



Pennsylvania
Department of
Transportation

2022

ANNUAL REPORT



Yassmin Gramian, P.E.
Secretary of Transportation

Transportation is the backbone of our society and is central to our quality of life.

And Pennsylvania's transportation network is vast. The state-maintained system alone is roughly 40,000 miles of state-owned roads and roughly 25,000 state-owned bridges, 35 fixed-route transit systems, 121 public-use airports, 259 private-use airports, 277 private-use heliports, three ports and the privately-owned network of more than 5,600 miles of freight railroad lines. Our fuel taxes and various transportation fees support construction and maintenance on another 78,000 miles of municipal and county roads, along with 6,400 local bridges.

Additionally, our Driver and Vehicle Services operation provides online tools and operates 103 facilities for face-to-face customer service, ensuring commercial and personal driver licensing and testing, photo services and vehicle registration and inspection remain current and safe. We provide over-the-counter REAL ID services at 13 facilities, with further expansion planned.

Supporting a transportation network of this size requires investment, and there are significant needs across all modes. We remain focused on modernizing transportation funding in

Pennsylvania, reducing our reliance on the gas tax and exploring new, 21st-century funding solutions through our PennDOT Pathways program. We're grateful for the historic Bipartisan Infrastructure Law, which will bring \$4 billion in new federal funds to Pennsylvania over five years. This is the largest infrastructure investment in decades, and we have already begun to put these dollars to good use in important projects around the state.

We are also working to transform our approach to transportation so that equity is at the forefront of our work. Technology and innovation in our field presents us with an opportunity to reinvent transportation in a way that is smarter, cleaner, safer, more equitable, and more efficient than ever before, and it's our job to not only be experts of our transportation system itself, but also in the challenges and inequities that our system perpetuates as we integrate new solutions and plan for future investments.

Transportation needs to work for everyone, and I'm proud of the work of the PennDOT team has done to improve our network for all people, in the service of a safer and more connected Pennsylvania.



OUR VISION

An enhanced quality of life built on transportation excellence.



OUR MISSION

Enhance, connect and add value to our communities by providing a sustainable, equitable transportation system and quality services for all.



OUR VALUES

Safety: We value the safety of our employees, customers and partners in all that we do.

Innovation and Evolution: We pursue and incorporate evolving technologies and innovative practices to improve transportation.

Equity in Mobility: We enhance quality of life through investments in equitable, efficient and safe movement of people and goods.

Customer Experience: We are committed to providing a positive customer experience for all.

Communication: We are committed to effective, transparent, timely communication with our employees, customers and stakeholders.

Inclusive Workforce Investment: We build a strong team by respecting one another, promoting teamwork and seeking to recruit and empower our diverse workforce.

Sustainable Transportation: We connect Pennsylvania to the world's economy through environmentally and fiscally sustainable, resilient transportation systems.



SAFETY AT ALL LEVELS

Ensure safety is engrained in the culture of PennDOT to protect our employees, customers, partners and the traveling public as well as our assets.



INNOVATION

Provide access to equitable, affordable, reliable and sustainable transportation options that support quality of life and economic prosperity.



COMMUNICATION THAT FOSTERS RELATIONSHIPS AND ENCOURAGES NEW IDEAS

Strengthen internal and external relationships, cultivate employee ideas and engage customers equitably using collaborative, transparent communication tools and services.



RECRUITING, RETAINING AND DEVELOPING A DIVERSE AND INCLUSIVE WORKFORCE

Ensure a flexible work environment that inspires employee development, is strengthened by team diversity, values employee insight and empowers employees to pursue rewarding careers at PennDOT.



MOBILITY AND CONNECTIVITY

Provide access to equitable, affordable, reliable and sustainable transportation options that support quality of life and economic prosperity.



CUSTOMER SERVICE

Equitably serve all customers and communities by working to understand and empathetically respond to their unique needs.



EFFECTIVELY LEVERAGING AVAILABLE RESOURCES BY MODERNIZING TECHNOLOGY AND ASSETS

Assure excellence in productivity, efficiency, sustainability, service quality and resiliency in asset stewardship by leveraging technology and innovation to improve Pennsylvania's multimodal transportation infrastructure and processes, while maintaining the integrity, confidentiality and protection of customer records and personally identifying information.

HIGHWAYS & BRIDGES

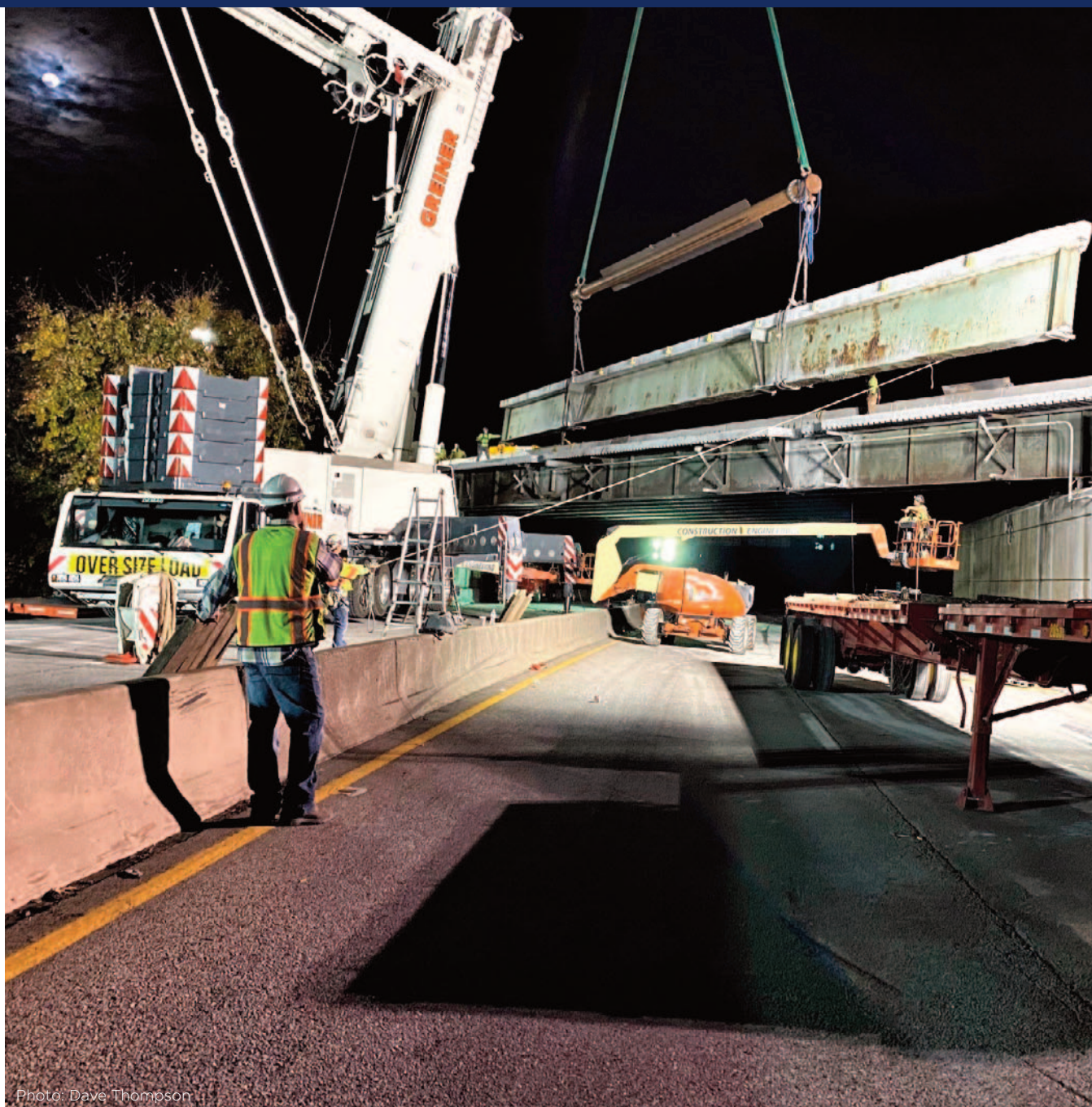


Photo: Dave Thompson

2022 PennDOT Highlights



510* State-Owned Bridges Preserved or Improved.

29* Local-Owned Bridges Preserved or Improved.



\$59.9 Million For Roadway Patching



174,348 Tons of Asphalt Used

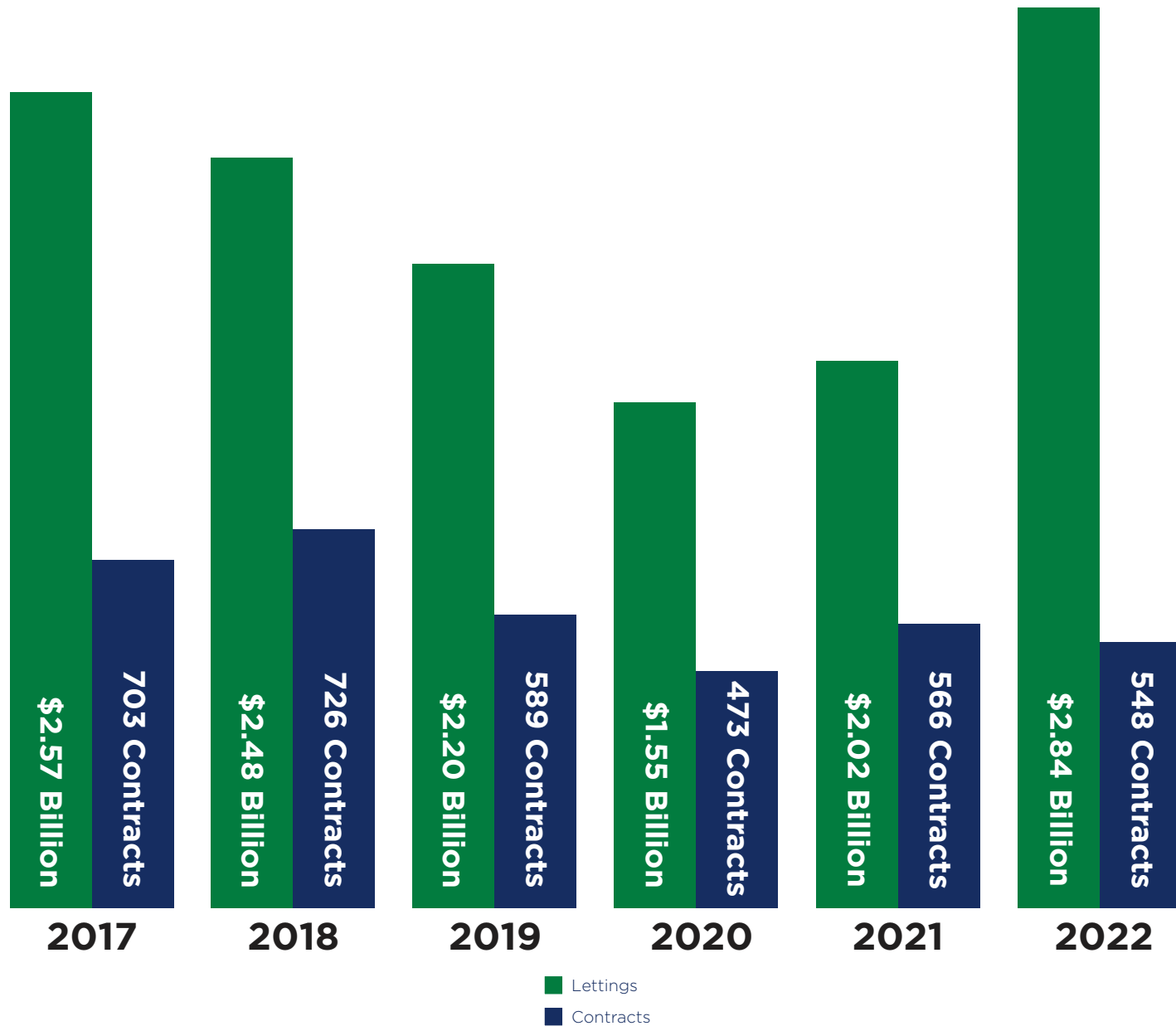


5,850 Miles of Improved Roadway

* Information as of December 5, 2022

With PennDOT directly responsible for approximately **40,000** roadway miles and **25,400** bridges in Pennsylvania, maintaining our transportation network takes strong partnership among the department, federal and local governments, planning partners, the construction industry and our communities.

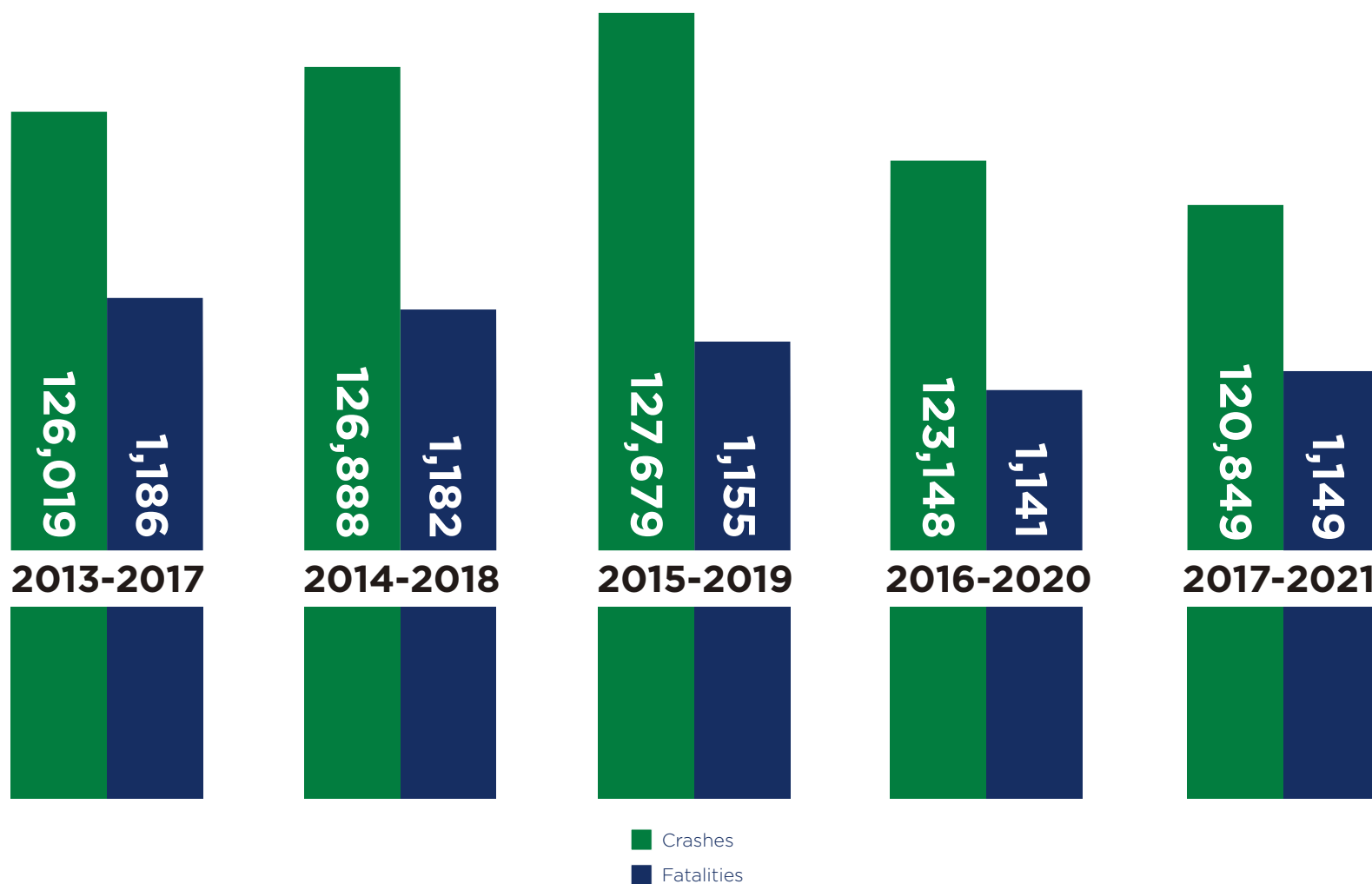
In addition to the state's highways and bridges, a robust menu of travel and commerce options such as aviation, transit and rail facilities are also essential to keeping people and goods moving.



PENNSYLVANIA HIGHWAY FATALITIES & CRASHES

5-YEAR AVERAGE

This is a multi-year statistical review of reportable motor vehicle crashes in Pennsylvania. A reportable crash is one in which the incident occurs on a highway or traffic way that is open to the public and an injury or a fatality occurs, or at least one of the vehicles involved requires towing from the scene.



As the five-year crash fatality average has begun to level out, PennDOT is more committed than ever to making Pennsylvania's roadways safer for travelers of all modes. PennDOT's 2022 Strategic Highway Safety Plan, found online at PennDOT.pa.gov/Safety, outlines our strategy to decrease, and eventually eliminate, crash fatalities in Pennsylvania. Additionally, the public can access commonly requested crash and fatality information, as well as create their own custom searches with the Pennsylvania Crash Information Tool online at CrashInfo.PennDOT.gov.

*Fatality data for 2022 is not yet complete (as of the printing of this report)

CUSTOMER CARE CENTER STATISTICS



Customer Care Center

Welcome to the PennDOT Customer Care Center

Submissions are not monitored outside of normal business hours, which are Monday - Friday, 8 a.m. to 4:30 p.m. For the transportation emergency, call 911. For urgent issues, call the dedicated PennDOT County Office.

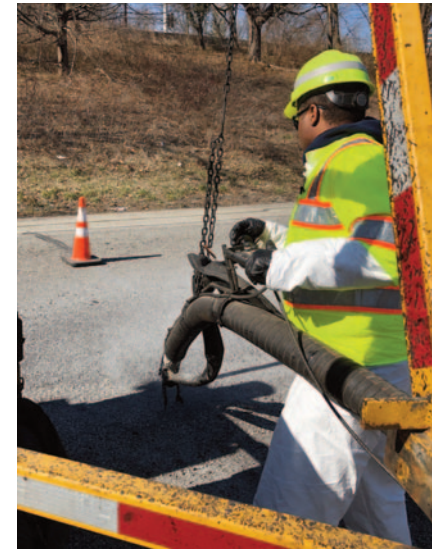
New Concerns

Existing Concerns

49,580

www.customercare.penndot.gov

PennDOT resolved 49,580 Customer Care Concerns.



DRIVER AND VEHICLE SERVICES

In 2021, PennDOT's Driver and Vehicle Services licensed Pennsylvania's nearly **9 million** drivers and **810,858** motorcyclists, while registering nearly **12 million** vehicles and close to **377,000** motorcycles.



DRIVER AND VEHICLE SERVICES 2022 MILESTONES

PennDOT Expands Online Services for People With Disabilities

PennDOT has always been focused on providing inclusive processes, and meeting our customers' needs for innovative services. Customers who have a permanent Person with Disabilities Parking Placard now have the option of completing various services online from the comfort of their home.

This new online process enhances customer convenience related to customers needing certain Person with Disability placard services. The initiative, part of our efforts to modernize operations, allows Pennsylvanians with a Person with Disabilities Parking Placard to now renew their permanent placards, change their address on a product (for both permanent and temporary placards) and replace their lost, stolen or destroyed permanent or temporary placard ID and permanent placard all online through our placard services portal.

PennDOT has over 900K permanent placards issued across the state. The new service cuts down on processing times for customers by eliminating the mail in process and subsequent processing of paperwork. Temporary Person with Disabilities Parking Placard customers are also able to update their address and request replacement identification credentials through this online service. From the time the program was introduced in late June of 2022, there have been over 15,000 transactions completed where Pennsylvanians have taken advantage of these services. Permanent Placard holders continue to receive a renewal form approximately 60 days prior to their expiration by mail and continue to have the option to renew by mail.

To renew a placard online or to obtain additional information on services provided, including how to obtain a placard, customers may visit the [Person with Disabilities Information](#) page on the [Driver and Vehicle Services](#) website. The service is available 24 hours a day, seven days a week.

PennDOT Enhances Customer Information with New Database of Suspended Inspection Stations, Inspectors, Dealers, and Issuing Agents

Vehicle safety and emission inspections, license plate issuance, registration and titling are an integral part of ensuring the safety and proper registration of all who travel our roadways, and in June of 2022, PennDOT enhanced its transparency to customers by launching a new database disclosing vehicle inspection stations, inspectors, vehicle dealers and issuing agents who are under suspension for infractions of state inspection regulations, vehicle code infractions and contract requirements.

These real time (daily) updates allow consumers to use this new tool to help in making an informed decision about those services, as the sites consist of a daily up-to-date listing of suspended inspection stations, inspectors, vehicle dealers and other issuing agents within the commonwealth.

The information is available to customers by visiting the [Suspended Inspection Stations](#) and Inspectors page to see what stations or inspectors are under suspension and the [Suspended Issuing Agents](#) page for a list of dealers or issuing agents under suspension.

Additionally, customers can also see the violation that resulted in the entity's suspension. The information includes an easy-to-understand list of violation definitions providing the customer a clear understanding of why the entity was suspended.

Approximately 17,000 safety inspection stations and approximately 7,700 emission inspection stations operate in Pennsylvania, monitored by PennDOT Quality Assurance Officers (QAOs). Through regularly scheduled, unannounced visits and covert audits to inspection stations, these QAOs ensure compliance with the regulations governing the inspectors, vehicle safety inspection and emissions inspection programs as well as the administrative requirements of these programs. They also investigate customer complaints against inspection stations or inspectors reported to PennDOT.

There are approximately 8,000 vehicle dealers and issuing agents in the commonwealth contracted to provide services to customers on behalf of PennDOT. They are monitored by PennDOT's Driver and Vehicle Services' Regulated Client Services Section and the Risk Management Office through unannounced audits, scheduled site inspections and analysis of internal reports of title transactions. Customer reports of suspected wrongdoing or complaints can also be made by telephone or email to the PennDOT tip line at (717) 705-9913 or RA-pdPennDOTTip@pa.gov.

Making this information easily accessible to our customers allows Pennsylvania residents the ability to obtain information needed to make decisions on service by seeing the actions taken by PennDOT to ensure our dealers, issuing agents, inspectors and inspection stations are in compliance with requirements and when they're not customers have the tools needed to be aware of the issues and the reason for suspension. This effort helps ensure that vehicles owned by Pennsylvania residents are properly titled, registered and inspected leading to the improved safety of occupants of the vehicle and those they interact with on the roadways.

DRIVER AND VEHICLE SERVICES 2022 MILESTONES

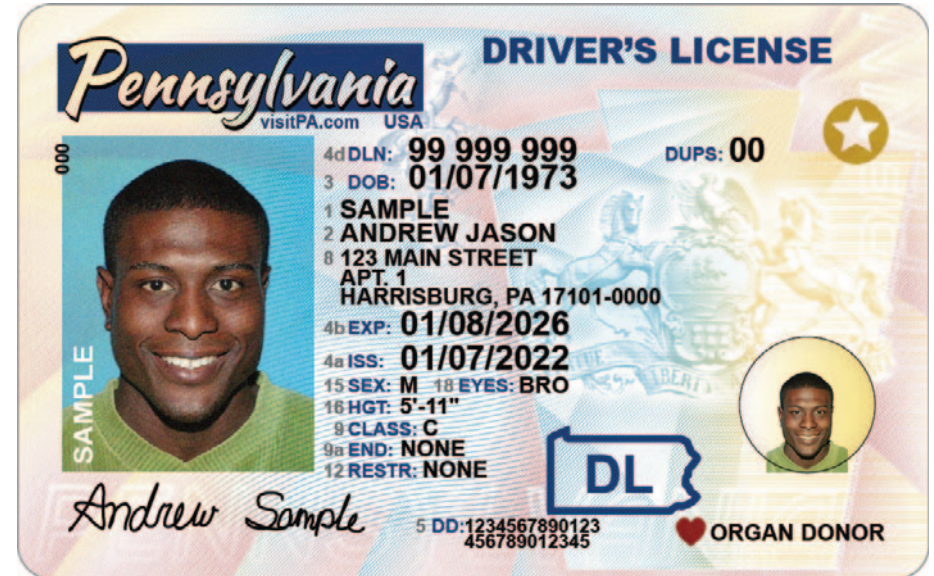
PennDOT Phases in Newly-Designed Driver Licenses, Identification Cards

As part of ongoing security enhancements, PennDOT updated the design and enhanced the security features of its driver license and identification card products. The update is an important component of PennDOT's ongoing work to enhance and protect the integrity of the driver license and identification card issuance process. All Driver and Photo locations began using the new products by the end of December 2022.

Both standard and REAL ID compliant products use the new design and security features. The new products will be phased in over the next four-year renewal cycle and will replace existing products. Both current and new card designs will be in circulation during the transition period.

The cards look different and have additional enhanced security features that improve fraud prevention and protect from counterfeiting and alteration. Some of the enhanced features include:

- Guilloche Security Design, a feature that includes sophisticated techniques to embed a variety of customized security patterning into the credential, using non-commercial software developed specifically for high security documents (banknotes, passports, ID cards, etc);
- Optically Variable Ghost Portrait and Variable Data with UV, features that change their appearance when the viewing angle of the card changes, which moves them from fully visible to non-visible. The card also includes an ultraviolet (UV) response that fluoresces under UV lighting. The UV response is fixed – visible under UV light regardless of viewing angle;
- Dynamic Look Through Element (DLTE), a dynamic feature with gold metallic tint that is visible under direct lighting.



DRIVER AND VEHICLE SERVICES STATISTICS

PennDOT Driver License Centers are operated by PennDOT employees and offer driver license services.

PennDOT's stand-alone Photo Centers are located throughout Pennsylvania. When you receive a camera card, which is an invitation to our photo license, identification card process, you must appear at a photo center to obtain a photo for a driver's license or an identification card.

PennDOT partners with private businesses to provide customers with face-to-face, over-the-counter services. Online indicates that these business partners have a secure, electronic connection to PennDOT and can issue a variety of products on-the-spot. These businesses charge a market-driven fee for their services in addition to applicable PennDOT fees.



9.1 Million
Licensed Drivers



12.1 Million
Registered Vehicles



3,180
Special Fund License
Plates Sold Raising
\$61,000



4+ Million
People Assisted by
the DVS Call Center



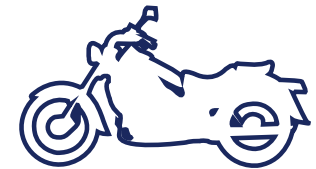
9.9 Million
Online Transactions



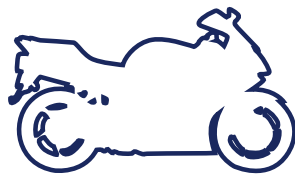
24,000
Personal License
Plates Sold



30,400
PA Motorcycle License
App Downloads



798,700
Licensed
Motorcyclists



369,200
Registered
Motorcycles



13,400
Participants in the
Safety Course



394,300
PA Driver License
App Downloads





2022 PennDOT Highlights



195.7 Million Fixed
Route Bus Trips



65 Operating Railroads



5,600 Miles of
Railroad Tracks



121 Licensed Public Airports

HELPING SENIORS ON A DAILY BASIS (FY 21-22)



ACTIVE TRANSPORTATION PLAN

In 2022, PennDOT advanced several Active Transportation Plan priorities to improve opportunities for walking and biking through coordination efforts with planning regions across the state.



- The department finalized a Shared Use Path Right-of-Way Agreement to be used in lieu of prior agreement templates. The single template addresses all scenarios where a shared use path (trail) is requested within the right-of-way, including shared use paths, trails in limited access, and separated bicycle facilities. The agreement requires improvements to be maintained post-construction by local authorities.
- The department continues to make updates to Pub 13 (Design Manual 2) to provide design flexibility for all modes of transportation.
- PennDOT continues to coordinate with local and state partners to prioritize and fund local planning efforts, improve trail facilities, and educate local communities in the value of active transportation
- Department staff continue outreach to all partners on the Active Transportation Plan as part of education and awareness and to emphasize the importance of the PennDOT Connects process to identify and support local planning needs.



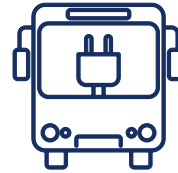
MULTIMODAL HIGHLIGHTS



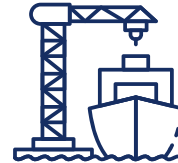
New storage yard track for ATI Flat Rolled Products Corporation.



Starrucca Viaduct bridge rehabilitation and track replacement project on the Central New York Railroad.



As of November 2022 there are **678** transit vehicles powered by alternative fuels in operation at Pennsylvania transit agencies. In 2022, **181** transit vehicles were replaced throughout Pennsylvania with the help of state funding.



Container lifts and containers at the Port of Philadelphia due to PA Intermodal Cargo Growth Incentive Program:

- **20,831** Added Container Lifts (FY 21-22)
- **236,659** Total Lifts increased since 2015 (FY 21-22)

Over the past eight years, the Governor has invested more than **\$500** million in capital projects at PhilaPort, for which PennDOT provided both oversight and financial support. This allowed substantial investment in Erie Port capital projects and operating grants to PortPitt.



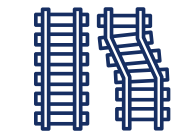
Keystone corridor passenger trips:

- **Keystone: 717,361** (FY 21-22)
- **Pennsylvanian: 174,374** (FY 21-22)
- **TOTAL: 891,735** (FY 21-22)



Awarded **99** grants totaling **\$32.9** million in FY 2021-22
Licensed public airports:

- **121** public airports/heliports licensed in PA
- **14** Scheduled service airports
- **14** commercial airports
- **63** federally sponsored airports



- **23** Rail Freight Projects (RFAP/RTAP) approved (FY 2021-22)
- **11** Rail Transportation Assistance Program (RTAP) projects completed in CY 2022 totaling approximately **49** miles of track improved/added
- **11** Rail Freight Assistance Program (RFAP) projects completed in CY 2022 totaling **78** miles of track improved added; 1 railroad tunnel rehabilitated; **12** railroad bridges rehabilitated/replaced
- **65** operating railroads
- More than **5,600** miles of track

INNOVATIONS & TOP PROJECTS



Delivering transportation innovations is part of PennDOT's DNA, and we remain committed by developing smart approaches to doing business through catalysts, like the State Transportation Innovation Council and Lean government initiatives, to exploring transformational technology like automated vehicles, safety, and continuous quality improvement through employee engagement.



The Pennsylvania State Transportation Innovation Council (STIC) continues to be a vital and collaborative entity that remains focused on advancing proven innovations to improve transportation for the people of Pennsylvania.

The STIC celebrated its 10th anniversary in 2022. Originally established in 2012, the PA STIC held its inaugural business meeting in March of that same year. Unique in its approach to moving innovation forward, the PA STIC not only supports and promotes the deployment of EDC innovations, but it looks beyond to other innovations that may be well-suited for implementation in Pennsylvania. For that reason, the PA STIC continues to be upheld as a national model of success.

As part of the STIC's 10th anniversary celebration, the STIC launched a podcast series, interviewing former STIC members, co-chairs and innovation owners about the importance of innovation through collaboration; released a series of articles highlighting some of the most successful STIC innovations; and published a STIC timeline video featuring the STIC's accomplishments over the past decade.

The STIC also launched an Innovation in Motion webinar series focused on innovation through collaboration success stories. Topics included Unmanned Aerial Systems, Lean Government, Use of Measures and Metrics to Improve Government Operations and Digital Delivery in Transportation.



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STIC AND EDC INNOVATION SPOTLIGHTS

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Significant progress was made on several Federal Highway Administration (FHWA) Every Day Counts and STIC innovations as well as FHWA STIC Incentive Program funding projects in 2022.

Two new STIC innovations were introduced in 2022, including Elastomeric Spray Type Membrane Waterproofing and the Air Foil innovation. This brought the total number of STIC innovations currently in development to 10. Three additional innovations – Environmentally Sensitive Area Signage, Geosynthetic Stabilized Bridge Approach, and the Vegetation Management Equipment Catalog – moved to the Advancement Phase of the STIC Innovation Development Process, and the Certified Concrete Finishers Course innovation was fully deployed.

The STIC's Certified Concrete Finishers Course innovation reached an important milestone in April 2022 when PennDOT adopted a specification change to include the certification requirement on all PennDOT projects. With this change, contractors are required to ensure that 60 percent of their crews are certified to meet the new specification. Since 2019, nearly 1,600 Pennsylvania concrete finishers completed either the National Ready Mix Concrete Association (NRMCA) or American Concrete Institute (ACI) certification programs, making Pennsylvania first in the nation with finishers who have received the NRMCA lifetime certification. The Pennsylvania Aggregates and Concrete Association conducted 52 certification classes in 2022 which trained more than 800 individuals.

Work also continued on the FHWA EDC-6 innovations that Pennsylvania is pursuing, including Crowdsourcing for Advancing Operations; e-Ticketing and Digital As-Built; Next Generation Traffic Incident Management (TIM); Integrating Technology, Data and Training; Targeted Pavement Overlay Solutions (TOPS); and Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair.

As part of the Crowdsourcing for Advancing Operations innovation, PennDOT continues to use software that relies on crowd-sourced incident data from Waze and INRIX, two transportation mobile applications that provide traffic speed and incident data. The technology pulls together the speeds and incidents from a subset of vehicles on a given segment of road to provide real-time information, which enables Traffic Management Centers to better monitor incidents on individual routes around the state. Operators can select items in the incident list and see details of the length of the congestion and can zoom in on maps and cameras for a better picture of what is occurring. That information can then be quickly posted for queue protection, detouring, and displayed on the public-facing 511PA system.

To support EDC-6 e-Ticketing efforts, which involves converting paper-based materials ticketing systems and as-built plans into electronic workflows, PennDOT is moving into the third pilot season in 2023 with full implementation anticipated with the 2024 version of Publication 408. As part of the EDC-6 Digital As-Built innovation, PennDOT rolled out various pilot studies

focusing on different areas, including guiderails, Existing Ground Confidence, bridge authoring, and drainage authoring to support the overall goal of PennDOT's Digital Delivery Directive (3D2025) initiative.

The Next Generation Traffic Incident Management (TIM) incorporates training, data, and technology to help PennDOT, law enforcement officials and local agencies reduce secondary crashes and incident clearance times and various efforts are underway to support this innovation, including online traffic incident management courses for emergency management professionals across the state. The MView initiative, a multi-state partnership, which shares real-time video to help law enforcement, first responders and transportation agencies do a better job being aware of and managing weather, traffic and security issues, features more than 15,000 cameras from over 200 agencies in Maryland, Virginia, the District of Columbia, Baltimore, Maryland State Police and the Maryland Stadium Authority. In addition, PennDOT is piloting automated protection messaging for adverse driving conditions on Interstate 81 with the goal to give drivers more forewarning about changing weather conditions so they will slow down and avoid crashes.

The EDC-6 innovation Targeted Overlay Pavement Solutions (TOPS) builds on conventional overlay methods and includes new overlay materials and techniques. TOPS are more durable and cost-effective than traditional overlay methods and extend the lifespan of a roadway in a relatively short timeframe. This reduces the

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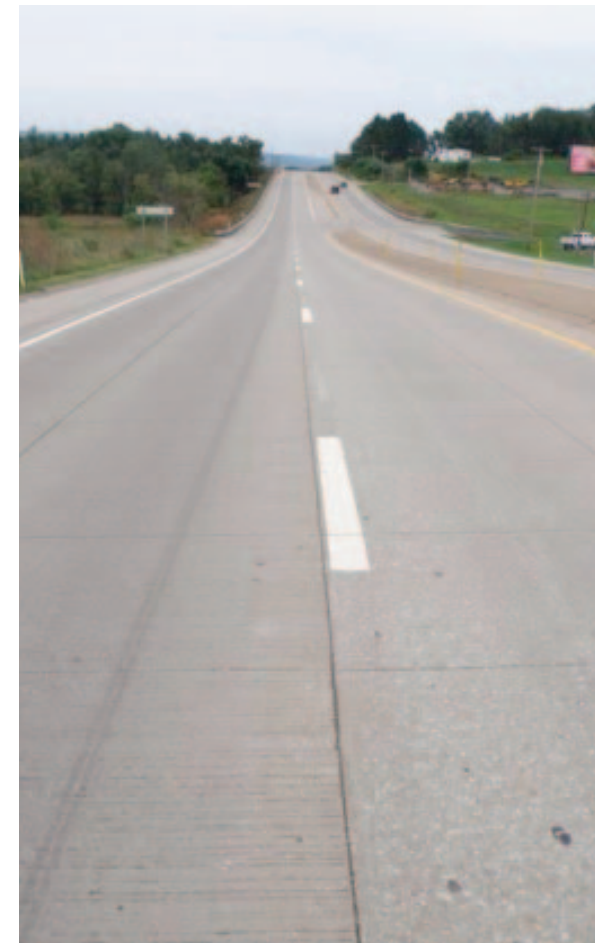
need for long-term lane closures and continuous roadway reconstruction projects. The innovation is being used on many projects throughout Pennsylvania. In District 6, Highly Modified Asphalt was used during the paving of a high traffic area on I-95. In District 1, Highly Modified Asphalt was used as part of a larger pilot project on approximately one mile of I-79. Asphalt Rubber Gap-Graded was tested along sections of four different roadways: SR 15 in Adams County, District 8, I-78 in Berks County, District 5, I-376 in Lawrence County, District 11, and SR 15 in Snyder County, District 3.

As part of the EDC-6 Ultra-High Performance Concrete (UHPC) for Bridge

Preservation and Repair innovation, PennDOT is exploring UHPC as a solution for several challenges the department is facing, including using UHPC for deck overlays, to repair steel beam ends and to create Bridge Deck Link Slabs. Bridge Deck Link Slabs are replacements for bridge joints. They allow the structure to rotate without creating a maintenance item that needs regular replacement and keep deicing salts from having a pathway to affect the superstructure below the deck. Bridge Deck Link Slabs is a current STIC innovation and has been piloted in District 1.

The Bridge Deck Link Slabs innovation received STIC Incentive Program funding in 2021 to assist with the development of a

design tool, which will ultimately help bridge engineers decide whether a bridge is suited for using Bridge Deck Links Slabs. The design tool, currently in the testing phase in the department, analyzes the changes to the force effects on the bridge caused by the link slabs and determines if the effects are structurally acceptable, or if additional modifications to the structure are needed.



TRANSFORMATIONAL TECHNOLOGIES

National Electric Vehicle Infrastructure (NEVI) Plan



Signed by President Joe Biden in November 2021, the Bipartisan Infrastructure Law (BIL) created the National Electric Vehicle Infrastructure (NEVI) Formula Program, which provides Pennsylvania with \$171.5 million in dedicated formula funding.

The initial focus of this funding is for states to strategically deploy Direct Current Fast Charging (DCFC) stations along its designated Alternative Fuel Corridors (AFCs), to help build out the national EV AFC network. Once a state's AFC network is “fully built out” according to FHWA criteria — NEVI-compliant DCFC stations that are both: a) no more than 50 miles apart along each AFC; and b) no more than 1 mile from the nearest AFC exit — then that state may use NEVI Formula Program funds for EV charging infrastructure on any public road or other publicly accessible location.

Pennsylvania's NEVI State Plan was approved by FHWA on Sept. 14, 2022. Federal guidance on the \$2.5 billion Discretionary Grant Program is anticipated for Fall 2022.

PennSTART

On August 11th, Pennsylvania Department of Transportation (PennDOT) Secretary Yassmin Gramian announced that the department, the Pa. Turnpike Commission, and the Regional Industrial Development Corporation (RIDC) of Southwestern PA are partnering

on site planning and design for the Pennsylvania Safety, Transportation and Research Track, or PennSTART -a state-of-the-art facility envisioned to benefit emergency responders, transportation technology companies, and research institutions while supporting the local economy. In addition to allowing Automated Vehicle (AV) testing and development, PennSTART's aim is to address safety, training, and research needs in six key areas: traffic incident management (TIM); tolling and intelligent transportation systems (ITS) technology; work zones; commercial vehicles; transit vehicles; and AV and other emerging technologies.

Navy Yard Shuttle

PennDOT partnered with PIDC and Delaware Valley Regional Planning Commission (DVRPC) to bring the first automated shuttle to the Philadelphia Navy Yard. Beginning in December, the zero-emissions shuttle pilot consists of testing, training, and analyzing the shuttle's performance at the Navy Yard. Once this testing is complete in early 2023, Phase 1 of the full deployment will augment existing transportation services between key locations within the Navy Yard, and then in Phase 2 will connect the Navy Yard to SEPTA's NRG Station on the Broad Street subway line and adjacent to the Sports Complex and FDR Park. PennDOT will oversee regulatory approvals and is partnering with researchers at Drexel University to analyze shuttle performance and rider feedback to inform future deployments.

Connected and Automated Vehicle (CAV) Hotspots

PennDOT performed a research study on connected and automated vehicle hotspots. The goal of this project is to utilize data such as census information, industry trends, traffic data, and other sources sets to identify locations in Pennsylvania most likely to see initial market penetration of connected and automated vehicles. PennDOT and planning partners can utilize the tools developed as part of the project to prioritize CAV deployments.



Lean Efforts Continue at PennDOT

In support of Governor Wolf's LeanPA initiative, PennDOT continued to provide updates to the Governor's Office of Performance through Excellence (OPE) in 2022 on Lean and process improvement initiatives being advanced across the department through the coordinated efforts of PennDOT's Bureau of Innovations (BOI) and its District Lean Leaders. Lean is a set of tools and strategies aimed at improving performance by making processes simpler, better, faster, and cheaper. Lean focuses on the customer by maximizing customer value and minimizing waste.

PennDOT launched its Focus on Innovations online publication in March 2022, which is a first-of-its-kind online publication highlighting innovations from across the department, including Lean process improvements. Some of the Lean innovations featured included: PennDOT's Driver and Vehicle Services mobile ticketing system, which is reducing wait times at Driver License Centers; deploying integrated billing, record keeping, and flight carting software in PennDOT's Bureau of Aviation to save money by eliminating paper records; and creating an Adopt A Highway supply pick-up box outside of the Allegheny County Maintenance Office that reduced contact with the public during the pandemic, thereby increasing safety.

As an example of PennDOT's continued commitment to continuous improvement, BOI supported the Bureau of Office Services (BOS) in the continuous improvement initiative of enhancing the Highway Equipment Repairs process. After initially mapping the process together, program updates required the process to change. BOI worked with BOS stakeholders to update the process map to reflect the new requirements. BOS presented their work at a monthly District Lean Leaders meeting and during a PennDOT Innovation in Motion webinar focusing on Lean government.

PennDOT continues to serve as a member of the Transportation Lean Forum (TLF), an international group of Lean practitioners who gather every other month to discuss Lean successes and challenges. BOI presented about the department's Lean Dashboard at the May 2022 TLF, discussing the dashboard's design, data sources, and use. The presentation received accolades from those present, and several participants, including representatives from various transportation agencies reached out to BOI to obtain additional information to use toward developing their own dashboards.



Monthly Lean calls with PennDOT Lean champions brought together this community of practice to advance process improvement across the department. Each month, several PennDOT organizations presented Lean innovations from their work areas on a broad range of topics. Some noteworthy presentations, in 2022 included: District 12's ISO Quality Management System, Driver and Vehicles Services' Real ID Metrics, District 10's Quality Transportation Construction Projects and District 2's Centre County Garage Organization. These initiatives covered a range of Lean tools, including, but not limited to, process mapping, visual management, and metrics.

Through these efforts, PennDOT organizations reported eight projects with 18,381 hours in annual time savings, nine projects with \$613,445 in annual cost savings and 15 projects with a 73% improvement in quality or throughput in 2022 alone. Since PennDOT began reporting Lean metrics in 2018, there have been 65 Lean projects that have reported a total of 29,238 hours in time savings annually, 15 projects that showed more \$4 million in annual cost savings, and 171 projects that improved operations by an average of 38%.

PennDOT INNOVATIONS AWARDS

PennDOT Innovations Challenge



PennDOT hosted the fifth annual Innovations Challenge in 2022. The challenge asked students, in ninth through 12th grades, to develop a comprehensive and cost-effective public engagement strategy, taking Pennsylvania's diverse demographics into consideration, beyond the current public engagement procedures (outlined in Publication 295) that uses innovative technologies and tools that PennDOT can implement to more effectively engage and connect with all age groups during the transportation planning and project development process.

PennDOT received more than 30 innovative solutions from schools across the state. In April 2022, seven regional winners participated in a statewide judging event with the Secretary and a panel of judges.

The 2022 PennDOT Innovations Challenge winning team from Monroe Career and Technical Institute in Monroe County developed the "PaE3 program" a solution designed to help communities become "Excited, Educated and Engaged" about PennDOT projects. The program focuses on using existing technologies to approach the need for communication between PennDOT and its key stakeholders, including using map applications like Waze and Google Maps to provide notifications about proposed road work projects, similar to how those sites show accidents and current construction projects.

PennDOT Celebrates Employees at Annual Awards Ceremony



PennDOT Secretary Yassmin Gramian, P.E., hosted the annual PennDOT Innovations Award Ceremony in November 2022, recognizing the groundbreaking work of 91 PennDOT employees during the past year. Nineteen employees were recognized for their innovative idea and smart practice submissions into PennDOT's IdeaLink and WorkSmart online employee engagement systems.

Sixty-nine members of PennDOT District 12's I-70 and Route 51 Emergency Bridge Repair Team received the George W. McAuley, Jr., P.E. Innovation Award, for their use of a novel design-build-like approach to conduct an emergency bridge repair in approximately five weeks. PennDOT's District 3 Bulk Diesel Exhaust Fluid (DEF) Cube Team was honored with a George W. McAuley, Jr., P.E. Innovation Award Runner-Up trophy for their work installing a 660-gallon DEF Cube that will allow the district to buy fuel in bulk for the truck fleet, saving money.

The award, named for PennDOT's late executive deputy secretary who passed away in 2021, recognizes employee-driven teams of three or more that help to promote and foster continuous improvement at PennDOT by advancing innovation or solving a problem.



PennDOT Creates Council on Inclusive Excellence, New Position Focused on Transportation Equity

At PennDOT, we're committed to ensuring that equity is at the heart of everything we do. Last year, we released the PennDOT Dismantling Systemic Racism and Inequities 2021 report (PDF), which discussed how PennDOT can achieve greater equity in the areas of contracting, public involvement, community investment, our boards and commissions, and of course, our own internal culture at the department.

As part of that effort, PennDOT established the Council on Inclusive Excellence (CIE), which is comprised of staff from across the department. The CIE works to integrate best practices for diversity, equity, and inclusion into agency policies and programs.

This work also led us to create a new position, Director of Equitable Transportation, to work with staff, partners, and stakeholders to best determine how to embed equity in all our short and long-range planning and in our contracting processes – making it part of the process every step of the way.

We are committed to making forward progress in our transportation equity efforts. Creating and supporting a quality transportation system that works for everyone is at the center of the department's mission, and PennDOT is committed to the ongoing work that this requires.



Improving Equity in Contracting

Small and diverse businesses are central to our economy, and PennDOT is focused on helping set small and diverse businesses up for success in securing contracting opportunities with the department. We must ensure that as the tide rises in our industry, that disadvantaged businesses see their ships rise along with us all.

We conducted a Disparity Study in 2018, and one of the recommendations of the study was for PennDOT to seek opportunities to educate, mentor and grow DBE firms. The Dismantling Systemic Racism and Inequities Working Group recommended the formation of a mentor-protégé program as a critical step in addressing this issue.

Through collaboration with our federal partners and the industry, we have developed a program that will increase opportunities for diverse business entities to compete for prime contracts, build capacity, and gain the experience needed to pursue larger scale projects.

In October, PennDOT was proud to host its first one-day conference designed to connect small, minority, women-owned and disadvantaged business enterprises (DBEs) with potential contracting opportunities at the department. The conference was open to DBE firms, primes, contractors and industry leaders, and will cover such topics as DBE certification, the PennDOT prequalification process, branding strategies, and a panel discussion on best practices from current DBE's, among other sessions. Additionally, firms learned how to participate in PennDOT's Mentor-Protégé program, which connects DBEs with prime contractors to gain and expand experience in the industry.

As a follow-up to the conference, PennDOT is holding smaller workshops in all PennDOT districts that will provide direct support to businesses with the DBE certification process, on-the-job training opportunities, contract compliance training, and more.



TOP REGIONAL PROJECTS 2022

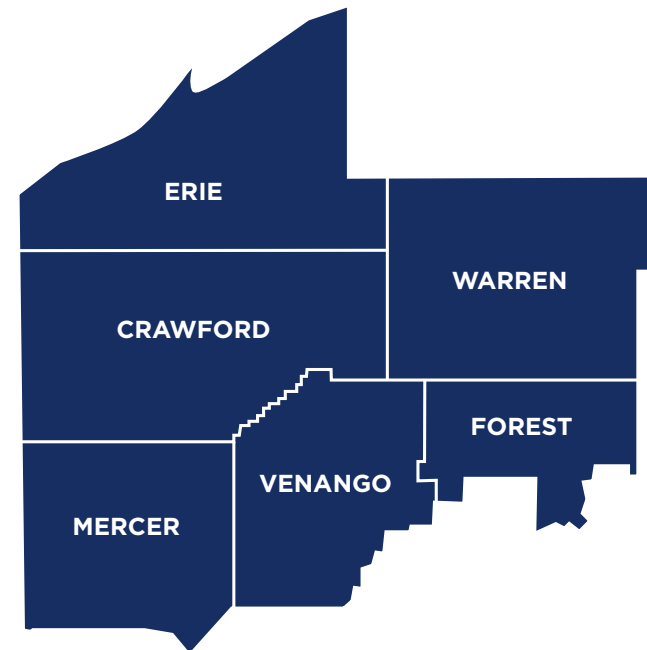


Photo Credit: Dave Thompson

DISTRICT 1

The Oliver Road Intersection Improvement Project included the construction of a five-leg roundabout at the intersections of Oliver, Flower, and Hamot roads in Summit Township, Erie County. The project was developed to address safety concerns at the intersections, which had crash rates more than two times the statewide average for similar roadways. The single-lane roundabout includes new sidewalks, ADA curb ramps and lighting, drainage improvements, vegetation replacement, and environmental mitigation. During the design phase, archeological research was done in the work area nearest to the Erie County Technical School. Construction work was done in seven phases over two years.

Erie County: \$3.8 million





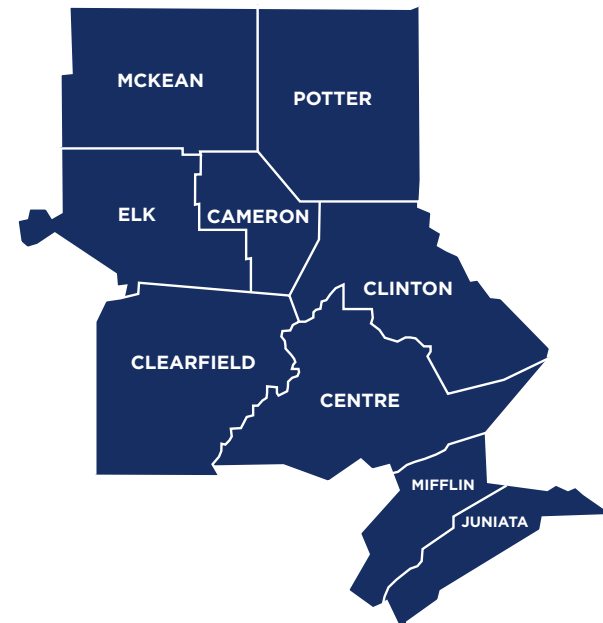
DISTRICT 2

Interstate 80/Section A18 local interchange and access from Route 26 to I-80

Located east of Bellefonte, completion of the new interchange is part of a long-awaited safety improvement in Centre County. The local interchange project is the first phase of a three-phase project to build local access, a high-speed interchange connection between I-99 and I-80, and improve Jacksonville Road (Route 26).

In July 2018, the project was awarded an initial \$35 million federal Infrastructure for Rebuilding America (INFRA) grant. Completing all three phases will support the regional freight economy, improve the reliability of roadway travel throughout the region, and enhance safety for roadway users.

Centre County: \$52 million

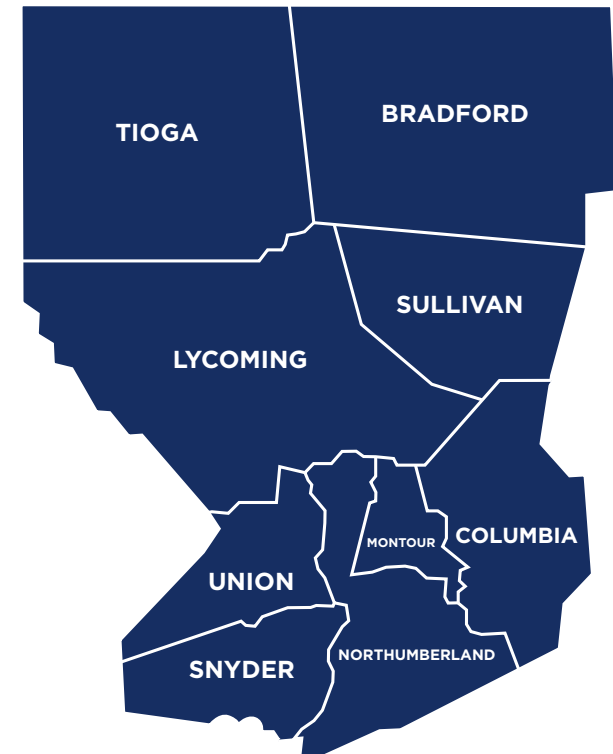




DISTRICT 3

The Central Susquehanna Valley Transportation Project (CSVT) Northern Section is a new 4-lane, limited access highway connecting Route 147 south of Montandon, Northumberland County to Route 15 south of Winfield, Union County. The project included a 4,545-foot bridge over the West Branch Susquehanna River, eight other highway bridges, 5 million cubic yards of earthwork, 4 miles of composite pavement, two interchanges, and new route designations for Routes 147 and 405. After nearly 7 years of construction, the new highway was opened to traffic in 2022. It is expected to reduce congestion and improve safety by separating trucks and through traffic from local traffic. The new highway will accommodate growth and positively impact the economy of the region.

Northumberland County and Union County: \$338 million





DISTRICT 4

This highway improvement project is located on State Route 2001 (Milford Road) in Lehman Township, Pike County.

This project consists of roadway reconstruction, realignment, and travel lane & shoulder widening. To improve safety on the roadway, the horizontal and vertical geometry was corrected and now meets current design criteria. The project required excavation, handling, treatment, and placement of acid-bearing rock and soil materials. Additional work included: wetland mitigation, replacement of an existing concrete I-beam bridge, the installation of a pre-cast concrete arch culvert, excavation, full depth bituminous paving, utility improvements and relocations, and landscaping throughout the project area.

The project covered 5.5 miles of SR 2001 and will be completed in the spring of 2023.

Pike County: \$30 million





DISTRICT 5

The U.S. 222 Intersections Project involved replacing the signalized intersection of U.S. 222/Genesis Drive with a modern roundabout, the addition of a roundabout at U.S. 222/Schaeffer Road, widening of the U.S. 222/Route 73 intersection with turn lanes and upgraded signalization, and widening this section of U.S. 222 from a single lane in each direction to two lanes in each direction. The project is located in Maiden Creek Township, Berks County. Work began in September 2019 with major work being completed in November 2022. The average daily traffic volume on U.S. 222 through the project limits is 26,015 vehicles daily north of the Route 73 intersection and 22,563 vehicles daily south of the Route 73 intersection.

Berks County: \$26.9 million





DISTRICT 6

I-95 Section GR4 - This project rebuilt and improved 1.5 miles of southbound Interstate 95 between Allegheny Avenue and Columbia Avenue in the Fishtown and Port Richmond sections of Philadelphia and included replacement of the mile-long I-95 southbound viaduct and the associated southbound ramps at Girard Avenue.

The Section GR4 contract also constructed sustainable enhancements adjacent to and beneath I-95. Among those features are a multi-use trail; low-maintenance landscaping; urban stormwater management devices; enhanced public spaces; LED street and understructure lighting; and thematic formliners for decorative treatment of bridge and abutment walls.

Work on this project began in March 2018 and finished in December 2022.

Philadelphia County: \$328.3 million

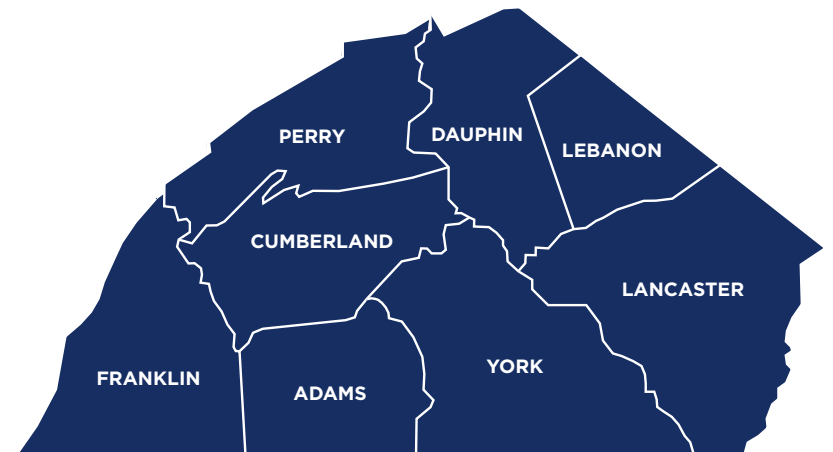




DISTRICT 8

Interstate 83 reconstruction project includes widening and rebuilding a 2.77-mile section of I-83 east of the City of Harrisburg from just south of Exit 48 for Union Deposit Road, through Exit 50 for U.S. 22 (Colonial Park/Progress), to Exit 51 for Interstate 81. This project is part of the larger Capital Beltway Project to address deteriorating road conditions, safety and congestion on I-83 in the Harrisburg region. This section of the beltway project was completed in early summer of 2022.

Dauphin County: \$104.7 million





DISTRICT 9

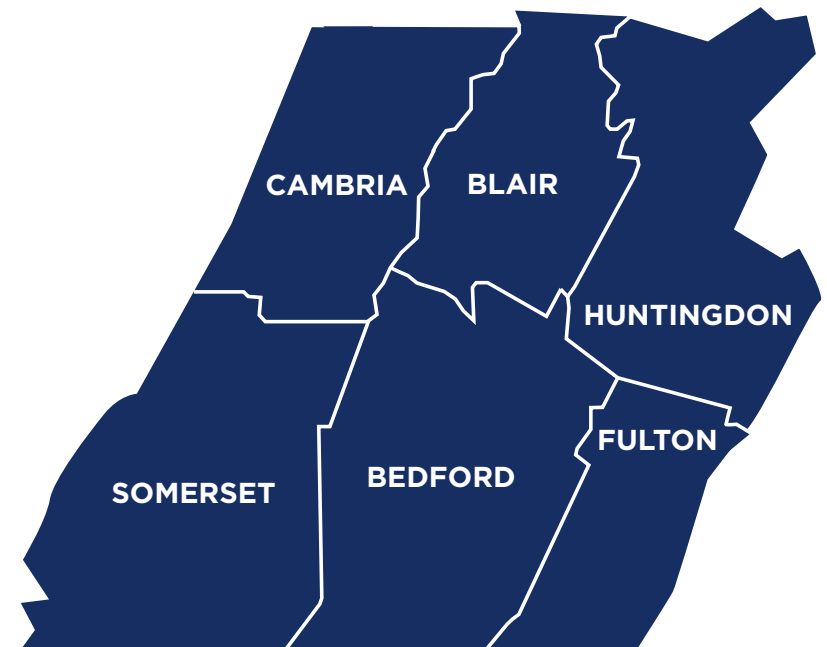
The Geistown corridor improvement project extended 1.75 miles from the Bedford Street/Penrod Street intersection in Stonycreek Township to the Scalp Avenue/Luray Avenue intersection in Richland Township, Cambria County.

On Bedford Street from Penrod Street to Luray Street and on Scalp Avenue from Lamberd Avenue/Demuth Street to Luray Avenue, the pavement was resurfaced, and a two-way left-turn lane was added within the existing roadway area by removing through lanes.

The two-way left-turn lane provides safer access to properties and minor streets along the corridor.

The existing cloverleaf interchange on Scalp Avenue at Belmont Street was replaced with an an-grade, single lane roundabout and the existing bridge was removed. Sidewalks were constructed around the roundabout and along roadways in the vicinity of the roundabout. Four traffic signals were replaced, and two others had minor modifications to support the lane reconfiguration.

Cambria County: \$7.8 million

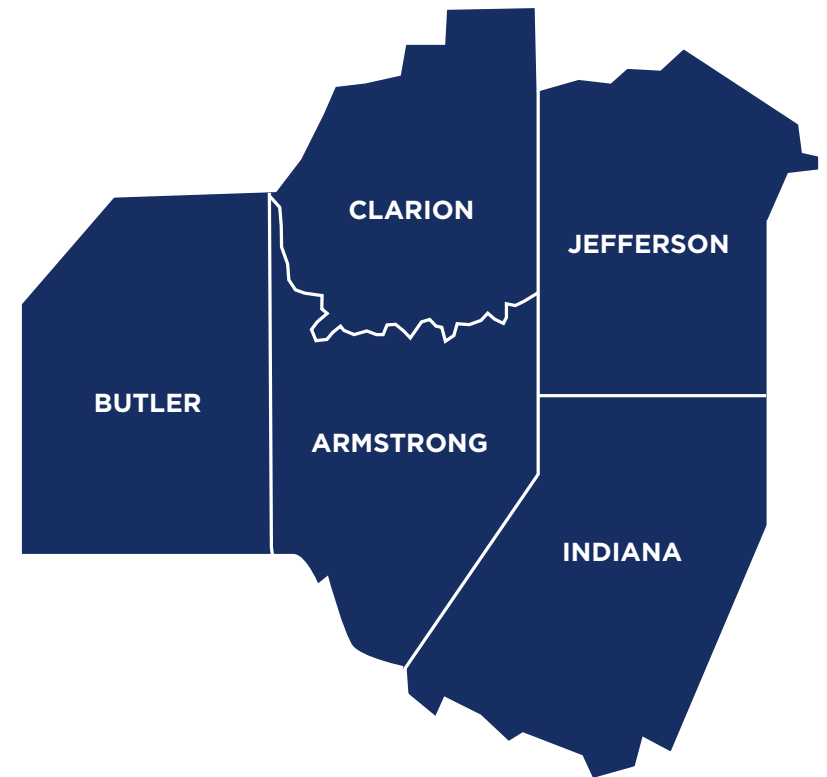




DISTRICT 10

The Jackson Township Improvement project consisted of intersection upgrades and a roundabout along Route 19 in Butler County. Work included the new concrete roundabout, widening, paving, drainage, and new signals. This project was built while maintaining two lanes of traffic on the roads during the day and with minimal traffic impact. Work began in Spring 2021 and was completed in the Fall 2022. The project was developed and funded through a Cooperation Agreement between PennDOT, Jackson Towne Centre, LLC (Project Sponsor) and Jackson Township which applied the award of \$1.5M in State Multimodal Transportation Funds (MTF) and \$1.5M from the Governor's Transportation Infrastructure and Investment Fund (TIIF) to the construction phase of the project. The remainder of construction costs (~\$900k) and all pre-construction phases were funded by the project sponsor.

Budget: \$3.9 million

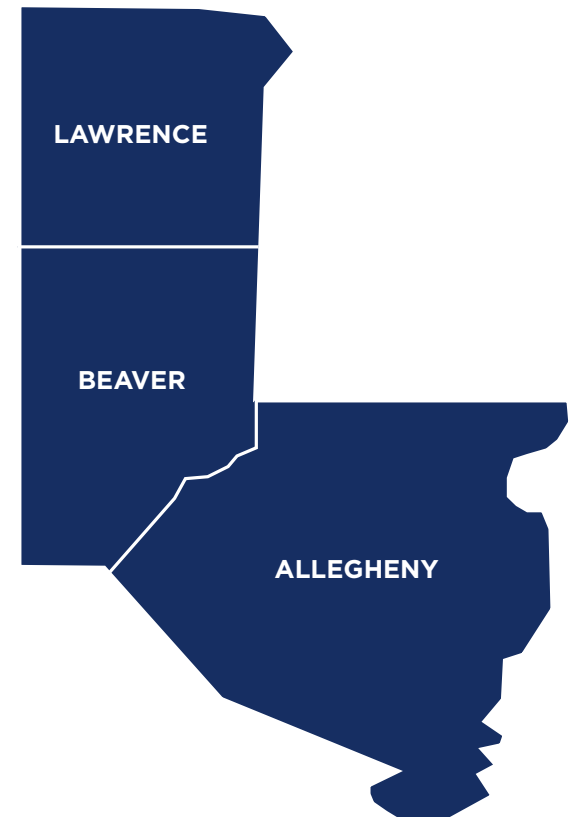




DISTRICT 11

The reconstruction of the Fern Hollow Bridge, which carries Forbes Avenue over Frick Park in the City of Pittsburgh, comes less than a year from when the city-owned structure collapsed. The project is an excellent example of collaboration between the department, the Federal Highway Administration, the City of Pittsburgh, the contractor, and consultant. An emergency declaration by Governor Wolf allowed the project to use all available powers, resources, and personnel deemed necessary to cope with the magnitude and severity of the bridge collapse. The expedited reconstruction includes a 5-foot sidewalk and a 10-foot 5-inch shared use path, as well as a mid-block crossing, that will enhance bike and pedestrian safety.

Allegheny County - \$25.3 million

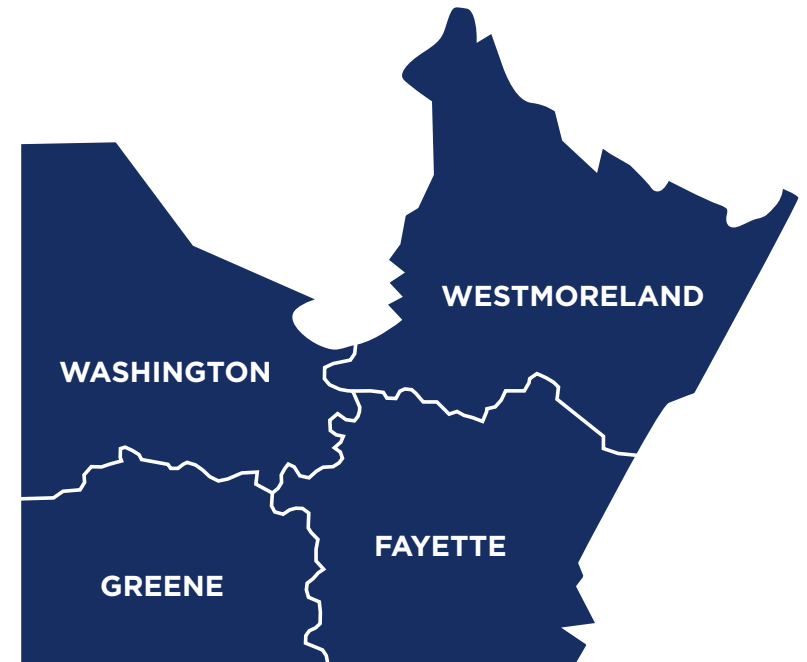




DISTRICT 12

The Interstate 70 Yukon & Madison Interchanges Project, located in South Huntingdon Township, Sewickley Township, Hempfield Township, and New Stanton Borough. This project involved the reconstruction and widening of Interstate 70 with 3.7 miles of new concrete pavement, full reconstruction of the Yukon (Exit 53) and Madison (Exit 54) interchanges, replacement of four mainline I-70 structures, one mainline culvert, and installation of a new culvert at the Yukon eastbound on and off ramps. Additionally, the project included new interchange signing and overhead sign structures, highway lighting at the Madison Interchange, Intelligent Transportation Systems work (ITS), drainage, guiderail, pavement markings, storm water mitigation, including basin construction, and stream relocation and mitigation. The project is substantially complete as of November 2022.

Westmoreland County: \$92.8 million





REVENUE SOURCES 2021-22 (IN THOUSANDS)

State Funding

Motor License Fund: Non-Restricted	\$2,692,001
Motor License Fund: Restricted	\$1,901,979
Motor License Fund: Restricted Aviation	\$11,780
Multimodal Fund	\$139,244
Act 44 Public Transportation Trust Fund	\$2,055,239
Act 26 Public Transportation Assistance Fund	\$262,183
Pennsylvania Infrastructure Bank	\$42,000
Lottery Fund	\$170,907
General Fund	\$128,115
General Fund Bonds	\$175,000
Unconventional Gas Well Fund	\$1,000
Organ & Tissue Donation Awareness Fund	\$80
Total State Funding	\$7,579,528

Federal & Other Funding

Federal Funds: Highways	\$2,273,129
Federal Funds: Pass Through	\$171,958
Federal Funds: Public Transportation and Other	\$205,750
Federal & Other: Aviation	\$45,049
Other Funds: Highways	\$226,111
Federal & Other Funds - Rail Freight	\$0
Total Federal & Other	\$2,921,997

Total Funding **\$10,501,525**

Bipartisan Infrastructure Law

The federal Infrastructure Investment and Jobs Act (IIJA) – or Bipartisan Infrastructure Law (BIL) – signed by President Joe Biden in late 2021 was the largest federal investment in infrastructure in decades. In this first year under the new law, Pennsylvania's communities have already seen benefits across the commonwealth.

The BIL invests in various infrastructure types and all transportation modes. The BIL will bring \$4 billion in new highway and bridge funds to Pennsylvania over the next five years, and nearly \$600 million in the 2022 federal fiscal year alone. These investments are supporting and accelerating projects across Pennsylvania when, without it, cost and supply challenges would have resulted in fewer projects.



Photo Credit: Dave Thompson

REVENUE USES 2021-22 (IN THOUSANDS)

Highway Related

Highway & Bridge Maintenance	\$1,777,044
Highway & Bridge Improvement.....	\$3,281,654
Driver & Vehicle Services.....	\$311,526
Payments to Local Government	\$869,172
PennDOT Facilities.....	\$16,000
General Government Operations.....	\$58,934
Pennsylvania Infrastructure Bank.....	\$42,000
Refunds & Other.....	\$3,550
Welcome Centers	\$4,115

Total Highway Related Uses\$6,363,995

Multimodal Related

Aviation	\$66,829
Rail Freight	\$41,000
Mass Transit	\$2,442,422
Rural & Intercity Transit.....	\$207,650
Free & Shared Ride Transit.....	\$170,907
Aviation Grants.....	\$6,720
Rail Freight Grants (EA).....	\$11,197
Passenger Rail Grants (EA).....	\$8,959
Ports & Waterways Grants (EA).....	\$11,197
Bicycle & Ped. Facilities Grants Statewide (EA)	\$2,239
Statewide Program Grants (EA)	\$40,000
Multimodal Administration & Oversight (EA).....	\$4,317
Transfer to Commonwealth Financial Auth. (EA).....	\$54,615
PennPorts Regional Port Auth. Debt Service	\$0

Total Multimodal Uses.....\$3,068,052

Debt Service & Other Agencies

Pennsylvania State Police	\$509,870
General Fund Capital Debt	\$119,646
Pennsylvania Turnpike.....	\$163,782
Motor License Fund Capital Debt: Hwy & Bridges.....	\$130,375
Other Agencies.....	\$136,805
Tort Payments.....	\$9,000

Total Debt Service & Other Agencies\$1,069,478

Total Revenue Uses.....\$10,501,525



2021-22 PENNDOT INCOME & EXPENDITURES

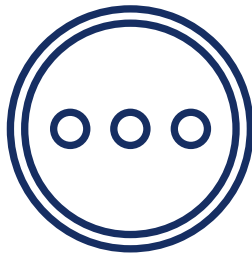
2021-22 MOTOR LICENSE FUND INCOME



LIQUID FUELS TAX: **3,384,633**



LICENSE & FEES: **1,139,824**



OTHER: **\$9,840**

Total State Revenue Utilized - \$4,534,297
(Dollars in Thousands)

2021-22 MOTOR LICENSE FUND EXPENDITURES



HIGHWAY MAINTENANCE: **\$1,678,818**



HIGHWAY & BRIDGE IMPROVEMENT: **\$1,057,669**



STATE POLICE: **\$500,000**



LOCAL SUBSIDY: **\$612,417**



DRIVER & VEHICLE SERVICES: **\$247,735**



OTHER DEPARTMENTS: **\$193,661**



TURNPIKE: **\$163,782**



OTHER PENNDOT: **\$80,215**

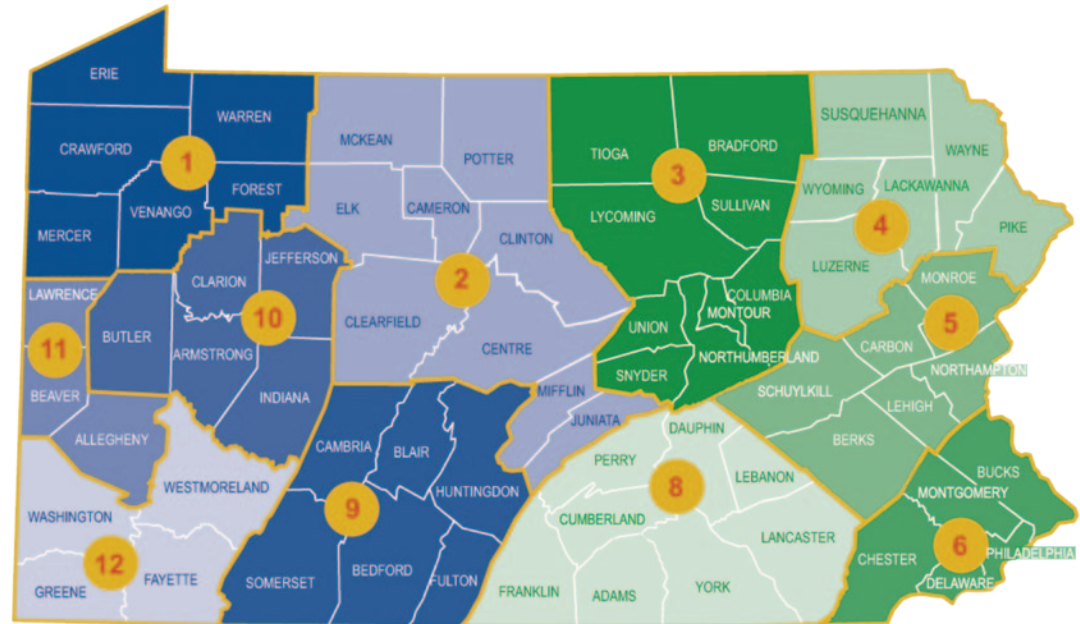
Total State Expenditures - \$4,534,297
(Dollars in Thousands)

PENNDOT ENGINEERING DISTRICTS

PennDOT's 11 Engineering Districts throughout the state maintain, restore and expand the state's highway systems. Each office does its part to deliver a safe and efficient transportation system on the nearly 40,000 miles of highway and roughly 25,400 bridges that PennDOT is responsible for.

See or sign up for PennDOT news near you at www.penndot.pa.gov under "Regional Offices."

More information about PennDOT's operations and the state highway system is available in PennDOT's Fact Book at www.penndot.pa.gov under "About Us."



District 1 – 814-678-7085

District 2 – 814-765-0400

District 3 – 570-368-8686

District 4 – 570-963-4061

District 5 – 610-871-4100

District 6 – 610-205-6700

District 8 – 717-787-6653

District 9 – 814-696-7250

District 10 – 724-357-2800

District 11 – 412-429-5000

District 12 – 724-439-7315

Driver Licensing and Vehicle Registration - 717-412-5300

Regional Twitter Handles

Allentown@511PAAllentown
Altoona@511PAAaltoona
Erie@511PAErie
Harrisburg@511PAHarrisburg
Philadelphia@511PA Philly
Pittsburgh@511PAPittsburgh
Scranton@511PANortheast
State College@511PAStateColl
Statewide@511PAStatewide

Regional Facebook Links

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www.facebook.com/groups/BayfrontParkwayProject/
www.facebook.com/groups/pittsburghpenndot/
www.facebook.com/groups/northeastregionpenndot/

Learn about our executive team at www.penndot.pa.gov under "About Us."

Secretary

Secretary of Transportation **Yassmin Gramian, P.E.** oversees programs and policies affecting highways, urban and rural public transportation, airports, railroads, ports, and waterways. She manages PennDOT's annual budget, which is invested in Pennsylvania's approximately 120,000 miles of state and local highways and 32,000 state and local bridges. Under her leadership, the department is directly responsible for nearly 40,000 miles of highway and roughly 25,400 bridges.

She also has oversight of the state's 10.3 million vehicle registrations and 9 million driver's licenses and IDs.

Acting Executive Deputy Secretary

Melissa J. Batula, P.E., was appointed PennDOT's Acting Executive Deputy Secretary in March 2021, after serving as the first female Deputy Secretary for Highway Administration since January 2020. She is adept at building strong relationships with industry and government partners and is committed to helping to guide the department in successfully carrying out its mission.

Highway Administration

Michael Keiser, was appointed Acting Deputy Secretary for Highway Administration in March 2021. He leads PennDOT's largest deputation which includes employees in "design, construction, maintenance, materials testing, environmental review, safety, and traffic engineering.

Driver And Vehicle Services

As deputy secretary of Driver & Vehicle Services, **Kurt J. Myers** and his team oversee the issuances of driver's licenses, ID cards, motor vehicle registrations, driver license centers and standalone photo license centers, regulatory oversight of statewide driver safety programs, vehicle safety inspection and the enhanced auto emissions program.

Planning

Deputy Secretary for Planning **Larry S. Shifflet** and his group work with the federal government and local planning organizations to develop the 12-Year Transportation Program, which serves as the blueprint for highway, bridge, aviation, rail freight and mass transit improvements

Multimodal Transportation

Andy Batson, AICP, Acting Deputy Secretary for Multimodal Transportation, oversees aviation, rail freight, public transportation, ports, pedestrian and bike programs.

Administration

Michelle Jennings was appointed acting deputy secretary for administration in July 2021. She heads the Administration deputation which includes the bureaus that oversee fiscal management, computer systems, mobile applications, telecommunications, equal opportunity/equal employment opportunity in contract compliance, training, employee safety programs, human resources, office services, and facilities management.



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iPhone



Android

