

## Pennsylvania Senate Transportation Committee

Feb. 2, 2016

PennDOT Secretary Leslie S. Richards

Chairman Rafferty, Chairman Wozniak and transportation committee members, thank you for this opportunity to discuss PennDOT's perspective regarding delivery of our highway and bridge projects.

I'll start with some background: PennDOT provides for the planning, design, construction, and maintenance of more than 40,000 miles of roadways and over 25,000 bridges. This makes our state system the 5th largest in the nation – roughly the same size as the state systems of all the New England states, New York and New Jersey combined. Our count of 25,000 state-maintained bridges ranks us as the nation's third largest bridge system.

### **Act 89 progress**

The enactment of Act 89 in November 2013 has contributed to the completion of 1,217 projects worth \$2.3 billion and provided funding for 559 projects that are currently underway. PennDOT now sustains a construction program between \$2.4 billion and \$2.5 billion annually. This funding allowed for 607 construction contracts to be let in 2015, and we anticipate that 750 contracts (representing nearly 800 projects) will be let for construction in 2016. Major projects for 2015 projects included:

- SR 422 Schuylkill River Bridge replacement
- Reconstruction of Exit 18 along I-83
- Central Susquehanna Valley Transportation project Susquehanna River Bridge
- I-70/Bentleyville Interchange replacement
- I-70/New Stanton Interchange replacement
- Beginning of I-84 reconstruction in Pike County

We are delivering on the intent of Act 89. Governor Wolf and I are moving projects you and your constituents expect, within the resources we are given. But there are challenges. The Corbett administration over-promised projects by at least \$6 billion compared to projections of available revenue for the next 12 years following Act 89.

Absent a legislative solution, a number of these project may not advance in the next 12 years.

Delivering projects takes a concerted effort and is contingent on available funds. A cooperative process including Metropolitan and Regional Planning Organizations also sets the blueprint for project completion and this is known as the Transportation Improvement Plan (TIP), which is the Four-Year Program. There are 1,580 projects on our current Four-Year Program, along with 2,797 projects on our 12-Year Program (TYP).

I note that some members are concerned that projects they believed to be fully funded prior to Governor Wolf's taking office last year, in fact, are not funded. Again, if all unfunded projects are to move forward in the next 12 years, a legislative solution is required. Members first raised this with us last year. By way of explanation, when Act 89 was being considered in 2013, a Decade of Investment list was publicized to show the progress that could be made.

To deliver our large program, PennDOT is actively working on the long-range projects in the Four Year Program as well as many resurfacing projects. Our work is productive to the point that we always take advantage of the annual federal redistribution of funds unused by other states. In 2015, we received an addition \$95 million in federal funds because we were ready to deliver additional projects when other states could not fully use their federal allotment.

### **Funding, the TIP, and advancing projects**

It's important to remember that securing additional state transportation funding was a process that evolved over several years. Findings from the Transportation Funding and Reform Commission led to a State Transportation Advisory Committee Transportation Funding Study which in turn led to a Transportation Funding Advisory Commission report.

As the dialogue regarding transportation funding's impact moved along, the Department believed it would be prudent to show the public what work could be completed with various investment levels. A "Decade of Investment" website was developed with three levels of data available:

- **Current Funding:** Projects programmed on the FFY 2013-2024 Twelve Year Program.
- **Decade of Investment:** Draft list of additional projects that could be accomplished under the then Governor's proposal.
- **Senate:** Draft list of additional projects that could be accomplished with additional funds proposed by Senate Bill 1.

The notification regarding the website availability included this caveat: "Obviously, the final list will depend upon the actual legislated revenue if a bill is passed and signed by the Governor".

Again, I'd want to point out that prior to Governor Wolf's taking office, the various scenarios included assumptions and were developed prior to the knowledge of how much additional revenue would be provided for which of the various modes/programs, and that no existing funding would be taken away.

The 2015 Transportation Improvement Program (TIP) and the 2015-2026 Twelve Year Program (TYP) were approved on August 14, 2014, by the State Transportation Commission. The 2015 TIP incorporated many of the Current Funding, Decade of Investment, and Senate scenario projects up to the point of fiscal restraint. Again, these decisions were based on consensus from planning partners across the state.

To further public understanding of progress on projects, the Department released a PA Transportation Projects/Act 89 Progress website to monitor the delivery of projects identified in the scenarios above.

The 2017 TIP and 2017-2028 TYP are currently under development. The federal funds available for programming have increased due to the passage of the Fixing America's Surface Transportation (FAST) Act. However, a significant potential reduction in available state Motor License Fund (MLF) resources has limited the ability to reach as many projects as hoped for. Funds from the MLF needed to support the State Police mission to keep our transportation network safe are competing with the vast demand for projects and this means some tough decisions lie ahead. It should be noted that all projects that will be funded during the upcoming TIP and 12-Year program have not yet been identified.

### **The Project Delivery Challenges**

PennDOT is among the national leaders in terms of the size of our construction program. Traditional key measures that define successful project delivery include "on-time", "on-budget". PennDOT has historically done very well with these measures; in fact, in 2015, 95% of our design projects were bid on time and 92% of our construction contracts were completed on-time. Another key measure of success is the overall length of project delivery. Our focus going forward is to shorten the schedule length.

The biggest risks to our project schedules come from entities outside the PennDOT organization and occur when our project efforts require coordination and collaboration with other agencies and stakeholders. These interactions occur in four major categories:

- **Property Owners:** 316 projects (or 40%) required negotiation with property owners for temporary or permanent right-of-way acquisition for 2015.

- **Environmental Clearances:** 550 (or 91% of the 2015 contracts) required coordination to meet environmental rules.
- **Utility Coordination:** 318 contracts (or 52%) impacted or potentially impacted utility facilities in 2015.
- **Railroad Coordination:** 92 contracts (or 15%) required coordination with railroad companies in 2015.

Our ability to control and minimize the length of project delivery is related to the required process for each of these areas and the availability of resources.

I'll offer details from each area of concern:

### **Property Owners – Right-of-way Acquisition**

Highway construction cannot begin until the Department has secured the necessary property rights.

Each property acquisition requires interaction with the individual property owner. Federal and State regulations afford private property owners specific rights that must not be violated during the acquisition process. The rights afforded to each property owner can include payment of engineering and attorney fees and allotting sufficient time for vacating acquired dwellings.

It is always the Department's goal to settle right-of-way claims expeditiously and amicably. If on an individual project, we are able to achieve amicable settlements on all claims, the acquisition for the project can be completed in less than six months.

However, the complexity of right-of-way acquisition also impacts this duration. If an amicable settlement cannot be reached on all claims, we file a Declaration of Taking, which adds approximately 75 days to the acquisition process. If a residential or business relocation is required (3% of acquisitions), an additional 14 to 30 months are needed for the acquisition, due to the processes and procedures outlined in the governing laws. From time to time a project will be delayed when a property owner files preliminary objections to a Declaration of Taking, claiming the Department does not have the right to condemn their property or has committed a procedural error in the condemnation process. Although preliminary objections are very rarely granted, the time taken to defend them in court can be lengthy.

To assist in making our project schedules more predictable, we initially include the possibility of one condemnation into each project to allow sufficient time in case we must condemn (22% of acquisitions require condemnation). Once right-of-way requirements are better defined, the project schedule is modified accordingly. This approach has allowed us to successfully achieve the on-time schedule targets, but not reduce schedule

length. So because the process is very well defined and established in law, there is very little we can do to shorten the overall schedule.

### **Environmental Agencies**

As part of preliminary engineering during project delivery, PennDOT prepares environmental documents required by the National Environmental Policy Act and Pennsylvania's section 2002 of the Administrative Code. The federal and state laws require that PennDOT evaluate and document the relevant environmental impacts from projects. To deliver the overall program, we are working on 500-600 environmental documents at any given time.

A key component of the environmental review process is coordinating with other agencies that have jurisdiction over resources impacted by our projects. As part of a long-term collaborative effort going back to the late '90s, PennDOT has seven Memoranda of Understanding (MOU) with state and federal agencies wherein PennDOT and FHWA pay salary and benefits for staff in those agencies to dedicate their time to PennDOT project reviews. These memoranda of understanding are with:

- US Army Corps of Engineers
- US Fish & Wildlife Service
- PA DEP
- PA Fish & Boat Commission
- PA Game Commission
- PA DCNR, and
- PA Historical and Museum Commission

This arrangement has been judged a national best practice. Although these come at a cost of \$3 million to PennDOT and FHWA, these positions are key in expediting PennDOT projects by:

- Focusing on PennDOT project reviews;
- Providing knowledgeable points of contact at the agencies; and
- Assisting PennDOT staff through cooperative collaboration on projects.

Additionally, PennDOT continuously works with other agencies such as the U.S. Coast Guard to maintain the positive working relationships, improve coordination, and streamline project delivery.

Without our funded positions and the Memoranda of Understanding covering them, Act 89 projects with environmentally sensitive designs would not be delivered as expeditiously as they have been.

Similar to the environmental review process performed during preliminary engineering, projects that impact waterways or wetlands require permits from federal and state agencies. Nearly all PennDOT permits are processed by the Pennsylvania Department of Environmental Protection. Last year, DEP approved 801 permits for PennDOT projects. Nearly half of those permits were for maintenance. The majority of the remainder were general permits. About 60 percent of all DEP permits in a year are issued to PennDOT.

PennDOT and DEP renewed their MOU in 2014. Under the MOU, PennDOT funds DEP engineer and biologist reviewers in each of the six DEP regions, plus one central office liaison. PennDOT staff have direct access to the reviewers. The funded positions at DEP play a key role in project delivery. The one-on-one service is invaluable; PennDOT staff can call their DEP reviewers and discuss comments to quickly resolve issues.

To help facilitate the permit process, PennDOT and DEP have an electronic Joint Permit Application (JPA) process. Currently, this system allows certain types of permits to be submitted and reviewed electronically, which expedites the review process.

PennDOT is currently working collaboratively with DEP and other stakeholders in the environmental permitting area to redesign and expand the JPA system, which will provide the means of processing almost all General (waterway) Permits (Chapter 105 permits as well as all Erosion and Sedimentation Control Permits (Chapter 102 permits). When fully implemented, we expect this system will be truly best in class.

### **Utility Coordination**

This area has less predictability and therefore more risk to project delivery schedules. Utility coordination involves identification and possible relocation of existing facilities that may be in conflict with our highway and bridge projects. Successful utility coordination requires early and frequent communication with utility owners, as well as cooperation and clear identification of the project scope and schedule. In any given year, we generally deal with over 400 different utilities, both privately and publically owned. In 2014, the Department paid over \$37 million for utility relocations, and over \$32 million in 2015. Additionally, in 2015, we started the Public Private Partnership (P3) Rapid Bridge Replacement program, which aims to replace 558 bridges over three years and many require utility relocations.

Under the law, utilities may occupy the highway right-of-way but they must move when impacted by a highway project. Typically, they need to relocate at their own cost. However, we do cost share with municipalities, and pay relocation costs of utilities that have prior property rights.

Relocation of utilities plays a large role into the development of our projects. Because of our construction sequencing, coordination becomes a critical aspect of these relocations.

### **Striving for Improvement**

We have worked with utility companies to establish policy regarding needed lead time for plan review and agreement development. We also coordinate during the design period to determine the amount of time needed during construction for the utility to complete their work. The times coordinated with utility companies are then contractually written into our contracts so that the contractor can develop his or her schedule accordingly. The construction contracts include utility provisions that identify:

- the utilities in the project limits,
- the type of work they are doing,
- the areas of relocation,
- a description of work, and
- the amount of time it will take to do the work.

Although we work collectively to establish the needed timeframes and establish these in the contract, these timeframes are predicated on the utility's resources (in terms of budget, manpower, equipment, and supplies) and those factors are out of our control. To compensate for utility-related delays, we try to "work around" the utility impacts where possible, but still our ability to reduce overall project delivery times are limited.

### **Internal PennDOT Next Generation (PNG) Team**

In an effort to better understand and streamline utility relocation, PennDOT convened a special internal task force (PNG team) in the summer of 2015 to fully map the utility process and identify potential areas of improvement. The internal PNG team mapped out 41 distinct interaction points during the project delivery process from early design through construction.

### **Areas of Impact**

Critical examples of these interactive points are as follows:

- While a PA One call verifies a utility's lateral location, it does not verify its vertical depth, which causes conflicts with excavation during construction. These conflicts are in theory completely avoidable, but at a cost. An urban project spanning multiple miles may have 500 water and sewer laterals that could potentially be impacted by the highway construction. Determining the exact location of these facilities during design could cost upwards of half a million dollars. PennDOT may be forced to make calculated risks to find the best value between locating every

underground utility and assuming some risk that may delay the project if a conflict is discovered.

- Utilities' lines strung on poles may trigger delays when multiple utilities, such as power, cable and phone lines, are on each pole. This requires separate relocation efforts and means more time.
- Contractual implications exist if utility times in the contract are not met, resulting in additional time and money for completion. Over the last five years, the Department paid \$6.6 million (or about \$1.3 million per year) in construction cost increases due to delays associated with utility work.
- Examples of other utility impacts on highway projects include:
  - Manhole and utility box adjustments not completed on schedule. This can create a safety hazard for the public due to the unevenness of the pavement and can adversely affect the quality of the pavement if adjustments require cutting or patching of the new pavement to transition to the adjusted manhole.
  - Open utility cuts in new pavements. When work is not properly coordinated, there are occasions where a utility must move, upgrade, or replace facilities soon after the completion of our roadway project, thus introducing pavement cuts which can affect the overall pavement life.

### **Causation of Issues**

We do recognize that utilities face many challenges that can ultimately result in project delays. Similar to PennDOT, utilities can experience issues with property owners when trying to procure private right-of-way to relocate their facilities. Sometimes the amount of work or the number of needed working days is underestimated during the design phase and not discovered until construction staff becomes involved. Budget is a concern for all organizations. In some cases, utilities are limited in how much work is completed within the quarter or the fiscal year because of budget constraints.

From our observations, utility companies are staffed and organized to place a priority on the operation of their systems and are not staffed to handle PennDOT's needs. Each of the 41 interactions between PennDOT and a utility company on a particular project need a response from the utility. The utility companies are simply not staffed to handle day to day interactions with PennDOT. They allocate resources to PennDOT when resources are available and this contributes to lengthy project delivery timeframes and lead times.

### **Moving forward**

As stated, we have formed an internal PNG team that is currently beginning work to help develop a better management system for improving work flow from the department, its contractors, and utilities and for capturing data and real time reporting of status. We



have suggested that the Legislative Budget and Finance Committee study opportunities to work with data to help improve the overall utility coordination process. We would welcome the opportunity to work with the LB&FC to continue our internal data mining efforts with the 41 interaction points and define proper timeframes for each of these interactions.

## **Railroads**

Similar to utilities, railroads are similarly not staffed to handle PennDOT needs, but are focused and staffed to manage the operation of their own systems. Our extensive roadway and rail transportation networks are among the most developed in the nation. When the 5,000-mile rail network is overlaid on our 40,000 miles of state highways and 25,000 bridges, there are many areas of common interest as well as potential concerns. As each of our organizations modify our networks, we both evaluate each other's projects in terms of safety, engineering, and operational impacts both during construction and for the final configuration and seek to minimize risk to our organization.

Projects that include coordination with railroads can result in unpredictable schedules. This unpredictability is caused by needing to coordinate with 65 freight railroads and four passenger and commuter lines individually, each of which have different requirements. While the priority for both PennDOT and the railroads is the safe and efficient movement of people and goods, PennDOT's public project responsibilities do not always coincide with the railroads' private sector requirements. Here are two current examples:

**Amtrak:** Amtrak is structured to minimize risk to their organization. They require states to fully indemnify Amtrak for risks associated with highway bridges over Amtrak's rail line. These would be risks associated with the potential of work done under a PennDOT project which, for example, uncovers a contamination that would otherwise not have been found. Without indemnification, Amtrak may be required by federal requirements to clean-up the contamination all the way back to the source. They have also identified a potential risk of a highway bridge being located over Amtrak's line, thus introducing a risk of a vehicle or debris leaving the bridge and landing on the tracks. In both these instances, Amtrak seeks indemnification to protect themselves from these risks. However, PennDOT is prohibited by sovereign immunity under the Pennsylvania Constitution from indemnifying Amtrak for any risks. A solution involving payment of a risk fee has been implemented concerning potential contamination, but no solution has been reached with Amtrak on the general liability risks of which it has concerns.

**Norfolk Southern:** Norfolk Southern staff have communicated that they are facing a potential merger and are streamlining operations. The resulting personnel reductions in their engineering, right-of-way, and field operation sections has led to increased timeframes for design reviews, delayed property settlements, as well as scheduling conflicts due to a lack of railroad safety personnel (flaggers). The railroads' focus on

maximizing revenue has had two major effects. First, an insistence on final construction plans and the execution of the construction agreement before they will proceed with property settlement means that PennDOT would need to allocate construction funds (in order to execute the agreement with the railroad) before we know if the land needed for a bridge's placement is available. Second, we have seen a marked reduction in the amount of track outages to allow PennDOT work. As the railroad seeks to maximize revenues by increasing track usage, this results in a decrease in the time available to construct Department projects and wreaks havoc with our contractors' schedules.

Although railroad coordination affects the fewest number of projects, we are still focused on improving this coordination as well. In late 2014, PennDOT entered into a partnering team involving USDOT, FHWA, the Federal Railroad Administration (FRA), Amtrak, and PennDOT to resolve ongoing issues, such as indemnification. Collectively, the team identified six areas and is currently working to implement improvements.

### **An Economic Winner**

As all of you in this room understand, maintaining transportation investment is critical to our economic well-being.

Act 89 meant not only improvements to the road and bridge system, but jobs for people working on these projects and improved connections that help bolster commerce and quality of life. The rough estimate is an additional 25,000 to 30,000 jobs for every \$1 billion in infrastructure investment.

Beyond these immediate job gains, crucial as they are to our economy, Act 89 has enabled Pennsylvania to do something even more important: to invest for the long-term in a future of economic growth, opportunity, a sustainable quality of life and a cleaner, healthier environment for our kids and their kids.

In 2010, the US Treasury and Council of Economic Advisors concluded a thorough-going study of the economic effects of infrastructure investment. Their findings couldn't be clearer: investment in transportation infrastructure increases productivity, accelerates economic growth, generates permanent new jobs, enhances real-estate values, and yields new tax revenues at the federal, state and local levels. In short, it creates new wealth. But that's not all of it. Transportation investment reduces congestion, thus saving the public valuable time, expense, energy consumption and the emission of pollutants and green-house gases.

## **Conclusion**

We are proud of our project delivery process at PennDOT. However, the number one issue we have today is unfunded committed projects and to fund those projects a legislative solution is needed.

We deliver needed roadway and bridge projects for the good of our Pennsylvania citizens and the general public, and we deliver them on time. We continuously strive to improve the Project Delivery Process and seek new ways to partner with our external stakeholders to get even better. We work with Pennsylvania citizens when needed to fairly and equitably acquire right-of-way. We have partnered with our resource agencies to efficiently deliver our projects in a collaborative approach, which recognizes the unique mission, goals, and objectives of each. We understand the challenges of the railroads and their need to reduce risk. Although still challenging, impacts with railroads impact the fewest number of projects, but we are currently working to improve our interactions.

From our perspective, utilities are the biggest remaining area where we currently need assistance in order to make substantial improvements to continue to improve project delivery. For that reason, we appreciate this effort and for the opportunity to present to you today. And finally, available revenue is the unavoidable factor that underwrites how far we can advance on pending projects.

Thank you.

