ***Our current status is rated as "LOS C."***
- Fund at Current Levels: The last option is to stick with the funding we have in place already, which is far below that required to keep our transportation network at even the same service level (LOS C).

**Projected Needs, Funding and Funding Gap (Billions of 2011 dollars)**

| | Target LOS | Current LOS | Continued Current Funding Levels |
|---|---|---|---|
| **Total Needs** | **122.83** | **94.13** | **66.17** |
| **NCDOT Responsibility** | **114.11** | **86.30** | **59.70** |
| **Total Baseline Revenues** | **54.03** | | |
| **Baseline Funding Gap** | **(60.08)** | **(32.27)** | **(5.67)** |

*NCDOT, 2040 Plan*

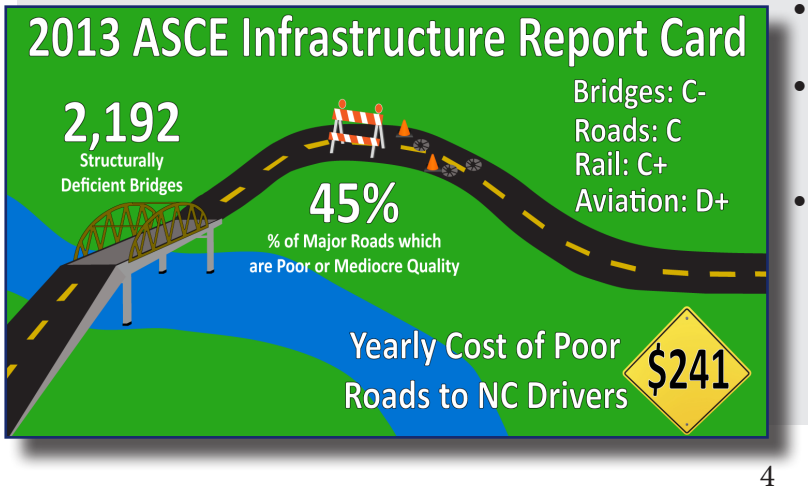
Through the 2040 Plan period, the NCDOT will need to invest at least $86.3 billion (in 2011 dollars) just to maintain existing Level of Service (LOS) conditions and $114.1 billion to improve the transportation network's performance and capacity (Target LOS). **Even simply keeping funding at its current level, there is not enough projected revenue forecast.**

# Overview: Reports on Transportation in North Carolina

There's no shortage of experts weighing in on the sad state of America's transportation infrastructure or the cost of failing to invest in the future. But, often, reports are geared towards national data and trends. However, three sources routinely focus on state-based data and specifically cover North Carolina: ASCE, TRIP and TTI.

## ASCE - Infrastructure Report Card

The NC Section of the American Society of Civil Engineers (ASCE) detailed infrastructure challenges in its *2013 Infrastructure Report Card*. ASCE represents more than 145,000 civil engineers who plan, design, construct, and operate the built environment – while protecting and restoring the natural environment.




In the report card, ASCE indicated:

- Of the 18,165 bridges in North Carolina, 2,192 (12.1%) are considered structurally deficient and 3,296 (18.1%) are considered functionally obsolete.
- 45% of North Carolina's roads are in poor or mediocre condition.

**ASCE recommendations included:**

- Develop a diverse funding strategy that will sustain high levels of quality and service for users without burdening taxpayers.
- Promote sustainable public-private partnerships and optimize third-party contracts through transparency.
- Employ mileage-based user fees and other road pricing method when applicable.
- Maintain the existing North Carolina gasoline user fee and promote the use of tax dollars in bridge construction projects.
- Continue to engage policy makers to allocate appropriate funding levels to minimize future bridge closures.

## TRIP Report

**TRIP** is a nonprofit organization that researches and evaluates economic and technical data on surface transportation issues. TRIP reports on the National and individual states' transportation networks, focusing on safety and the impact of transportation conditions on drivers, vehicles and the economy.

According to the 2014 TRIP Report:

- Annually, $364 billion in goods are shipped from North Carolina and $337 billion in goods are shipped to North Carolina, mostly by truck.
- Eleven percent of NC's major roads and highways have poor pavement condition. Pavement condition on 38 percent of the state's major roads is rated fair or mediocre.
- Poor road conditions cost North Carolina motorists $2.3 billion a year in extra vehicle repairs and operating costs – $340 per motorist.
- Fifty-four percent of North Carolina's major urban highways are congested. Traffic congestion costs American motorists $121 billion a year in wasted time and fuel costs.
- Roadway conditions are a significant factor in approximately one-third of traffic fatalities. There were 1,292 traffic fatalities in 2012 in NC and a total of 6,585 people died on North Carolina's highways from 2008 through 2012.

### How Does Inadequate Investment in Transportation Impact Safety?

Transportation dollars dictate:

- Pavement condition/ pothole repairs
- Bridge condition
- Lane widths
- Roadway lighting
- Lane markings
- Shoulders
- Guard rails
- Median barriers
- Clear signage
- Intersection design
- The number of lanes

### How Do Poor Roads Impact Drivers' Costs?

Poor road conditions like potholes lead to:

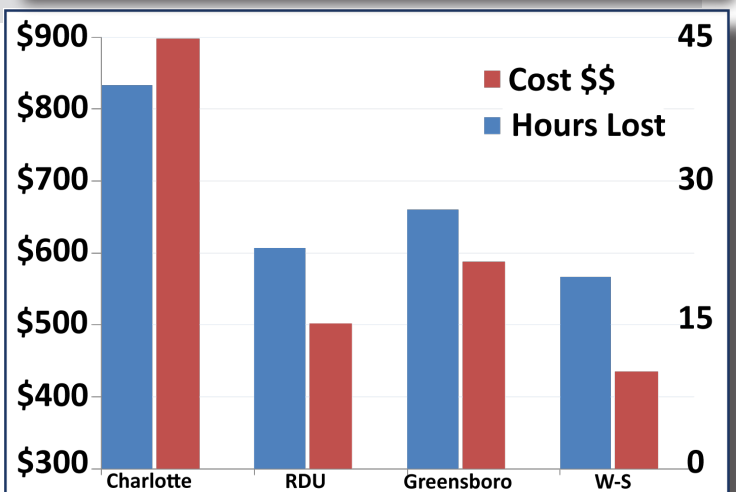
- Excess fuel consumption
- Tire wear/damage
- Suspension wear/damage
- Accelerate vehicle depreciation

## TTI Urban Mobility Report

TTI (The Texas A&M University Transportation Institute), studies transportation and traffic congestion around the nation and seeks solutions to the problems and challenges facing all modes of transportation. In its 2012 *Urban Mobility Report*, TTI assigns values to hours, dollars and fuel lost due to traffic in some of our states most congested areas.

According to TTI, in 2011:

- The average driver in the Charlotte urban area wasted 40 hours each year stuck in traffic and loses $898 in the cost of lost time and wasted fuel as a result of traffic congestion.
- The average driver in the Raleigh-Durham area wasted 23 hours each year stuck in traffic and loses $502 in the cost of lost time and wasted fuel as a result of traffic congestion.
- The average driver in Greensboro wasted 27 hours each year stuck in traffic and loses $588 in the cost of lost time and wasted fuel as a result of traffic congestion.



*Impact of traffic congestion on drivers, TTI 2012*

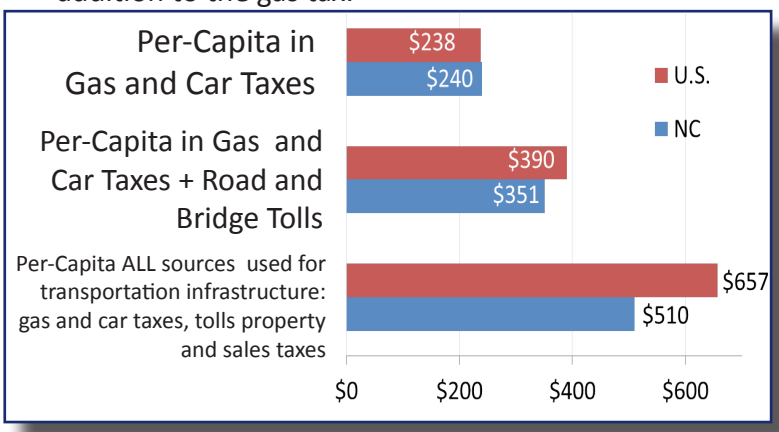
- The average driver in Winston-Salem wasted 20 hours each year in traffic and loses $435 in lost time and wasted fuel as a result of traffic congestion.

TTI researchers concluded that the most effective way to address traffic congestion varies by urban area, but that in all cases, a multi-faceted approach should be used. That includes more efficient traffic management and public transportation in addition to new construction.

# Myths versus Facts: What We Pay for Transportation in North Carolina

### *Myth #1: We pay more than other states*

The first thing drivers in our state say is "I shouldn't pay more - our gas tax is already too high." True, when you cross into Virginia or South Carolina, there is a drop in the gas tax and the price at the pump. But, that's because in our unique state, we pay for transportation primarily in gas tax, not in other sources. To truly compare apples to apples, you have to look at all the fees and taxes - like property taxes, local fees, tolls, etc that **OTHER STATES** have in addition to the gas tax.




When all the fees are combined, North Carolinians actually pay about **$510/year per capita - compared to the U.S. average of $657.**

### *Myth #2: DOT is wasteful, with workers just standing around*

Since 2007, NCDOT has been thoroughly engaged in a Transformation plan to completely overhaul the organization. Hiring an external management consultant, they set about to determine a new strategic blueprint, project prioritization, performance metrics and more. NCDOT also took a hard look at its staff to determine where reductions could be made.

| Year | Admin Abolished FTE's | Field and Equipment Abolished FTE's | Total Abolished FTE's |
|---|---|---|---|
| FY10 | 187 | 751 | 938 |
| FY11 | 60 | 371 | 431 |
| FY12 | 144 | 288 | 432 |
| FY13 | 40 | 69 | 109 |
| FY14 | 22 | 80 | 102 |
| FY15 | 35 | 263 | 298 |
| Total | 488 | 1,822 | 2,310 |

One outcome since 2010 alone is the reduction of more than 2,300 Full-Time positions from the organization.

### *Myth # 3: The Government is wasteful and builds projects that are "Bridges to Nowhere"*

Starting in 2013, Governor McCrory and NCDOT began a process of streamlining how transportation projects were selected and paid for. Passed by the General Assembly that year, the ***Strategic Transportation Investments (STI)*** Law enables NCDOT to maximize North Carolina's existing transportation funding to enhance the state's infrastructure and support economic growth, job creation and high quality of life. STI establishes the Strategic Mobility Formula, a new way of allocating available revenues based on data-driven scoring and local input.

STI removes politics from the selection of transportation projects - no more "pork" for legislators districts because of influence. And, STI takes a hard look at data - economic value, job creation, traffic reduction and more - in assessing which projects advance.

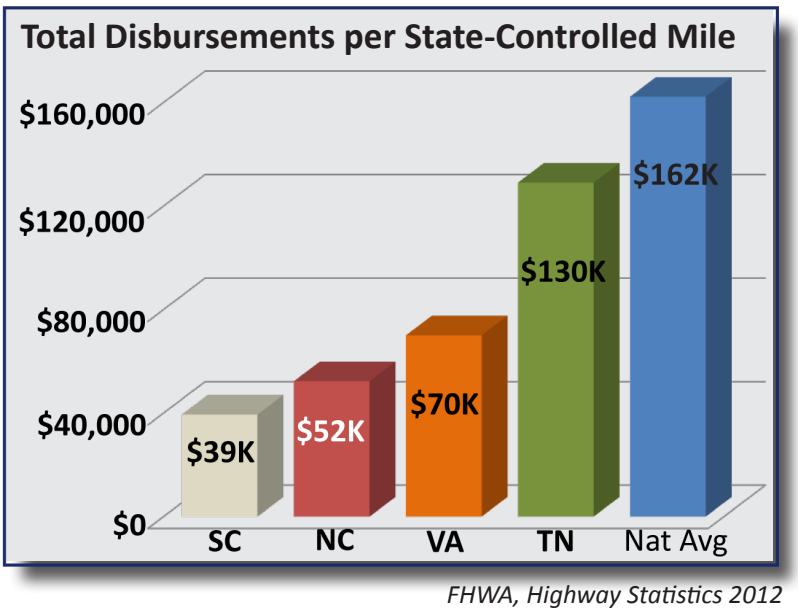
In December 2014, the draft 10-year ***State Transportation Improvement Plan*** was released. The


plan includes 1,100 projects across all transportation modes, covers every county in the state, and will create 300,000 jobs.

# Funding the Future: New Solutions for Meeting Tomorrow's Needs

North Carolina has **80,456** state-controlled miles in its system - second only to Texas - all of which are maintained with state funds. And contrary to popular belief, our state is extremely efficient. The total spending per mile is $52,282 - the **third lowest in the Nation.** Compare that with New Jersey (a state of comparable population), which spends in excess of $2 Million per mile.

Still, efficiency will only carry us so far in light of 42 percent projected growth by 2040 - 13.5 million North Carolinians. The gas tax model will not produce sufficient revenue to fund transportation, primarily because of increased vehicle efficiency.




*FHWA, Highway Statistics 2012*

The solution: Introduce a number of funding measures that **SPREAD the RESPONSIBILITY** over different types of users and collection means.

**Transportation Revenue Enhancement Options in NC**
(Billions of 2011 Dollars)

| Revenue Enhancement Options | Estimated Total Revenue until 2040 | Assumed Year to Implement |
|---|---|---|
| Continue Motor Fuels Tax Indexing | 18.85 | Ongoing |
| Increase Registration/License Fees with Inflation | 6.13 | 2016 |
| Eliminate Transfers from Highway Fund | 4.25 | 2016 |
| Redirect Short Term vehicle Lease Fee to NCDOT | 0.63 | 2016 |
| Additional 1% Highway Use Tax (Sales Tax on Autos) | 3.25 | 2016 |
| Dedicated Local Vehicle Property Tax | 0.50 | 2016 |
| Auto Insurance Surcharge (10% Tax Rate) | 12.16 | 2020 |
| Wholesale Motor Fuels Tax (8%) | 12.22 | 2020 |
| Interstate Tolling (6 cents/mi Rural; 12 cents/mi Urban; adjusted for 3.5% inflation) | 41.93 | 2020 |
| VMT Fee (2 cents/mi) adjusted for inflation | 26.64 | 2020 |
| **Total Revenue Enhancement Options Potential** | **126.56** | |

According to a 2013 report from the Institute for Transportation Research and Education (ITRE), 38 states have considered or tried 121 different revenue enhancement mechanisms leading to the successful adoption or reinstatement of 30 revenue enhancement mechanisms. The most common revenue enhancement mechanisms are:

- Gas tax increases or indexing (24 states)
- Sales tax (14 states)
- Other fees and fares (13 states)
- Mileage-Based User Fees (11 states)
- Tolling (7 states)

Bottom line, the two most critical factors involved in determining how drivers contribute to their impact and consumption of the roads remain **USE** (miles driven) and **WEIGHT**.

Heavier vehicles do more damage. According to the Federal Highway Administration, most passenger vehicles pay their full share of pavement damages, while trucks pay as little as 50 cents for each dollar of damage they impart on the roadway.

And, According to a series of articles in the *News & Observer* in 2006 and a 2007 *Governing* article:

- Trucks designed to carry a max weight of 80,000 pounds often carried more than 90,000 pounds
- A 10,000 pound increase in weight equaled a 42 percent increase in damage on North Carolina roads

- Heavy trucks cost the state an extra $78 million in damages per year
- Pavement originally designed to last 20 years would wear out in seven

Beyond factoring weight into the equation, the fairest way to gauge a driver's use of the roads is on pure consumption, like with tolling. While it isn't feasible - from a cost perspective - to toll all roads, more states are considering a **Mileage Based User Fees (MBUF)** as a means to more accurately track consumption. Rather than pay by the gallon (gas tax), which is impacted by fuel efficiency, users are charged by the mile.

The unknown for MBUFs are how to best track and collect fees. Options include fitting cars with technology to allow drivers to "pay at the pump" as with gas, or pay fees as part of vehicle registration renewals. Payments could be broken out across the year to avoid one large payment, and MBUFs also open the door for varying rates, based on weight.

**Current Gas Tax Model**

| Vehicle | Gas Tax Rate | Yrly Miles | MPG | Gallons Used | Total Tax |
|---|---|---|---|---|---|
| Toyota Camry | $0.365 | 15000 | 25 | 600 | $219.00 |
| Toyota Prius | $0.365 | 15000 | 50 | 300 | $109.50 |
| Toyota Sequoia | $0.365 | 15000 | 15 | 1000 | $365.00 |

With the proposed model, an average car (Camry) would be held harmless - paying the same amount of tax **but not decreasing over time with increased fuel efficiency.** The Prius would pay a rate more in line with the miles driven, but still lower than a Camry because of lower weight. And, a heavier Sequoia would pay on a rate more aligned with the wear it inflicts on the roadways.

**Proposed Tax/MBUF Model**

| Vehicle | Weight (lbs) | Yrly Miles | Factor (WxM)/Factor | Total Tax |
|---|---|---|---|---|
| Toyota Camry | 3275 | 15000 | 224315 | $219.00 |
| Toyota Prius | 3042 | 15000 | 224315 | $203.42 |
| Toyota Sequoia | 5730 | 15000 | 224315 | $383.17 |

**Bottom line,** issues such as privacy, collection and lump sum payments could all be worked out given the will to find a replacement for or enhancement to diminishing gas tax revenue.

## Where We Go From Here: Digging Deep

The realities are stark:

- North Carolina will see a 43 percent increase in population - 13.5 million by 2040
- The gas tax is a losing model over the long term because of rising fuel efficiency
- If we maintain the status quo, we face a **$5 BILLION** shortfall between now and 2040. If we want a safe and efficient transportation network that fosters economic prosperity, we face a **$60 BILLION** gap.

Our state's ability to grow economically, attract new industry and safely move workers, citizens, goods and services is directly impacted by the condition and breadth of our transportation network.

Inaction will not solve the problem, nor will passing it along to the next group of leaders. No new taxes or fees are ever popular, **but neither are closed bridges, potholes or massive traffic congestion**.

Acting now prevents a funding crisis from occurring. And, acting now to consider and enact transformative funding measures can finance wide-scale improvements on existing transportation infrastructure - saving money now compared to costly replacement in the future.

North Carolina deserves to be the *Good Roads State* again, but that requires an understanding by the public of the benefits of investing in our transportation system.

More importantly, it requires visionary leadership to enact transportation funding reform that plans for and embraces the future. Not as a challenge - but as an opportunity.