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Mr. Chairman and members of the Highways and Transit subcommittee, thank you for this opportunity to tell you where Pennsylvania stands regarding its strategies for addressing transportation maintenance and preservation needs.

Pennsylvania has a proud history of transportation innovation: over the past 200-plus years, a succession of roads cut through the wilderness, and later such improvements as canals, railroads and the nation's first superhighway cleared the way for the unparalleled mobility that Americans take for granted.

Increasingly, though, managing the transportation network to keep America moving means weighing difficult choices among satisfying enormous expectations, coping with the sobering reality of the size and age of the network, and dealing with very limited resources.

In Pennsylvania, we have the nation's fifth largest state-maintained highway system, 39,843 miles, and the third largest state-maintained bridge network, 25,327. With the average age of a state-maintained bridge being 50 years, Pennsylvania leads the nation in the highest number of structurally deficient bridges, 6,023. Nearly 24 percent of our state bridges greater than 20 feet are structurally deficient. That compares to a national average of 12 percent.

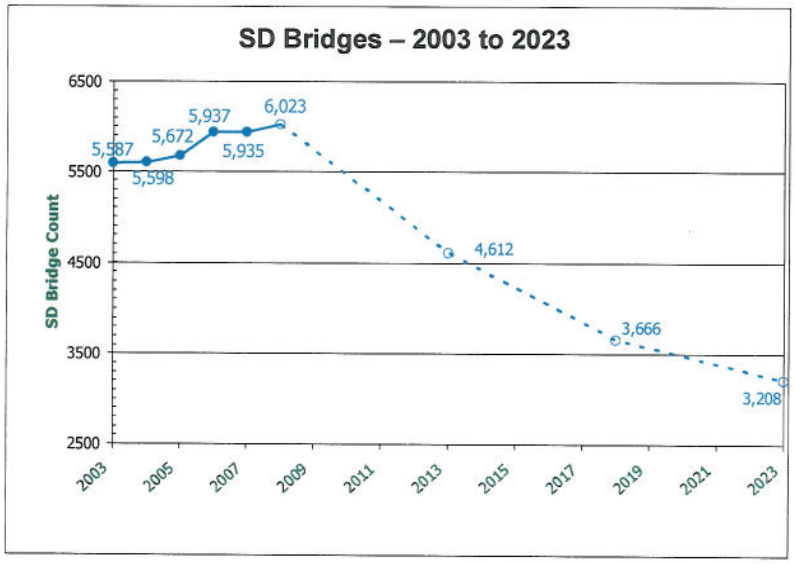

Exhibit 1

Exhibit 1 shows the number of structurally deficient bridges statewide, beginning in 2003. It shows a projected decrease in structurally deficient bridges between 2008 and 2023. This assumes the PA Legislature adopts Governor Edward G. Rendell's Rebuild Pennsylvania initiative and construction costs stop spiraling.

The effects of this bridge maintenance backlog have the potential to play havoc with Pennsylvania's mobility. Posting and closing bridges creates economic and personal hardships for the citizens of Pennsylvania.

Cracked Pier I-95, Philadelphia

In March, Interstate 95 in Philadelphia was closed for just over two days after cracks expanded in a support pillar of the viaduct that carries the roadway through the city (see photo at left.) For those two days, 184,000 vehicles a day were forced on to side streets and the national media carried pictures of the multilane interstate completely devoid of vehicles while nearby streets were jammed.

In February, the 2700 foot long Birmingham Bridge which crosses the Monongahela River in Pittsburgh had to be closed for just over three weeks after two spans moved because of problems with the bridge's rocker bearings. During the closure, 11,000 vehicles a day had to find alternate routes.

In April, a rural bridge in north central Pennsylvania, the Route 53 Irvona Bridge, was closed for a week after a routine inspection showed the steel beams needed immediate repairs.

PennDOT worked very hard to get one lane reopened quickly. During the closure, people who commuted over the bridge had to endure a posted 25-mile detour. Besides the inconvenience and lost time such a detour entailed, in these days of through-the-roof fuel prices, adding 25 miles to motorists' daily routine imposed a tough economic hardship as well, especially for commercial vehicles. We can't continue to operate in emergency mode because the higher costs associated with emergency projects reduces money available for other bridge projects.

Since 2004, PennDOT has been looking hard at its investments in new highway capacity. In 2004, PennDOT removed $2 billion worth of projects from its long-range plan and deferred another $3 billion in projects that would be reevaluated. These difficult

decisions continue as PennDOT struggles to find the resources to keep the system in a steady state of good repair. Moreover, because of limited resources, we are moving from a focus on pavement improvement to pavement preservation, to hold on to past gains.

Pennsylvania has been fortunate that since the early 1980s it has had a portion of its fuel tax based on a percentage tax on the wholesale price of fuel. The tax, called the Oil Company Franchise Tax, had a wholesale price floor of 90 cents a gallon and a ceiling of $1.25 a gallon. When fuel prices started rising dramatically in 2005, the tax generated additional dollars for highways and bridges. Between 2003 and 2006, the increase was equivalent to just over 5 cents a gallon more in tax. But that flexibility did not mean a windfall; rather it briefly allowed PennDOT to keep pace with inflation. But that tax hit the mandated ceiling in 2006 while we are seeing 12.5 percent annual inflation in construction contract costs with continued increases likely.

Pennsylvania Governor Edward G. Rendell is a champion for addressing infrastructure needs. In 2005, he named me to head a nine-member bipartisan Transportation Funding and Reform Commission to explore the state's infrastructure needs. In our November 2006 report, we laid out the details: an annual $1.7 billion shortfall for highway, bridge and transit needs. And these were modest, not pie-in-the-sky, extensive capacity expansion needs. The Commission recommended a package of tax and fee increases, including a 12.5-cent a gallon increase in the Oil Company Franchise Tax.

The Commission also agreed to investment principles that became the foundation of its recommendations. They included:

1. Transportation must be integrated with land use, economic development and environmental policies, programs and goals.
2. The highest priority is to provide for the mobility of all Pennsylvanians, including traditional groups who are transit dependent such as senior citizens and persons with disabilities. Optimizing the core transportation network and infrastructure is key to improving mobility.
3. Stringent criteria must be used to evaluate proposed increases in capacity of the transportation network.
4. Funding sources must be reliable, dedicated, inflation sensitive, and adaptive to changing environmental factors.
5. Funding level, structure, and distribution must be responsive to performance, reforms, and needs.

Responding to the Commission, Governor Rendell proposed a tax on the gross profits of oil corporations and a lease of the Pennsylvania Turnpike as part of his 2007/08 budget proposal. The lease was expected to generate a large lump sum payment that the state would invest and use the earnings as a new revenue source for transportation needs. Last month, the Governor announced the submission of a top bid of $12.8 billion. He projected it would generate on average $1.1 billion a year for the next ten years and then grow at 2.5% per year. He has asked the Legislature to approve the lease.

Last year, the Legislature responded to the Transportation Funding and Reform Commission report with what became known as Act 44. The legislation, which the Governor signed in July 2007, required the Pennsylvania Turnpike Commission and PennDOT to enter an agreement to seek federal authorization to convert the 311-mile cross-state Interstate 80 into a toll road and to increase tolls on the state's other main cross-state route, the Pennsylvania Turnpike. Act 44 is projected to generate $946 million, on average, for highways, bridges and public transportation each year over the next ten years then grow at 2.5% for each of the next forty years.

With that background outlined, let me now review what we are doing to manage and preserve our system. With the large number of structurally deficient bridges, Pennsylvania must focus on restoring these critical links. The Governor in February called on the Legislature to approve a bond-financed accelerated bridge program, Rebuild Pennsylvania. The program calls for investing $200 million more a year for each of the next 10 years in bridges. With the new funding, PennDOT committed to exceeding the Governor's target of repairs to 1,000 structurally deficient bridges over the next three years, the time remaining in the Governor's term of office. Last month, we outlined a list of 1,145 bridges we will do over the next three years. (See exhibit 3)

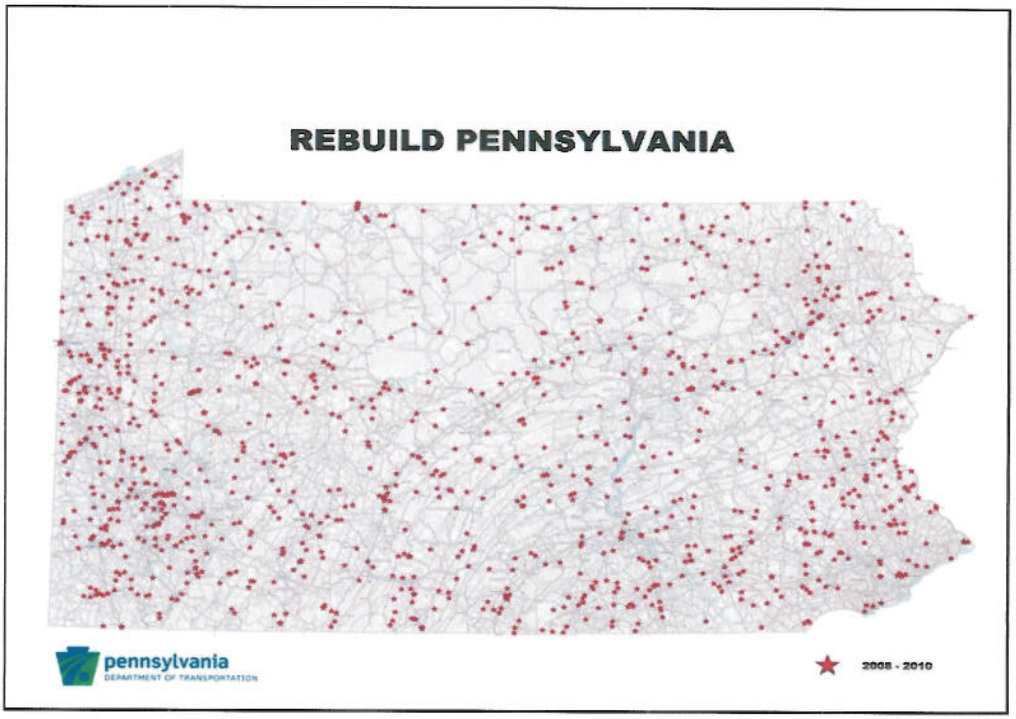

Exhibit 3

Since taking office in 2003, Governor Rendell has nearly tripled investment in bridge repairs. From $259 million in bridge construction contracts in 2002, Governor Rendell upped that investment to just over $700 million in 2007. Since 2003, Pennsylvania spent $3.8 billion repairing 1,381 bridges (see exhibit 4). Despite this investment and because

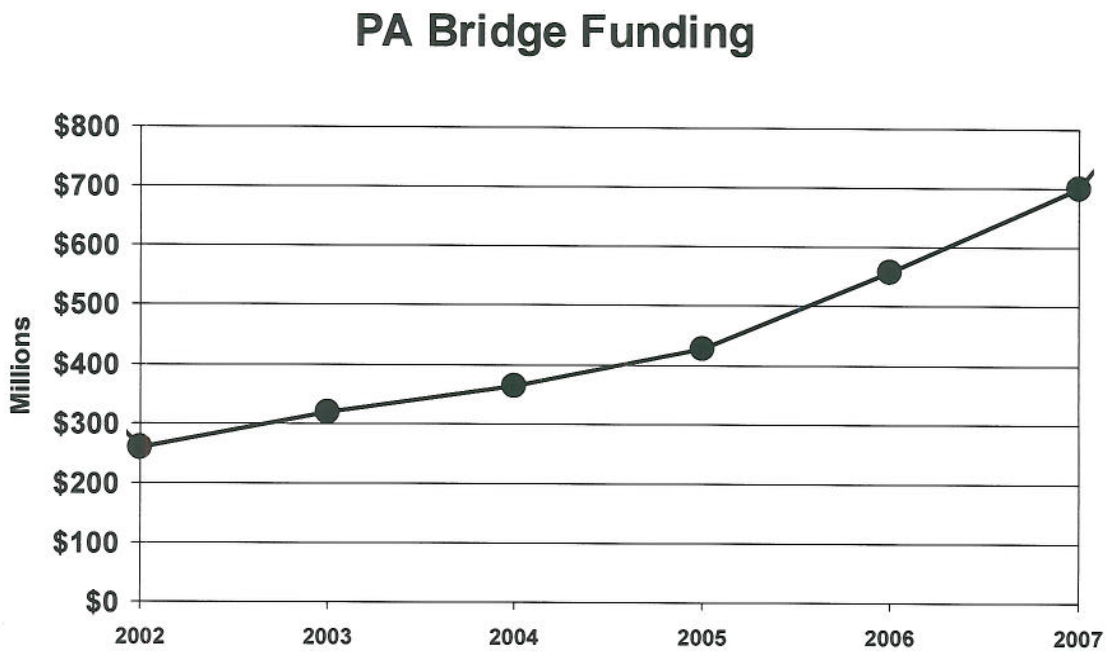

Exhibit 4

of the system's age, the number of structurally deficient bridges has grown, from 5,587 to 6,023.

In addition to our repair program, we are continuing with our strong commitment of preserving bridges to extend their service life, spending over $100 million in each of the last two years.

PennDOT also adopted a new risk assessment program to ensure repairs are targeted to bridges with the most need. With the new program, PennDOT weighs such factors as type of bridge, size and physical condition of the bridge, importance to the highway system, effect on road user costs and implications to commerce in deciding on which bridges to prioritize for repairs. We are also emphasizing 100 year design life for bridge replacements.

While we are focused on fixing our bridges, Pennsylvania must still pay attention to pavement quality. Over the last three decades, Pennsylvania has made steady improvement in the ride quality. The median pavement measure, known as the International Roughness Index (IRI), was 73 for interstates in 2007, just three points below the threshold for excellent condition (the lower the number, the better the pavement). With regards to roadways, our goals include:

- Applying the right treatment to the right road at the right time.
- Adopting uniform pavement maintenance goals and approaches.
- Using data and performance measures.
- Monitoring maintenance cycles.

PennDOT remains focused on system preservation rather than capacity expansion. This includes developing routine cycle maintenance. In the past, though, PennDOT always has lacked the resources to ensure the required maintenance is applied to keep the system stable, and this challenge continues.

Public Transportation

Public transportation also plays a critical role in Pennsylvania's transportation network. The Commonwealth provides roughly $1 billion a year to transit. Public transportation service exists in every county in the Commonwealth. The system includes 42 fixed route systems and 35 public paratransit systems. Some counties have communities that are served by fixed route bus systems while others have public paratransit service. Pennsylvania has the 6th largest public transit system in the country in the Southeastern Pennsylvania Transportation Authority (SEPTA), the 21st largest in Port Authority of Allegheny County (PAAC), 22 Small Urban Systems and 18 Rural Systems. We have seen a surge in ridership in the past two years and expect that increase to continue. (See exhibit 5)

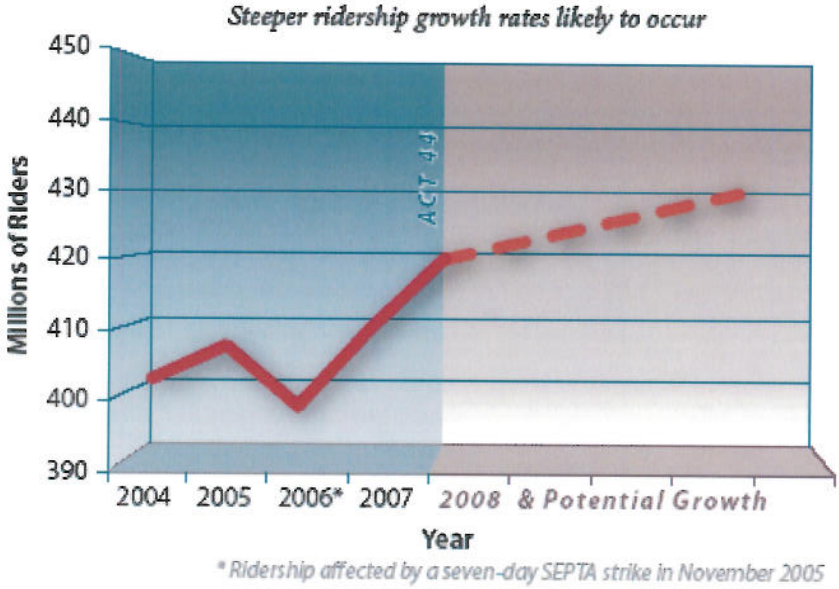

Exhibit 5

Pennsylvania also subsidizes 16 intercity bus routes and the state also contracts with AMTRAK to provide service on the Keystone Corridor between Harrisburg and Philadelphia.

In the case of public transportation, the Transportation Funding and Reform Commission found that there was an additional investment need of $760 million per year of which $260 million was needed for operating funding and the remaining $500 million for capital investment.

Act 44 did provide a new, stable source of funding for transit and rewrote what had been a piecemeal transit funding scheme. Among the changes were the introduction of funding based on need and performance and creation of a statewide transit capital improvement program. But it fell short in terms of the dollars needed to fund transit capital – providing on average only $150 Million of the $500 million needed. The needs are dire. For example,

- SEPTA projected $271 million of unmet capital needs including $69 million for garage facilities and stations, $78 million for fleet and equipment, $20 million for capital-related technology enhancements and $104 million for other general infrastructure improvements. Rail bridges are in critical need of repair with 78 of 350 regional rail bridges more than 100 years old. Twenty-one of them were built in the 1880's. Regional rail cars are also in dire need of repair, with 241 of them still operating with over 34 years of service.

- PAAC has projected $71 million of annual unmet capital needs including $5 million for garage facilities and stations, $17 million for fleet and equipment, $3 million for capital-related technology enhancements and $22 million for other general infrastructure improvements. Approximately 20% of PAAC's bus fleet (1,010 vehicles) exceed the estimated useful life.

- For all other urban systems and all rural systems combined, 48% of large buses have exceeded their useful life. And 53% of small buses are eligible for replacement.

In a time when gasoline prices are rising through the roof (from January 2003 to May 2008, diesel fuel costs have increased over 200%), Pennsylvania is experiencing record ridership growth in the existing systems, and an incredible demand for additional service. Much of the increase from Act 44 for smaller transit systems has been eaten up by rising fuel costs and planned service increases have been delayed or eliminated. We are struggling to have enough money to hold together what we have, let alone be able to think about the level of investment that would be needed to provide people with a robust cost-affordable, frequent and reliable transit system across the commonwealth that could reduce the need for the automobile, decrease energy usage and improve our track on global warming.

Future Issues

As we look to the future, we must look with brutal honesty at the stark transportation funding picture. We are dealing with unprecedented construction cost inflation. The 12.5% annual construction costs increase over the past five years shows no sign of stopping. We have seen an increase of 49.7% in structural steel prices and 27.5% increase in hot mix asphalt prices for the first quarter of 2007.

In February 2008, Governor Rendell along with California Governor Arnold Schwarzenegger and New York City Mayor Michael Bloomberg, formed a national coalition to address infrastructure needs. They said that a new vision for infrastructure must include the following:

- Infrastructure Investment
- Economic Competitiveness
- Sustainable Environment

The principles that guided the Transportation Funding and Reform Commission back in 2006 offered a similar philosophy.

In January, the National Surface Transportation Policy and Revenue Study Commission, which Congress created, also called for major reforms. The Commission recommended that the next reauthorization bill include replacing the 108 surface transportation programs with 10:

- ***Rebuilding America*** – state of good repair
- ***Global Competitiveness*** – gateways and goods movement
- ***Metropolitan Mobility*** – regions greater than 1 million population
- ***Connecting America*** – connections to smaller cities and towns
- ***Intercity Passenger Rail*** – new regional networks in high growth corridors.
- ***Highway safety*** – incentives to save lives
- ***Environmental Stewardship*** – both human and natural environments.
- ***Energy Security*** – alternative fuels
- ***Federal lands*** – public access on federal property
- ***Research and development*** – coherent national research program.

As PennDOT looks to its future, I believe we have no choice but to look for a different model for transportation investments. PennDOT is working to embrace "smart transportation" principles. Smart transportation is an approach that includes tailoring transportation solutions to the context in which the improvement is to be built, linking land use and transportation decisions, working with the community, planning for alternate modes of transportation and scaling the solution to fit within available resources.

With the expiration of SAFETEA-LU in September 2009, the federal government must soon address comprehensive transportation reauthorization. On behalf of the American Association of State Highway and Transportation Officials, I would like to offer some of the components for reauthorization that AASHTO supports.

AASHTO urges Congress to consider at least the following important components for the next reauthorization:

- ***The Repair Bill is Substantial and is Past Due.*** -- Over the last 60 years we have made a substantial investment in our highway, bridge and transit infrastructure. These facilities are aging, and much of the system needs to be repaired, rebuilt or replaced.

  For example, the 47,000 mile Interstate Highway System, which represents about 1 percent of total US road miles, has almost 15,000 interchanges, many of which are wearing out or do not meet current operational standards. The foundations of many of the 210,000 Interstate lane-miles may have to be rebuilt; many of the 55,000 bridges on the Interstate are in need of reconstruction or replacement; and of the 540,000 bridges elsewhere in the system, many are in need of repair.

- ***Governments at all Levels Must Fund their share of the Repair Bill*** – To even come close to meeting preservation needs, the federal-state-local funding partnership must be continued. We need to maintain the historical federal share – 45% -- of capital investment in the highway/bridge and transit portions of the national surface transportation system. Just to restore purchasing power of the program, federal highway funding would have to be increase from $43 billion in 2009 to $75 billion by 2015. State and local spending would have to increase from about $53 billion in 2009 to $89 billion in 2015. The federal transit program would have to be increased from $10 billion in 2010 to $17 billion in 2015.

- ***States need flexibility in the use of federal-aid to be able to take advantage of asset management approaches that can significantly extend the life of the highways and bridges.*** – A goal of asset management is to systematically repair and maintain pavements, structures, facilities and equipment so they do not deteriorate to the point where they have to be replaced. Expand eligible uses of Federal funds to include any physical maintenance that (1) extends the service-life of a facility and (2) is part of a State's asset management plan or approach to asset management. Expand federal-aid eligibility to include preventive maintenance.

- ***In the next authorization bill, Congress should authorize a thorough assessment of the Interstate and National Highway System corridors rehabilitation and reconstruction needs.*** There is significant concern that FHWA's bi-annual conditions and performance reports do not adequately estimate future needs, because the methodology does not address complete reconstruction or replacement of infrastructure that has reached the end of its useful life. The Interstate system has more than 55,000 bridges and tens of thousands of other significant structural elements, many of which are reaching 40 to 50 years of age. Bridges and other structures of this age usually require substantial rehabilitation or reconstruction, and, as we go out another 20 to 30 years, they will require complete replacement.

  Further, it is increasingly recognized that conditions and performance reports do not adequately account for interchange needs. The Interstate system has almost 15,000 interchanges, many of which do not meet current operational and design standards and create significant traffic bottlenecks or safety problems. Some of the most

significant congestion on the system is at major interchanges that were not designed to carry the volumes of traffic that currently use them. Higher projected future traffic volumes will exacerbate these problems. Interchange bottlenecks have significant economic impacts, including delays to both commodity movements and personal travel.

We look forward to Congress and the next President completing this work and helping the states position America for the global competition of the 21st Century.