FUTURE MOBILITY IN NEW YORK

The Condition and Use of New York's Surface Transportation System

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Founded in 1971, TRIP ® of Washington, DC, is a nonprofit organization that researches, evaluates and distributes economic and technical data on highway transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering and construction; labor unions; and organizations concerned with an efficient and safe highway transportation

Executive Summary

New York's extensive system of roads, highways, bridges and public transit provides the state's residents, visitors and businesses with a high level of mobility. As the backbone that supports the Empire State's economy, New York's surface transportation system provides for travel to work and school, visits with family and friends, and trips to tourist and recreation attractions while simultaneously providing businesses with reliable access for customers, suppliers and employees. With an unemployment rate of 8.6 percent, and with the state's population continuing to grow, New York must improve its system of roads, highways, bridges and public transit to foster economic growth, keep business in the state, and ensure the safe, reliable mobility needed to improve the quality of life for all New Yorkers.

As New York looks to rebound from the current economic downturn, the state will need to enhance its surface transportation system by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient and reliable mobility for residents, visitors and businesses. Making needed improvements to New York's roads, highways, bridges and transit could provide a significant boost to the state's economy by creating jobs and stimulating long-term economic growth as a result of enhanced mobility and access.

While the needs of the state's highway and transit systems continue to grow, the amount of revenue they receive is expected to remain limited, leading to significant challenges in providing a smooth, efficient and well-maintained system of roads, bridges and transit. As the state lacks adequate funding to improve physical conditions and traffic congestion worsens, meeting New York's need to modernize and maintain its system of roads, bridges and public transit will require a significant boost in local, state and federal funding.

Approved in February 2009, one aim of the American Recovery and Reinvestment Act is to stimulate the economy and provide a significant, short-term boost in transportation funding. New York's estimated $2.3 billion in surface transportation stimulus funding will allow the state to make some needed rehabilitation and improvements to its road, bridge and public transit systems, but it will not allow the state to proceed with numerous projects needed to modernize its surface transportation system. Even with the aid of stimulus funding, New York will still face a sizeable, on-going transportation funding shortfall.

This report examines the use, condition and funding of New York's surface transportation system. Also included in the report are individual analyses for New York's five largest metropolitan areas: Albany, Buffalo, New York City, Rochester and Syracuse. These regionalized reports cover each respective city and its surrounding metropolitan area and contain region-specific data on road and bridge conditions, congestion and traffic safety. These regional assessments are included as Appendices A through E in the report. All data used in the report is the latest available.

New York faces a significant backlog in funding needed transportation improvements and repairs over the next 20 years. The state's residents incur a significant cost as a result of roads and highways being congested, deteriorated and lacking some desirable safety features.

- New York's statewide 20-year transportation system analysis found that the state needs to spend $175 billion from 2010 to 2030 to maintain roads, highways, bridges and transit systems and to provide adequate mobility. But under current funding formulas, the state expects that revenues will be less than half that amount, resulting in a transportation funding shortfall of at least $87 billion from 2010 to 2030.

- TRIP estimates that New York's roadways that may lack desirable safety features, have inadequate capacity to meet travel demands or have poor pavement conditions cost the state's drivers approximately $16.4 billion annually in the form of traffic crashes, additional vehicle operating costs and congestion-related delays.

- The challenge of meeting the state's transportation funding shortfall will be exacerbated by growing debt repayments for funds borrowed largely in the 1980s to fund road, highway and bridge repairs in New York.

- Nearly half (49 percent) of the revenue going into the New York State Highway and Bridge Dedicated Trust Fund is currently being used to pay off debt. By 2013, debt service is expected to consume nearly three-quarters (72 percent) of the State Highway and Bridge Dedicated Trust Fund's incoming revenues, leading to a significant decrease in the amount of funds available for road and bridge maintenance, repair and construction.

- From state fiscal years 1993-1994 to 2008-2009, just over one-third (35 percent) of disbursements from the New York State Highway and Bridge Dedicated Trust Fund were spent on capital construction projects – the funds used to repair and improve the state's roads and bridges. By 2013, the share of the New York State Highway and Bridge Dedicated Trust Fund going to capital construction projects is expected to decline to 21 percent.

Numerous projects needed to maintain and expand the current transportation system will not be able to move forward without a significant, long-term boost in funding at the local, state or federal level.

- Without a significant, long-term increase in transportation funding, roads and bridges will continue to deteriorate, congestion will worsen and the condition of the state's public transportation system will decline.

- Approved in February 2009, the American Recovery and Reinvestment Act offers a significant, short-term boost in transportation funding in New York by providing $1.1 billion for road and bridge improvements and $1.2 billion for the state's public transit system. However, this funding is not sufficient to allow the state to proceed with many needed long-term projects that will improve safety, reduce congestion and expand capacity.

- Making needed repairs to the state's transportation system can help boost New York's economy. A 2007 analysis by the Federal Highway Administration found that every $1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 other jobs induced in non-construction related sectors of the economy.

- The unemployment rate in New York has increased from 4.6 percent in November 2007 to 8.6 percent in November 2009

- New York's funding shortfall has been exacerbated by the escalation of the cost of transportation improvements due to increases in the price of key materials needed for highway and bridge construction. The average cost of materials used for highway construction – including asphalt, concrete, steel, lumber and diesel – increased by 34 percent over the five-year period from November 2004 to November 2009.

Increases in the state's population and vehicle travel have placed additional stress on New York's roadways and transit systems, which has resulted in rising congestion and additional deterioration. Traffic congestion in New York is a significant burden in key urban areas and threatens to impede the state's economic development.

- Vehicle travel on New York's major highways increased by 25 percent from 1990 to 2008 – jumping from 107 billion vehicle miles traveled (VMT) in 1990 to 133 billion VMT in 2008. Vehicle travel in New York is expected to increase by another 20 percent by 2025, reaching approximately 160 billion VMT.
- New York's population reached approximately 19.5 million in 2008, an increase of eight percent and nearly 1.5 million people since 1990.
- From 1990 to 2008, New York's gross domestic product (GDP), a measure of the state's economic output, increased by 38 percent, when adjusted for inflation.

- Congestion on New York's urban highways is growing as a result of increases in vehicle travel and population. In 2007, 45 percent of New York's urban highways were congested, carrying traffic volumes that result in significant rush hour delays.

- Traffic congestion in New York costs the state's drivers $6 billion annually in lost time and wasted fuel.

Nearly half of New York's major roads are in poor or mediocre condition. Driving on rough roads costs the state's motorists more than $400 per year in extra vehicle operating costs – a total of $4.5 billion statewide.

- In 2007, 22 percent of major roads in New York were rated in poor condition. Another 24 percent of the state's major roads were rated in mediocre condition. Major roads include the state's Interstates, freeways and arterials.
- Roads rated in poor condition often have significant rutting, potholes or other visible signs of deterioration and typically need to be resurfaced or reconstructed. Roads rated in mediocre condition show signs of significant wear and may also have some visible pavement distress. Most pavements in mediocre condition can be repaired by resurfacing, but some may need more extensive reconstruction to return them to good condition.
- Roads in need of repair cost the average New York motorist $405 annually in extra vehicle operating costs. Driving on roads in need of repair costs the state's motorists a total of $4.5 billion each year. These costs include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear.

- The functional life of New York's roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.
- This report contains information on pavement conditions in New York's major metropolitan areas, including Albany, Buffalo, New York City metro area, Rochester and Syracuse. These regional assessments can be found in Appendices A through E of the report.

Thirty-eight percent of New York's bridges and overpasses show significant deterioration or do not meet current design standards. This includes all bridges that are 20 feet or more in length and are maintained by state, local and federal agencies. At current funding levels, the number of deteriorated bridges in the state is anticipated to increase over the next decade.

- Twelve (12.3) percent of New York's bridges were structurally deficient in 2008. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting commercial trucks and other larger vehicles including emergency service vehicles.

- Twenty-five (25.3) percent of New York's bridges were functionally obsolete in 2008. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes and shoulders, inadequate clearances or poor alignment.
- At the current funding level, 1,450 bridges in New York will become structurally deficient over the next five years and another 1,500 bridges will reach this point in six to ten years.

Improving safety features on New York's roads and highways would likely result in a decrease in traffic fatalities in the state. Roadway design is a factor in approximately one-third of all fatal and serious traffic accidents.

- Between 2004 and 2008, 6,946 people were killed in traffic accidents in New York, an average of 1,389 fatalities per year.
- New York's traffic fatality rate was 0.92 fatalities per 100 million vehicle miles of travel in 2008.
- The traffic fatality rate on New York's rural, non-Interstate roads is 1.98 fatalities per 100 million vehicle miles of travel. This is approximately three times the rate on all other roads in the state (0.65). Higher speeds and fewer roadway safety amenities likely contribute to the higher fatality rate on rural roads.
- Several factors are associated with vehicle accidents that result in fatalities, including driver behavior, vehicle characteristics and roadway design. It is estimated that roadway design is a contributing factor in approximately one-third of fatal traffic accidents.
- Where appropriate, highway improvements can reduce traffic fatalities and accidents while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.
- Traffic accidents and fatalities in which roadway characteristics were likely a factor cost New York motorists approximately $5.9 billion annually, including medical costs, lost economic and household productivity, property damage and travel delays.
- The Federal Highway Administration has found that every $100 million spent on needed highway safety improvements will result in 145 fewer traffic fatalities over a 10-year period.

The efficiency of New York's transportation system, particularly its highways, is critical to the health of the state's economy. Businesses are increasingly reliant on an efficient and reliable transportation system to move products and services. A key component in business efficiency and success is the level and ease of access to customers, markets, materials and workers.

- Approximately $319 billion in goods are shipped annually from sites in New York and another $372 billion in goods are shipped annually to sites in New York, mostly by commercial trucks on the state's highways.

- Seventy-three percent of the goods shipped annually from sites in New York are carried by trucks and another 18 percent are carried by courier services, which use trucks for part of the deliveries. Similarly, 72 percent of the goods shipped to sites in New York are carried by trucks and another 16 percent are carried by courier services.
- Commercial trucking in New York is projected to increase 25 percent by 2020.
- Increasingly, companies are looking at the quality of a region's transportation system when deciding where to relocate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient transportation system.
- Businesses have responded to improved communications and greater competition by moving from a push-style distribution system, which relies on low-cost movement of bulk commodities and large-scale warehousing, to a pull-style distribution system, which relies on smaller, more strategic and time-sensitive movement of goods.

All data used in the report is the latest available. Sources of information for this report include the New York State Department of Transportation (NYSDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the U.S. Census Bureau, the National Highway Traffic Safety Administration (NHTSA), the Reason Foundation and the Texas Transportation Institute (TTI).

Introduction

New York's system of roads, bridges and public transportation provides the state's residents and visitors with a high level of mobility. As the backbone of the Empire State's surface transportation system, roads, bridges and public transit play a central role in the state's diverse economy and enable residents and visitors to go to work, visit family and friends, move goods to market, and frequent tourist attractions.

New York faces significant challenges in repairing and maintaining its deteriorated system of roads, bridges and public transportation. The modernization of New York's surface transportation network is crucial to providing a smooth and efficient transportation system, while improving the economic livelihood of the state and accommodating future growth. As travel on New York's surface transportation system becomes more efficient and the physical condition of the system improves, personal and commercial productivity will increase, boosting economic development statewide.

Without a significant commitment to transportation funding at the state and federal level, many needed projects and improvements cannot move forward, jeopardizing New York's future mobility and potential for economic development. Even with the added funding the state has received through the federal economic stimulus package, many key projects remain unfunded at current transportation investment levels.

This report examines the condition, use and funding of New York's highway transportation system, as well as the state's ability to meet future mobility and traffic safety needs. In addition to statewide data, this report contains regional analyses for New York's five largest urban areas (which includes the cities and surrounding areas): Albany, Buffalo, New York City, Rochester and Syracuse. Appendices A through E contain road and bridge condition

data, and traffic safety data for each urban area. Sources of information for this report include the U.S. Department of Transportation (USDOT), the New York State Department of Transportation (NYSDOT), the Federal Highway Administration (FHWA), the U.S. Census Bureau, the National Highway Traffic Safety Administration (NHTSA), the Reason Foundation and the Texas Transportation Institute (TTI). All data used is the latest available.

Population, Vehicle Travel and Congestion in New York

Because of increases in the state's population and the rate of travel of its residents, the demands being placed on New York's roads and highways far exceeds their current capacity. It is critical that the state develop and maintain a modern transportation system that can accommodate future growth in population, vehicle travel and economic development.

New York's population reached approximately 19.5 million in 2008, an increase of eight percent and nearly 1.5 million people since 1990.[1]

From 1990 to 2008, annual vehicle miles of travel (VMT) in the state increased by 25 percent, from approximately 107 billion annual VMT to 133 billion VMT. [2] Based on travel and population trends, TRIP estimates that vehicle travel in New York will increase by another 20 percent by 2025, reaching approximately 160 billion VMT.[3]

New York also has experienced significant economic growth since 1990. From 1990 to 2008, New York's gross domestic product (GDP), a measure of the state's economic output, increased by 38 percent, when adjusted for inflation.[4]

Traffic congestion in New York is a growing burden in key urban areas and threatens to impede the state's economic development. Congestion on New York's urban highways is

growing as a result of increases in vehicle travel and population. In 2007, 45 percent of New York's urban highways were congested, carrying traffic volumes that result in significant rush hour delays.[5] Highways that carry high levels of traffic are also more vulnerable to experiencing significant traffic delays as a result of accidents or other incidents.

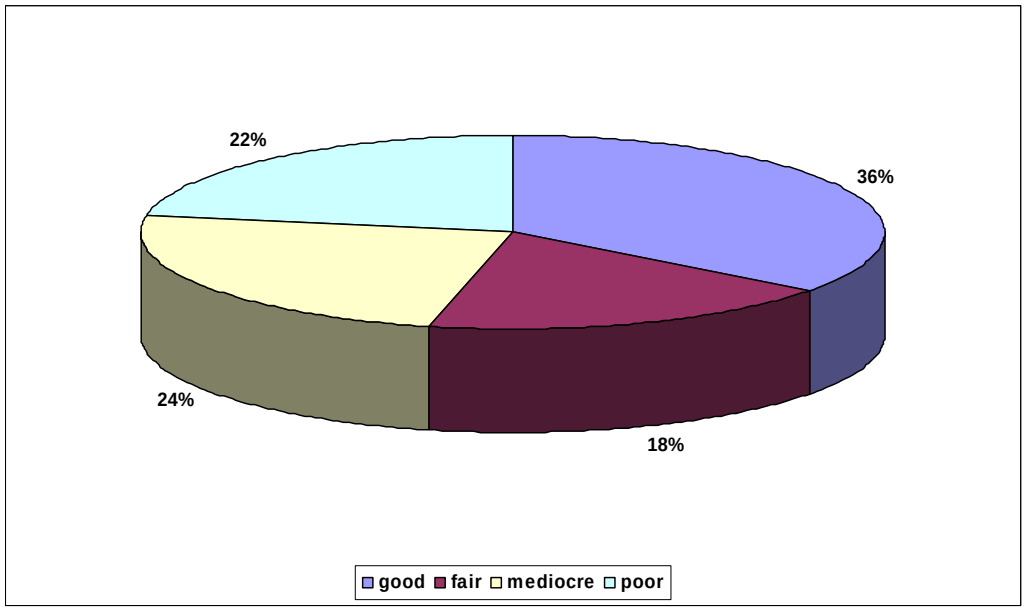
Traffic congestion in New York costs the state's drivers a total of $6 billion annually in lost time and wasted fuel.[6]

Condition of New York's Roads

Nearly half of New York's major roads, which include the state's Interstates, freeways and arterials, are in poor or mediocre condition. In 2007, 22 percent of major roads in New York were rated in poor condition.[7] Another 24 percent of the state's major roads were rated in mediocre condition.[8] Eighteen percent of the state's major roads were rated in fair condition and 36 percent of the state's major roads were rated in good condition in 2007.[9]

Roads rated in poor condition often have significant rutting, potholes or other visible signs of deterioration and typically need to be resurfaced or reconstructed. Roads rated in mediocre condition show signs of significant wear and may also have some visible pavement distress. Most pavements in mediocre condition can be repaired by resurfacing, but some may need more extensive reconstruction to return them to good condition.

Chart 1. Pavement condition of major roads in New York, 2007.



Source: TRIP analysis of Federal Highway Administration data

Pavement failure is caused by a combination of factors, including traffic, moisture and climate, the materials used and the quality of construction. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are even more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress.

The functional life of New York's roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible. Because reconstructing roads costs approximately four times more than resurfacing them, it is critical that roads are fixed before they require major repairs.[10]

In addition to documenting statewide pavement conditions, Appendices A through E of this report also contains separate breakdowns and information on pavement conditions in New

York's major urban areas (which include the city and surrounding areas), including Albany, Buffalo, New York City, Rochester and Syracuse.

The Cost to Motorists of Roads in Inadequate Condition

TRIP has calculated the additional cost to motorists of driving on roads in poor or unacceptable condition. When roads are in poor condition, which may include potholes, rutting or rough surfaces, the cost to operate and maintain a vehicle increases. These additional vehicle operating costs include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear. TRIP estimates that additional vehicle operating costs borne by New York motorists as a result of poor road conditions is $4.5 billion annually, or $405 per motorist.[11]

Additional vehicle operating costs have been calculated in the Highway Development and Management Model (HDM), which is recognized by the U.S. Department of Transportation and more than 100 other countries as the definitive analysis of the impact of road conditions on vehicle operating costs. The HDM report is based on numerous studies that have measured the impact of various factors, including road conditions, on vehicle operating costs.[12]

The HDM study found that road deterioration increases ownership, repair, fuel and tire costs. The report found that deteriorated roads accelerate the pace of depreciation of vehicles and the need for repairs because the stress on the vehicle increases in proportion to the level of roughness of the pavement surface. Similarly, tire wear and fuel consumption increase as roads deteriorate since there is less efficient transfer of power to the drive train and additional friction between the road and the tires.

TRIP's additional vehicle operating cost estimate is based on taking the average number of miles driven annually by a region's driver, calculating current vehicle operating costs based on AAA's 2008 vehicle operating costs and then using the HDM model to estimate the additional vehicle operating costs paid by drivers as a result of substandard roads.[13] Additional research on the impact of road conditions on fuel consumption by the Texas Transportation Institute (TTI) is also factored into TRIP's vehicle operating cost methodology.

Bridge Conditions in New York

New York's bridges and overpasses form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, as well as facilitating commerce and access for emergency vehicles. But the state's bridges and overpasses are aging and deteriorating, and a significant number are in need of repair or replacement.

In 2008, 38 percent of New York's bridges (20 feet or longer) were rated either structurally deficient or functionally obsolete.[14] Twelve (12.3) percent of the state's bridges were rated structurally deficient and 25 (25.3) percent were rated as functionally obsolete.

Chart 2. Bridge Conditions in New York, 2008.

BRIDGE CONDITION	NUMBER OF BRIDGES	PERCENT DEFICIENT
Structurally Deficient	2,135	12.3%
Functionally Obsolete	4,390	25.3%
Total Bridges	6,525	38%

Source: Federal Highway Administration, National Bridge Inventory

A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Bridges that are structurally deficient may be posted for lower weight limits or closed if their condition warrants such action. Deteriorated bridges can have a significant impact on daily life. Restrictions on vehicle weight may cause many vehicles – especially emergency vehicles, commercial trucks, school buses and farm equipment – to use alternate routes to avoid posted bridges. Redirected trips also lengthen travel time, waste fuel and reduce the efficiency of the local economy. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment.

It is likely that the condition of New York's bridges will worsen over the next decade. At the current funding level, 1,450 bridges in New York will become structurally deficient over the next five years and another 1,500 bridges will reach this point in between six to ten years.[15]

Appendices A through E of this report contain information on bridge conditions in New York's major urban areas (which include the city and surrounding areas), including Albany, Buffalo, New York City, Rochester and Syracuse.

Traffic Safety in New York

A total of 6,946 people were killed in motor vehicle accidents in New York from 2004 through 2008, an average of 1,389 fatalities per year.[16]

New York's traffic fatality rate was 0.92 fatalities per 100 million vehicle miles of travel in 2008. The national average of fatalities per 100 million vehicle miles of travel is 1.27.[17] The traffic fatality rate on New York's rural, non-Interstate roads is 1.98 fatalities per 100 million vehicle miles of travel. This is approximately three times the traffic fatality rate on all other roads in the state (0.65).[18] Higher speeds and fewer roadway safety amenities may contribute to the higher fatality rate on rural roads.

Chart 3. Traffic fatalities in New York from 2004 – 2008.

Year	***Fatalities***
2004	1,495
2005	1,434
2006	1,454
2007	1,332
2008	1,231
Total	**6,946**

Source: National Highway Traffic Safety Administration

Three major factors are associated with fatal vehicle accidents: driver behavior, vehicle characteristics and roadway design. It is estimated that roadway characteristics may be a contributing factor in approximately one-third of all fatal and serious traffic accidents. Improving safety on New York's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and a variety of improvements in roadway safety features.

The severity of serious traffic crashes could be reduced through roadway improvements such as adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, and providing better road markings and upgrading or installing traffic signals where appropriate.

Roads with poor geometry, with insufficient clear distances, without turn lanes, inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

Traffic accidents and fatalities in which roadway characteristics may be a contributing factor cost New York motorists approximately $5.9 billion annually, including medical costs, lost economic and household productivity, property damage and travel delays.[19]

The following chart shows the correlation between specific needed road improvements and the reduction of fatal accident rates nationally.[20]

Chart 4. Reduction in fatal accident rates after roadway improvements.

Type of Improvement	Reduction in Fatal Accident Rates after Improvements
New Traffic Signals	53%
Turning Lanes and Traffic Signalization	47%
Widen or Modify Bridge	49%
Construct Median for Traffic Separation	73%
Realign Roadway	66%
Remove Roadside Obstacles	66%
Widen or Improve Shoulder	22%

Source: TRIP analysis of U.S. Department of Transportation data

Importance of Transportation to Economic Growth

New York relies on an efficient transportation system to support economic development in the state. Reliable transportation access is critical to the health of New York's diverse industries.

The new culture of business demands that a region have well-maintained and efficient roads, highways and bridges if it wants to remain economically competitive. The advent of modern national and global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement. Consequently, the quality of a region's transportation system has become a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the greater necessity to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-side inventory management, and by accepting customer orders through the Internet. The result of these changes has been a significant improvement in logistics efficiency as businesses move away from a push-style distribution system, which relies on large-scale warehousing of materials, to a pull-style distribution system, which relies on smaller, more strategic movement of goods. These improvements have made mobile inventories the norm, resulting in the nation's trucks literally becoming rolling warehouses.

Highways are vitally important to continued economic development in the Empire State. As the economy expands, creating more jobs and increasing consumer confidence, the demand for consumer and business products grows. In turn, manufacturers ship greater quantities of goods to market to meet this demand, a process that adds to truck traffic on the state's highways

and major arterial roads. As international trade continues to grow, modern and efficient highways are critical around New York's border crossings and major distribution centers, as well as the state's ports.

An analysis of commodity transport by the U.S. Bureau of Transportation Statistics (BTS) and U.S. Census Bureau underscored the economic importance of New York's road system. The BTS report found that $319 billion in goods are shipped annually from sites in New York and another $372 billion in goods are shipped to sites in New York, mostly by commercial trucks on the state's highways.[21] Seventy-three percent of the goods shipped annually from sites in New York are carried by trucks and another 18 percent are carried by courier services, which use trucks for part of the deliveries. Similarly, 72 percent of the goods shipped to sites in New York are carried by trucks and another 16 percent are carried by courier services.[22]

Trucking is a crucial part of New York's economy, as commercial trucks move goods from sites across the state to markets inside and outside the state. Commercial truck travel in the state is expected to increase significantly over the next two decades. Based on federal projections, TRIP estimates that commercial trucking will increase by 25 percent in New York between 2009 and 2020.[23]

Transportation Funding in New York

Approved in February 2009, the American Recovery and Reinvestment Act offers a significant, short-term boost in transportation funding in New York by providing $1.1 billion for road and bridge improvements and $1.2 billion for the state's public transit system.[24] However,

this funding will not be sufficient to allow the state to proceed with needed long-term projects that will improve safety, reduce congestion and expand capacity.

Without a significant, long-term increase in transportation funding, road and bridge conditions will continue to deteriorate, congestion will worsen, and the condition of the state's public transportation system will decline.

New York's statewide 20-year transportation system analysis found that the state needs to spend $175 billion from 2010 to 2030 to maintain roads, highways, bridges and transit systems and to provide adequate mobility.[25] But under current funding formulas, the state expects that revenues will be less than half that amount, resulting in a transportation funding shortfall of at least $87 billion from 2010 to 2030.[26]

The challenge of meeting this transportation funding shortfall will be exacerbated by growing debt repayments for funds borrowed to fund road, highway and bridge repairs in the state. Nearly half (49 percent) of the revenue going into the New York State Highway and Bridge Dedicated Trust Fund is currently being used to pay off debt.[27] By 2013, debt service is expected to consume nearly three-quarters (72 percent) of the State Highway and Bridge Dedicated Trust Fund's incoming revenues.[28] From state fiscal years 1993-1994 to 2008-2009, just over one-third (35 percent) of disbursements from the New York State Highway and Bridge Dedicated Trust Fund were spent on capital construction projects – the funds used to repair and improve the state's roads and bridges.[29] By 2013, the share of the New York State Highway and Bridge Dedicated Trust Fund going to capital construction projects is expected to decline to 21 percent.[30]

New York's transportation funding crunch has been exacerbated by the escalation of the cost of transportation improvements due to increases in the price of key materials needed for highway and bridge construction. While construction materials costs have stabilized somewhat during the current recession, the average cost of materials used for highway construction – including asphalt, concrete, steel, lumber and diesel – increased by 34 percent over the five-year period from November 2004 to November 2009.

The unemployment rate in New York increased from 4.6 percent in November 2007 to 8.6 percent in November 2009.[31] Making needed repairs to the state's surface transportation system can help boost New York's economy. A 2007 analysis by the Federal Highway Administration found that every $1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 other jobs induced in non-construction related sectors of the economy.

Conclusion

New York faces a significant challenge in the need to modernize and improve its highway and transit system. The state's system of roads, highways, bridges and public transit play a central role in the Empire State's economy. Meeting New York's goals for sound economic growth, a high standard of living and strong economic progress will require the state to build and maintain a modern highway and public transit system.

Making needed improvements to New York's surface transportation system could also provide a significant boost to the state's economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

Approval of the federal stimulus package has provided a helpful down payment for the improvement of New York's surface transportation system. However, without a substantial, long term boost in local, state or federal highway funding, numerous projects to improve the condition and expand the capacity of New York's roads, bridges and highways will not be able to proceed, hampering the state's ability to improve the condition of its transportation system and to enhance economic development opportunities in the state.

Endnotes

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[2] U.S. Department of Transportation - Federal Highway Administration: Highway Statistics 1990. Federal Highway Administration, preliminary 2008 state VMT estimates.
[3] TRIP estimate based on analysis of FHWA data.
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[5] U.S. Department of Transportation - Federal Highway Administration: Highway Statistics 2007
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[15] New York Department of Transportation, 2008. Beyond the Gas Tax: A Symposium on Funding Future Transportation Needs. P. 1.
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[29] Ibid.
[30] Ibid.
[31] U.S. Bureau of Labor Statistics.