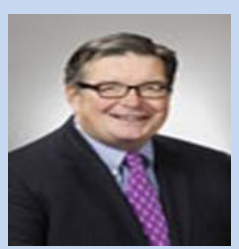




Mercer County

"The County Capital"



Brian M. Hughes
Mercer County Executive



2016 Annual Summary Report 2017 Goals Department of Transportation & Infrastructure

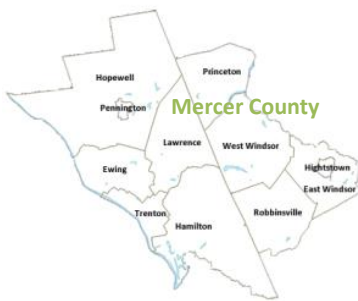
...enhancing the quality of life for Mercer County residents by ensuring a safe, efficient and reliable transportation system today and into the future...



Aaron T. Watson

Deputy Administrator

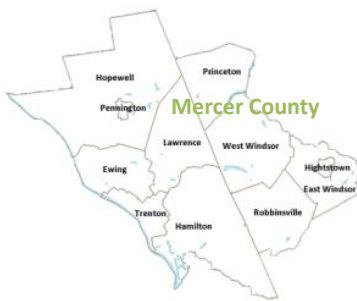
Prepared by: The Mercer County Department of Transportation & Infrastructure



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

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Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Executive Summary

I am extremely pleased to submit the Department of Transportation and Infrastructure's 2016 Accomplishments and 2017 Goals Annual Report. Over the past year, we have stayed committed to our goal of preserving and enhancing the quality of life of our citizens by improving County transportation infrastructure and resources. In spite of limited resources and unforeseen adverse circumstances this year, including a nearly six month freeze of projects funded through the State Transportation Trust Fund, we have been highly successful in meeting most of our goals set forth last year. Furthermore, we have added to the list of 2016 accomplishments that were not previously identified goals. For example, we added a new airline carrier, Allegiant Airline, in 2016, which was a major accomplishment but an unforeseen goal in 2015.

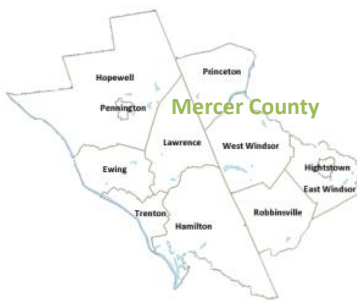


Aaron T. Watson
Deputy Administrator

This past year, I, along with my team, have experienced a number of changes in our roles and job functions. In September of 2016, I have taken on the role of the Executive Director of the Mercer County Park Commission while continuing my role as Deputy Administrator of the Department of Transportation and Infrastructure overseeing the Airport and Buildings and Grounds Divisions. In addition to remaining in his position as County Engineer, Gregory Sandusky has taken on the role of Director for the Department Transportation and Infrastructure and now oversees four (4) other divisions within the Department of Transportation and Infrastructure: Highway, Motor Pool, TRADE and Engineering. We are fortunate that Greg has accepted this leadership role and are excited for the future.

In addition to addressing infrastructure needs and providing transportation related services on an ongoing, daily basis, I am proud of some notable accomplishments in 2016. These include:

- Adding Allegiant Air to our current portfolio of commercial passenger airline providers at Trenton Mercer Airport (TTN);



Department of Transportation & Infrastructure

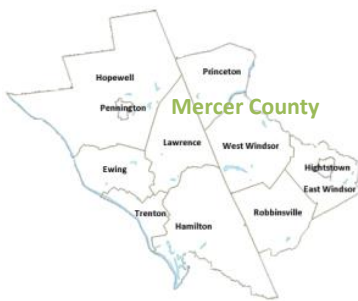
2016 Accomplishments/2017 Goals

- Completing rehabilitation of several key taxi taxiways at TTN;
- Receiving an award for “*Project of the Year*” for Bear Tavern and Jacobs Creek Bridges;
- Completing resurfacing projects on sixteen (16) roadway segments using in-house staff;
- Completing bridge reconstruction on thirty-six (36) bridge structures using in-house staff;
- Initiating the Local Concept Development Study for the Lincoln Avenue Bridge Replacement in City of Trenton. The study is being funded through Delaware Valley Regional Planning Commission (DVRPC).

For Year 2017, the Department of Transportation and Infrastructure is also proposing to undertake several key projects and initiatives:

- Airport Master Plan
- Additional Airport Fixed Base Operator (FBO)
- Milling and Resurfacing Projects
- CR 533 Signal Progression
- Reconstruction of three (3) major bridge projects.
- Project for Interagency Coordination for Long-Distance Human Service Transportation.
- Youth Detention Center renovations.

We look forward to another prosperous year!



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Buildings & Grounds

Karl Thomas, General Supervisor of Trades



The Division of Buildings & Grounds provides safe, secure and well maintained buildings and grounds for the general public, residents and employees of Mercer County. The staff strives to provide these services in a courteous, professional, and responsible manner. The Buildings & Grounds Maintenance Department provides physical support, custodial and maintenance services to 37 different county-owned facilities and several county offices located in leased areas. Among other responsibilities, department staff ensures building safety and the optimal performance of building systems by providing preventative maintenance and repair of mechanical, HVAC, electrical, plumbing, building security systems and interior/exterior repairs and renovations.

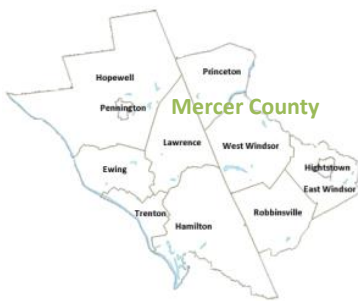
Operations:

- Property Management
- Janitorial
- Grounds Maintenance
- Security
- Snow Removal
- Mail Distribution

Maintenance:

- Preventive Maintenance
- Service/Work Order Request Completion
- Minor Maintenance
- Major Maintenance

Fiscal Year 2016 Operating Budget – *Goal accomplished.* A realistic and end-of-year projection was formulated in preparing the budget and approved by the Mercer County Board of Chosen Freeholders. Throughout the year, this division is responsible for the monitoring and controlling of expenditures and budgetary compliance. The total approved Fiscal Year 2016 budget is \$9,324,066 and employs a staff of 51.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Fiscal Year 2016 Capital Budget – *Goal accomplished.* The Capital Budget is the appropriations approved annually by the Mercer County Board of Chosen Freeholders as part of the annual Operating Budget process. The Capital Budget is the actual funding for approved projects in the fiscal year covered by the operating plan. The total approved Fiscal Year 2016 Capital Budget is \$2,130,000.

NJ State Contract Purchases – *Goal accomplished.* To obtain the best value at competitive prices vendors covered under the most current contract were utilized.

Maintenance of Facilities – *Goal accomplished.* The division performed and facilitated renovations, repairs and upgrades to County-owned and occupied facilities and grounds. In 2016 division personnel completed the following projects:

Administration Building (640 South Broad Street)

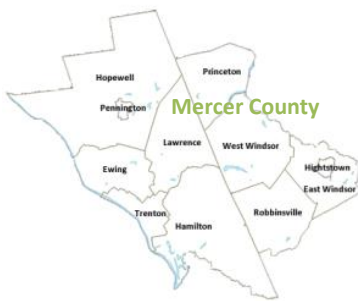
- Fire Pump and Controller

Correction Center (1750 River Road, Lambertville)

- Fire Hydrant
- Underground Storage Tank
- Compressor (*Records Wing*)
- York Chiller
- Cooling Tower
- Clarifier (*Sewerage Treatment Plant*)
- Bubbler System for the Fire Water Tank
- Boiler Actuator
- Temperature Control Regulator



McDade Administration Building
Main sewer line repair



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



Correction Center Upper Pump House
Variable frequency controls replacement



Sewage Treatment Plant
Clarifier Repair

County Connection (957 Route 33, Hamilton Township)

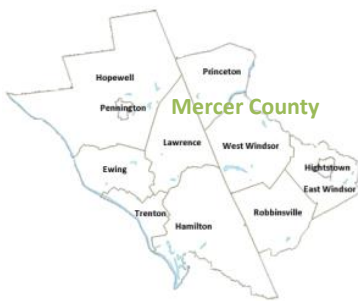
- Roof Top HVAC System

Courthouse

- New Floors in Common Area (400 South Warren Street)
- Variable Frequency Drive (RFD) HVAC System (175 South Broad Street)
- Hydraulic Gate Repair (175 South Broad Street)
- Honeywell Variable Frequency Drive (VFD) (175 South Broad Street)
- Elevator Hydraulic Oil Tank (175 South Broad Street)

Dempster Fire Training Academy (350 Lawrence Station Road, Lawrence Township)

- LED Retrofit Parking Lot Lighting
- Air Compressor
- Condensing Unit
- Chiller Compressor
- Pneumatic Control



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

DOT & I Facility (300 Scotch Road, Ewing Township)

- Air Conditioning Unit (Building #1)
- Boiler @ Building #1
- Bathroom/Locker Room Renovations
- Kitchen Renovations
- Mosquito Commission Chemical Storage Room



DOT & I Facility
Locker room renovation

Mercer House (1440 Parkside Avenue, Trenton)

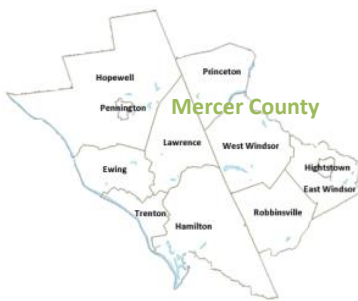
- New Wood Fencing
- Window Replacement
- HVAC Split System

Motor Pool (300 Scotch Road, Ewing Township, Building #4)

- New Propane Filling Station
- Kitchen Renovations



Motor Pool
New propane station installation



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Prosecutor's Office (240 West State Street, Trenton)

- Shooting Range Observation Deck
- HVAC
- Fence Repairs



Prosecutor's Office
Fence Repairs



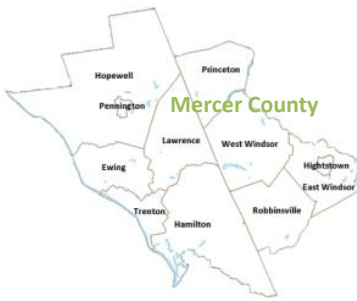
Prosecutor's Office
Shooting Range Observation Deck

Trenton – Mercer Airport (1100 Terminal Circle Drive, Ewing Township)

- Ticket Counter (Allegiant Airlines)
- Relocation of Kiosks (Frontier Airlines)
- New Air Curtain
- New Baggage Claim System
- Roof, ceiling and HVAC at ARFF Building
- New ceiling at Skylounge
- Runway Indicator Lights



Trenton – Mercer Airport
New runway indicator lights



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



Trenton – Mercer Airport
New air curtain installation



Trenton – Mercer Airport
New ticket counter installation



Trenton – Mercer Airport
New baggage claim system installation

Superintendent of Schools (*MCCC, 1075 Old Trenton Road, West Windsor*)

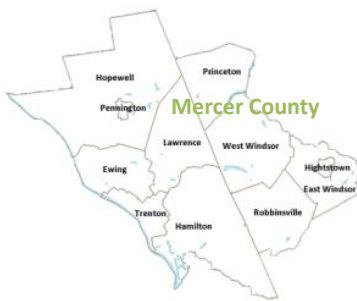
- Roof

Veteran's Building (*2280 Hamilton Avenue, Hamilton Township*)

- Sewer line repair



Veteran's Building
Sewer line repair



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Interdepartmental Assistance Program (IAP) – Goal accomplished. The division of Buildings & Grounds provides assistance to other departments/divisions within Mercer County Government. Assistance was provided to the following departments:

Human Services

- Renovated office space and installed new office cubicles.

Libraries (*Lawrence, Hopewell, Robbinsville, West Windsor*)

- LED Lighting Retrofit; facilitated the installation of a new Gas Roof Top Unit at Robbinsville Library; roof repair at West Windsor Library.

Prosecutor’s Office

Office of the County Clerk

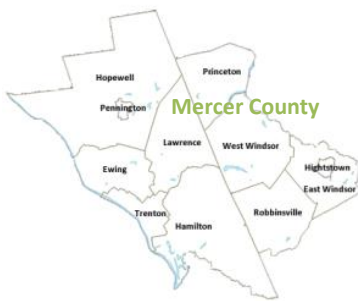
- The division planned a smooth transition of both offices from 209 South Broad Street (Courthouse) to 240 West State Street.

Sheriff’s Office

- Renovated the Crest Building at the Trenton-Mercer Airport and relocated the Mercer County Sheriff’s Office sub-station into the renovated space.

Snow Removal/Ice Control – Goal accomplished. During inclement weather conditions, snow removal was provided to the following facilities during nine (9) snow events:

- Courthouse (*175 South Broad Street; 209 South Broad Street; 400 South Warren Street*)
- Dempster Fire Training Academy (*350 Lawrence Station Road, Lawrence Township*)
- Extension Services (*930 Spruce Street, Lawrence Township*)
- Family Guidance (*1931 Nottingham Way, Hamilton Township*)
- Library(s)
 - Ewing Library (*61 Scotch Road, Ewing Township*)
 - Lawrence Library (*2751 Brunswick Pike, Lawrence Township*)
 - Hopewell Library (*245 Pennington-Titusville Road, Pennington Borough*)
 - West Windsor (*333 North Post Road, West Windsor Township*)



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

- McDade Administration Building (*640 South Broad Street, Trenton*)
- Veteran's Building (*2280 Hamilton Avenue, Hamilton Township*)
- Youth Detention Center/Mercer House (*1440 Parkside Avenue, Ewing Township*)

Other Accomplishments

In addition to the goals set forth in 2016, the following accomplishments have also been undertaken:

New Jersey Criminal Justice Reform (*175 South Broad Street*)

New Jersey is putting comprehensive bail reform measures into effect on January 1, 2017. The new law on pretrial detention of suspects and speedy trials that will require a mindset change by police, prosecutors and judges has been officially launched in Mercer County. Repairs and renovations were undertaken at 175 South Broad Street and 400 South Warren Street in Trenton, NJ to provide additional space needed to house staff.



Dempster Training Fire Academy (*350 Lawrence Station Road, Lawrence Township*)

Provided installation services needed for the replacement of new seating and carpeting in the Auditorium.

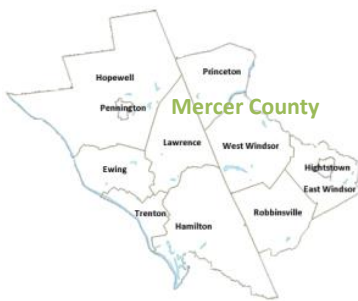
Correction Center (*1750 River Road, Lambertville*)

Video Conferencing

Renovations, repairs and installation of a Video Conferencing Room have been completed. Video conferencing sessions are now available for arraignments and bail hearings for defendants housed at the Mercer County Correction Center.

DOT & I Facility (*300 Scotch Road, Ewing Township*)

The Mercer County Board of Chosen Freeholders approved a Professional Services Agreement with Loring Consulting Engineers to provide professional electrical engineering services for the installation of a Stand-by Generator at the DOT & I Facility. Buildings & Grounds facilitated the installation along with the Consultant through completion of the installation.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

McDade Administration Building (640 South Broad Street, Trenton)

Facilitated with contractor Golden Crown the installation of interior sliding doors located inside the vestibule of the building. The new sliding doors now provide safety to employees as well as the general public entering the building.

Replacement of an obsolete security system was completed. The vendor Absolute Protection Systems installed a new Closed Circuit Television (CCTV) System.

Facility Assessment Services

The Mercer County Board of Chosen Freeholders approved a Professional Services Agreement with All Environmental, Inc. for professional property condition evaluation services needed regarding the structural needs and repairs for the following buildings:

Courthouse (s) (175 South Broad Street; 400 South Warren Street)

Dempster Fire Training Academy (350 Lawrence Station Road, Lawrence Township)

DOT & I Facility (300 Scotch Road, Ewing Township)

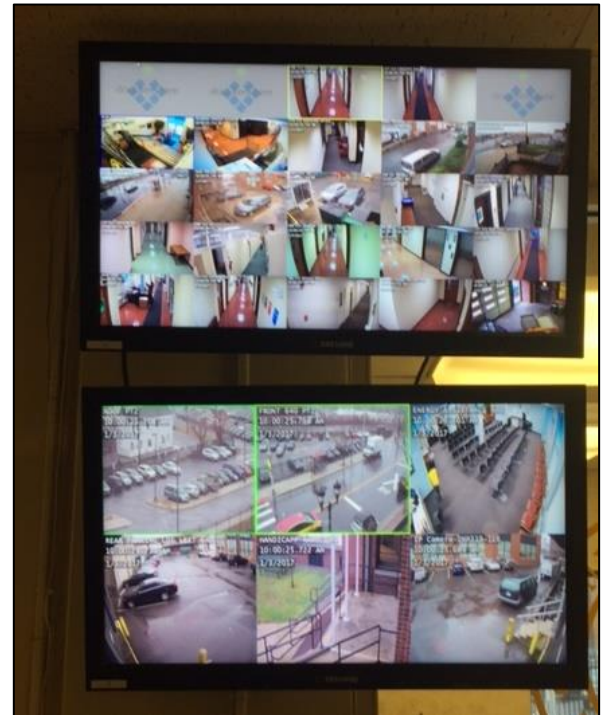
McDade Administration Building (640 South Broad Street, Trenton)

Mercer House (1440 Parkside Avenue, Trenton)

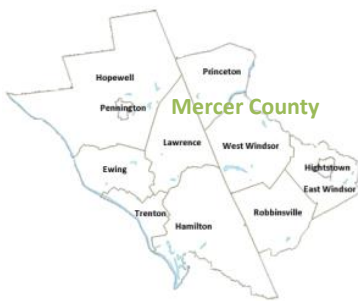
Superintendent of Schools (MCCC, 1075 Old Trenton Road, West Windsor)

Radio Tower Building (3 sites)

Mercer County received funds from the Hazard Mitigation Grant for generators installed at Mt. Rose, Correction Center and Hightstown for the support of Mercer County's Public Safety Radio System. The system is a simulcast cell with three transmit/receive site (*soon to be five*) and an additional six receive sites providing countywide radio coverage through a 14 channel trunked system.



McDade Administration Building
Closed Circuit Television System (CCTV)



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Correction Center, Radio Tower Site (*River Road, Hopewell Township*)
Hightstown Water Tank (*153 First Avenue, Hightstown Borough*)
Mt. Rose Tower (*5072 Province Line Road, Hopewell Township*)

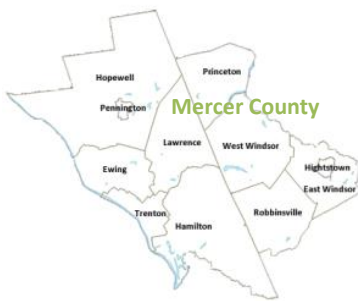
The system is used as primary communications for all Fire and EMS (*Emergency Management Services*) agencies, Police Departments, Emergency Management offices, as well as many County departments including the Sheriff's Office, the Prosecutor's Office, Central Maintenance, Medical Examiner, Motor Pool, and through a gateway DOT & I. The Emergency Management connections include each town, all colleges, and all hospitals. The system provides individual channels for the Police Departments and all County Departments. It also allows for interoperable communications amongst all participating agencies during major incidents. Because of the critical nature of this system, it is imperative that power is maintained at all of the sites. FEMA (*Federal Emergency Management Agency*) and OHSP (*Office of Homeland Security and Preparedness*) recognized this and provided funds to install these three generators to fill a gap in the system. As part of the application for these funds, Mercer County agreed to maintain the generators.

Youth Detention Center

- The Mercer County Board of Chosen Freeholders ratified a Professional Services Agreement with Sapphire + Albarran Architect, LLC to perform on-call engineering services as needed. Preliminary drawings and stages of design have been completed to relocate Mercer County Extension Services from 930 Spruce Street in Ewing Township along with Mercer County Family Guidance located at 1931 Nottingham Way in Hamilton Township to the Youth Detention Center located at 1440 Parkside Avenue, Ewing Township.

Trenton-Mercer Airport

- Renovation of bathrooms, street level, was completed by contractors Ricasoli and Satin Contracting. The electrical and plumbing was completed in-house.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

2017 Goals

Fiscal Year 2017 Operating/Capital Budget – Plan, develop and review potential cost savings in various areas.

NJ State Contract Purchases – Exploit contract purchases in an effort to keep costs down.

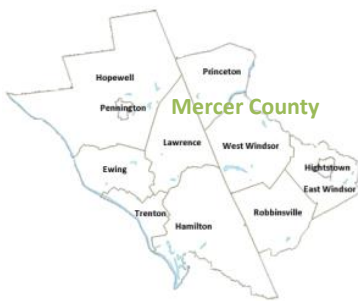
Maintenance of Facilities – Provide services related to the maintenance of County-owned and occupied facilities and grounds by maintaining the facilities in a safe and efficient manner.

Snow Removal/Ice Control – During inclement weather conditions continue to provide services.

Youth Detention Center Renovations – Complete the design phase and relocate Mercer County Extension Services and the Family Guidance Center to the Youth Detention Center located at 1440 Parkside Avenue in Ewing Township.

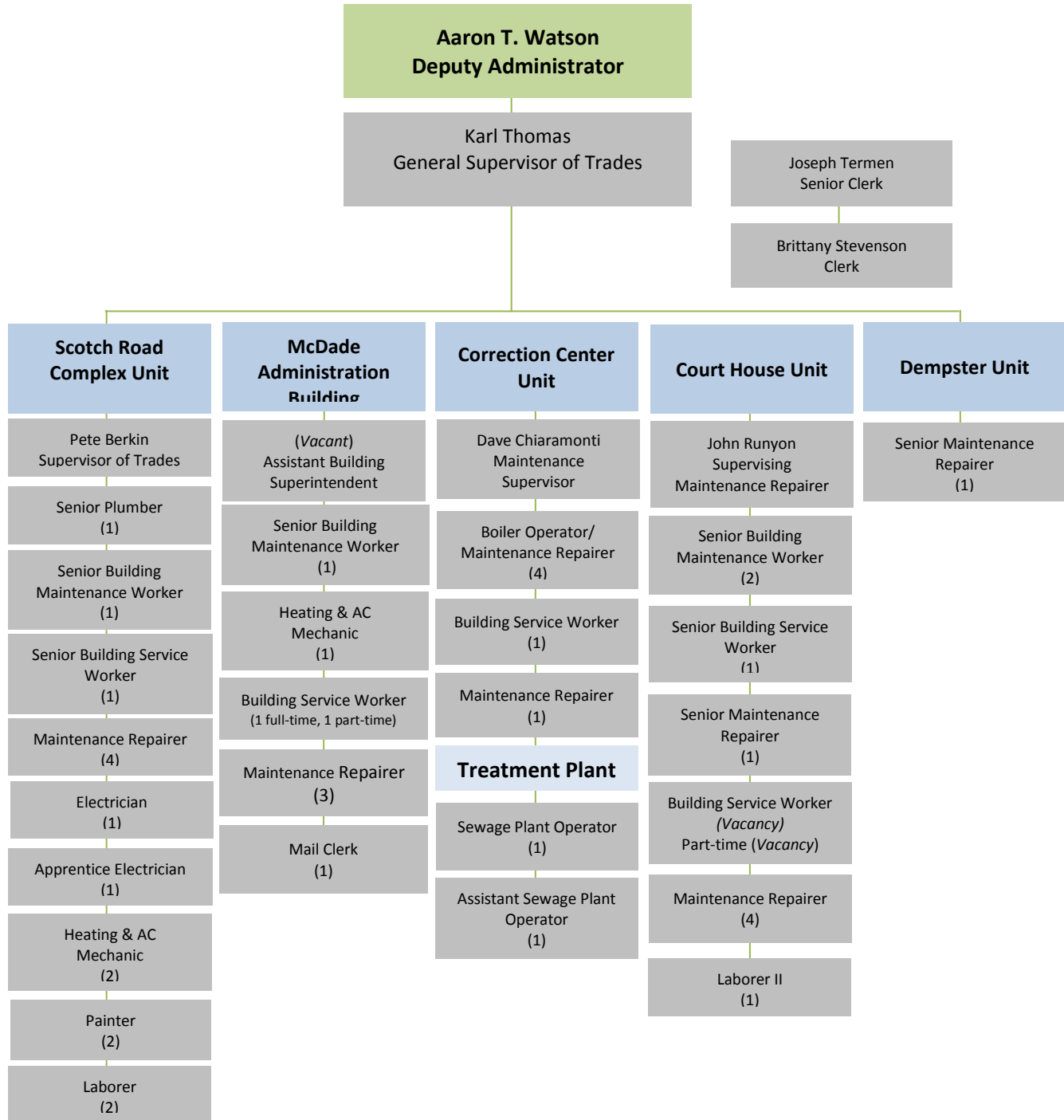
Interdepartmental Assistance – Provide assistance to other departments/divisions within Mercer County Government.

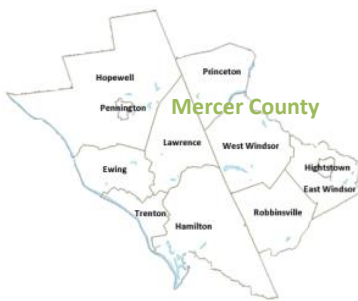
Facilitate Projects – Receive quotes, implement purchase orders and oversee projects with contractors/vendors.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Buildings & Grounds Table of Organization





Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Engineering

Gregory Sandusky, P.E., P.L.S., D.O.T. & I., Director/Mercer County Engineer
George A. Fallat, P.E., Traffic Engineer
Basit Muzaffar, P.E., Supervising Engineer, Highways and Bridges

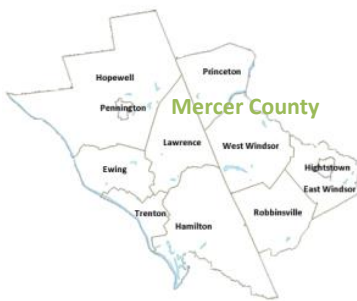
Under direction and control of the Director D.O.T. & I./County Engineer, the division is responsible for project development, design, construction and maintenance of 680 bridges and culverts; nearly 300 electrically operated traffic control devices as well as drainage features, pavement markings and signs on 180 miles (425 lane miles) of roadway within the county network. The division is also responsible for the review and approval site plans and subdivisions submitted to the Mercer County Planning Board. Mercer County's Engineering Division continues to successfully acquire state and federal funding for substantial capital investments to minimize the expenditure of county funds. Director DOT & I/County Engineer manages an annual budget comprised of capital and operating expenses in the approximate amount of \$8,884,177.90 and is staffed with five (5) employees along with four (4) Licensed Professional Engineers.

Project of the Year Award - Mercer County received the project of the year award for Bear Tavern and Jacobs Creek Bridges in Hopewell Township presented by the Professional Engineers Society of Mercer County on February 20, 2016.



Project of the Year Award

Left to Right: Deputy Administrator Aaron T. Watson; Mercer County Executive Brian M. Hughes; Director of DOT & I/Mercer County Engineer Gregory Sandusky; Supervising Engineer Basit Muzaffar



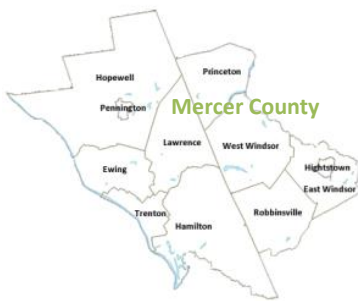
Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Transportation Trust Fund Act - The county and municipal roads and bridges carry an estimated 53% of the state's overall traffic, yet inequitably receive only 12% of funding for Local Aid allocations under the State's current Transportation Trust Fund (TTF). The proportionate share of Local Aid funding has dramatically decreased by 57% since the TTF was established nearly three (3) decades ago. New Jersey county governments operate and maintain over 7,000 bridges and an equal amount of centerline miles of roads at a current cost share to local taxpayers of approximately \$334 million dollars per year. Local municipal government operates and maintains 25,765 centerline miles of road at a current cost share to local taxpayers of approximately \$318 million. It is in the best interest of local governments and taxpayers for State leaders to establish critical funding for vital transportation projects and to increase Local Aid allocations. This action would be a means to reduce the reliance on the collection of local property taxes, promote job growth and economic development and ensure a safe and reliable transportation network.

On June 30, 2016 Governor Chris Christie issued Executive Order No. 210 declaring a state of emergency in New Jersey and directed his administration to prepare for an immediate shutdown of all projects funded by the TTF. Order No. 210 detailed that transportation projects may continue only when the state transportation commissioner and the governor determined that such projects were absolutely essential for the protection of the health, safety, and welfare of the citizens of the State of New Jersey or are required to ensure the receipt of federal funding.

During this time, a total of \$3.5 billion worth of road and rail projects across the state of New Jersey were halted. In addition, during this time commuters continued to travel on roadways and infrastructure in need of repair, or through job sites under construction. Subsequently, an increase in traffic delay was shown in these areas during the imposition of Executive Order 210. Furthermore, vendor contracts and employee wages were affected as payment for halted projects were on hold. This stop in payment forced difficult decisions for many New Jersey families during the imposition of the Executive Order.

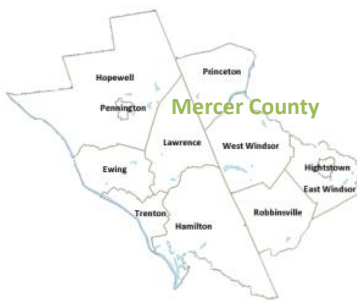


Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

The County Executive and the Mercer County Board of Chosen Freeholders passed a resolution to urge State leaders to reauthorize the Transportation Trust Fund with stable, dependable and sufficient sources of funding and to increase Local Aid allocations under the State's Transportation Trust Fund to \$400 million. During the imposition of Executive Order 210 the following Mercer County projects were required to cease work:

- Construction of Bridge #672.4, South Broad Street over Doctor's Creek in Hamilton Township (\$3,546,793.01)
- Construction of Bridge #543.7, Carter Road over Shipetaukin Creek in Lawrence Township (\$2,017,117.00)
- Construction of Bridge 212.12 and 218.1, River Road over tributaries of the Delaware River in Hopewell Township (\$2,517,498.00)
- CR 533 Signal Project (Whitehorse-Mercerville Road/Quakerbridge Road in Hamilton Township)
- Construction Inspection for CR 533 Signal Project TTF Swap (\$500,000)
- CR 533 Signal Project (Whitehorse-Mercerville Road in Hamilton Township) Construction, TTF Swap (\$6,000,000)
- Princeton-Hightstown Road CR 571 Design, West Windsor Township, TTF Swap (\$800,000)
- Mercer County Roadway Safety Improvements – RPMs County-Wide-TTF Swap (\$600,000)
- Mercer County Signal Upgrades- 3 Intersections to be upgraded in Ewing Township–TTF Swap (\$500,000)



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

On October 18, 2016 our office received notice from the New Jersey Department of Transportation (NJDOT), which was followed by formal documentation notifying the County that Executive Order 210 had been lifted by Governor Christie and all State funded projects may resume work.

2016 Accomplishments

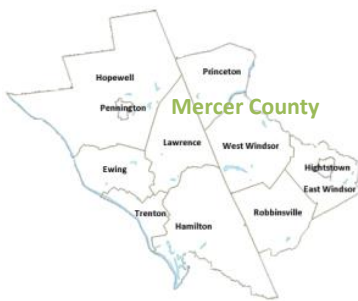
Annual Transportation Program (ATP)

County Aid funds are appropriated by New Jersey State Legislature annually for the improvement of public roads and bridges under County jurisdiction. Each county must develop an Annual Transportation Program (ATP). The ATP must be approved by the appropriate county governing body before submission to the State of New Jersey Department of Transportation (NJDOT) for final approval. Submission shall include a certification detailing that allotted funds will only be expended on eligible costs for projects set forth in the approved ATP. The Mercer County Board of Chosen Freeholders executed approval to submit applications securing \$2,808,700.00 for 2016. The application for 2017 funding has been submitted to NJDOT. Funding allocation for 2017 is \$2,678,200.00.

Bridge Construction and Design Projects

Preparation for bridge construction and design projects requires plan review and preparation of contracts, estimates, and proposals, bid documents, and Requests for Proposals (RFP's). The division coordinates the relocation of all utilities in the construction area and inspects the contractors work to ensure that design specifications are met and that projects are completed in a timely and cost-effective manner. Work quantities and invoices are reviewed and processed for payment. At the completion of the projects, a final inspection is performed before final payments are released to the contractor. Specifications for public bids were advertised, received, reviewed and awarded this year for the following bridge construction projects:

South Clinton Avenue over Assunpink Creek (Bridge No. 140.6), City of Trenton – *Goal not accomplished.* Due to issues with utility relocation and permitting we were unable to award the construction contract in 2016.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



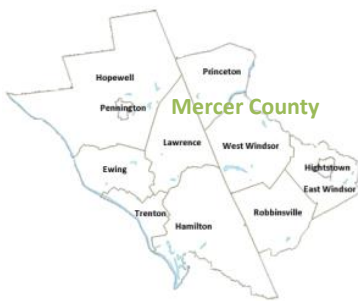
Existing River Drive
Bridge closed to traffic for start of
construction

River Drive over Tributaries to the Delaware River, (Bridge No. 212.12 and No. 218.1) Township of Hopewell – Goal accomplished. The bid was awarded to the lowest bidder, Montana Construction, in June 2016 in the amount of \$2,517,498.00. Construction commenced on December 5, 2016.

Carter Road over Beden’s Brook (Bridge No. 250.3), Township of Hopewell- Goal not accomplished. Due to a project being undertaken by the New Jersey Department of Transportation (NJDOT) on Route 206 in Hopewell Township, Carter Road, under the jurisdiction of Mercer County, is being used as part of their detour. Mercer County cannot commence construction until NJDOT completes their project.



Existing Carter Road Bridge (No. 250.3)



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Cherry Valley Road over a branch of Beden's Brook (Bridge No. 350.1), Municipality of Princeton – Goal accomplished – Mercer County entered into an Inter-County Agreement with the County of Somerset for the replacement of Bi-



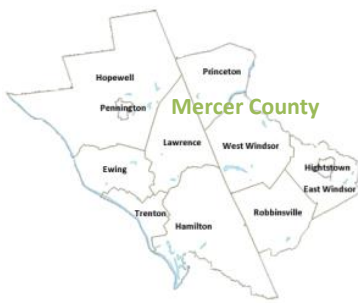
Cherry Valley Road (Bridge No. 350.1)
Completed

County Bridge 350.1. The construction contract was awarded to Konkus Construction in the amount of \$1,800,000.00 with each County responsible for 50% of the cost. The project was completed in August 2016. Each County will assume all responsibility for maintenance and control of the portion located in their municipality.

Carter Road over Shipetaukin Creek (Bridge No. 543.7), Township of Lawrence – Goal partially accomplished. The bid was awarded to the lowest bidder, Marbro, Inc., in the amount of \$2,017,117.00. Construction commenced on April 18, 2016. The contractor plans on completing this project in mid-January, 2017.



Carter Road (Bridge No. 543.7)
Contractor Marbro, Inc. forming back wall of structure



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Nottingham Way over Assunpink Creek (Bridge No. 6-140.13), City of Trenton/ Township of Hamilton - *Goal accomplished.* Bids for the project were advertised and received for review on December 16, 2014. The Contract was awarded to Earle Asphalt on January 22, 2015. This bridge was completed in early 2016.

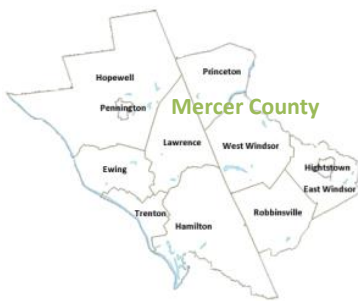


Nottingham Way (Bridge No. 6-140.3)
Left: Before construction commenced
Right: Completed

South Broad Street over Doctor’s Creek (Bridge No. 672.4), Township of Hamilton - *Goal partially accomplished.* Bids for the project were advertised and received for review on October 16, 2015. The Contract was awarded to Simpson & Brown, Inc., on December 10, 2015. Construction is expected to be completed in January 2017.



South Broad Street Bridge (No. 672.4)
During construction



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Maxwell Avenue over Big Timber Run (Bridge No. 863.10), Borough of Hightstown – *Goal accomplished* - Bids for the project were advertised and received for review. The Contract was awarded to Interstate Contracting and Excavating. This bridge was completed and opened to traffic on May 12, 2016.



Maxwell Avenue (Bridge No. 863.10)
Completed construction

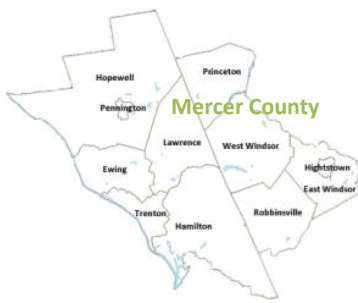
Bridge Design

Professional Service Agreements were awarded through a consultant selection process and approved by the Board of Chosen Freeholders for the design of the following bridge projects:

Washington Crossing-Pennington Road over Woolsey's Creek (Bridge No. 216.6), Township of Hopewell – *Goal accomplished*. The Contract for design was awarded to Johnson, Mirmiram & Thompson in the amount, not to exceed, \$246,002.00. The design phase has not been completed and will carry-over as a goal in 2017.

Hopewell Rocky-Hill Road (Bridge No. 252.2), over a Branch of Beden's Brook, Township of Hopewell – *Goal partially accomplished*. The contract for design was awarded to Churchill Engineers in an amount, not to exceed, \$166,131.00. The design phase has not been completed and will carry-over as a goal in 2017.

Alexander Road over Stony Brook (Bridge No. 330.1), Municipality of Princeton – *Goal not accomplished*. Due to issues with the Contribution Agreement the Request for Proposals for the design phase has not been completed and will carry-over as a goal in 2017.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Iron Bridge Road (Bridge No. 670.4), over Crosswicks Creek, Township of Hamilton - *Goal accomplished* – A Shared Services Agreement with the County of Burlington for the replacement of the Bi-County Bridge (No. 670.4) was executed on December 15, 2016.



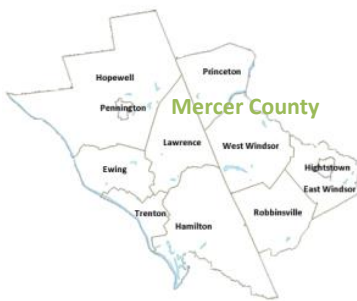
Existing Old Trenton Road
(Bridge No. 745.3)

Old Trenton Road (Bridge No. 745.3), over Bridegroom Run, Township of West Windsor - *Goal not accomplished.* Due to issues with utility relocation and the Township's change of position regarding optional sidewalk construction through the site, along with associated ROW acquisition, the design process has been delayed.

Cranbury Road (Bridge No. 762.1), over Bear Brook, Township of West Windsor - *Goal not accomplished.* Utility relocation issues delayed the design process by several months.



Existing Cranbury Road
(Bridge No. 762.1)



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Old Trenton Road (Bridge No. 861.1), over Tributary to Millstone River, Township of East Windsor – The contract for design was awarded to IH Engineers in the amount of \$160,178.00. The design phase has not been completed and will carry-over as a goal in 2017.

Other Accomplishments

In addition to the goals set forth in 2016, the following projects have also been undertaken:

Valley Road Bridge (#211.4) and the Relocation of the Bear Tavern Road Truss, Hopewell Township – The County contracted with Genesis, LLC to perform design services for these two structures at a cost not to exceed \$220,000.00. Parson’s Brinkerhoff, who performed the design services for the replacement of the Jacobs Creek Bridge and the Bear Tavern Road Bridge, provided the County with a quote of \$348,931.00 to perform design services for the two structures. The design cost proposed by Genesis, LLC provided Mercer County with a savings of \$128,931.00 compared to the cost proposed by Parson’s Brinkerhoff. Genesis, LLC did the design of the project for the Califon Bridge, which was similar to this project.

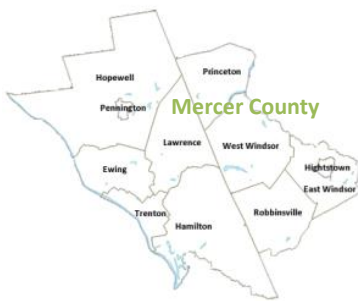
2017 Goals

Bridge Construction:

River Drive over Fiddler’s Creek (Bridge #212.12) and River Drive over Steele’s Creek (Bridge 218.1), Hopewell Township – Complete construction.

Carter Road over Beden’s Brook (Bridge #250.3), Hopewell Township – Submit final specifications for advertisement for public bidding, receive bids and award the project to commence construction (*subject to availability of funds*).

Alexander Street over Stony Brook (Bridge 330.1), Princeton Township - Submit final specifications for advertisement for public bidding, receive bids and award the project to commence construction (*subject to availability of funds*).



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Bakers Basin Road over Shipetaukin Creek (Bridge #543.1), Lawrence Township - Award the project and commence construction (*subject to availability of funds*).

Carter Road over Shipetaukin Creek (Bridge No. 543.7), Township of Lawrence – Complete construction

South Broad Street over Doctor’s Creek (Bridge No. 672.4), Township of Hamilton – Complete construction

Old Trenton Road over Bridegroom Run (Bridge #745.3), West Windsor - Submit final specifications for advertisement for public bidding, receive bids and award the project to commence construction (*subject to availability of funds*).

Cranbury Road over Big Bear Brook (Bridge #762.1) West Windsor – Award the project and commence construction (*subject to availability of funds*).

Bridge Design:

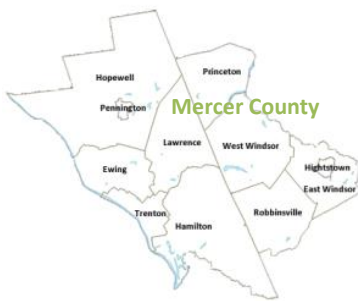
Lincoln Avenue over Assunpink Creek & NEC (140.9), City of Trenton - Complete the Local Concept Design and commence the award for Preliminary Design.

Washington Crossing-Pennington Road over Woolsey’s Creek (Bridge No. 216.6), Township of Hopewell – Complete the design phase.

Hopewell Rocky-Hill Road (Bridge No. 252.2), over a Branch of Beden’s Brook, Township of Hopewell – Complete the design phase.

Alexander Street over Branch of Stony Brook (Bridge 331.1), Princeton Township – Award the contract for design and begin the design and permitting process.

Cherry Valley Road over Beden’s Brook (Bridge #350.3), Princeton, Mercer County and Montgomery Township, Somerset County - Award the contract for design and begin the design and permitting process.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Lower Ferry Road over Gold Run (Bridge 415.2), Ewing Township - Award the contract for design and begin the design and permitting process.

Lower Ferry Road over West Branch of Shabakunk Creek (Bridge 441.4), Ewing Township - Award the contract for design and begin the design and permitting process.

Iron Bridge Road over Crosswicks Creek (Bridge 670.4), Hamilton Township, Mercer County and Chesterfield Township, Burlington County - Award the contract for design and begin the design and permitting process.

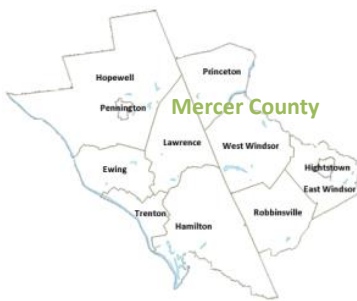
Yardville-Groveville Road over Doctor's Creek (Bridge 672.2), Hamilton Township - Award the contract for design and begin the design and permitting process.

Old Trenton Road (Bridge No. 861.1), over Tributary to Millstone River, Township of East Windsor – Complete the design phase.

Windsor Road over Tributary to Assunpink Creek (Bridge 942.6), Robbinsville Township - Award the contract for design and begin the design and permitting process.

Traffic and Roadway Projects

The Engineering Division is also responsible for preparing and overseeing contracts for installing traffic control devices, guiderail and repairs to other traffic safety features county-wide. In addition, roadway and traffic safety improvements are routinely requested from local elected officials and municipal residents. The Engineering Division also procures outside funding for constructing traffic signal upgrades and roadway improvements through the New Jersey Department of Transportation (NJDOT). Design work for these projects is completed by in-house engineering staff.



Department of Transportation & Infrastructure

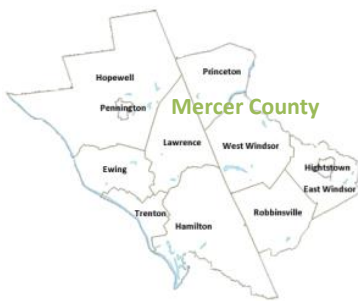
2016 Accomplishments/2017 Goals

Install Bicycle Lanes at various locations throughout Mercer County – Goal partially accomplished. Working with the Mercer County Planning Division, several key routes, including Washington Crossing Road and Washington Road, have been identified as candidates to install bike lanes. At this time, we are in the process of selecting a consulting firm to prepare plans, specifications and estimates for the purpose of pursuing federal safety funding for construction. In keeping with the Mercer County’s Complete Streets Policy, bike compatible shoulders are installed to the extent possible when we restripe roads that have been resurfaced.

Construct crosswalk and Pedestrian Activated Beacons on Washington Road – Goal accomplished. In response to a crash involving two pedestrians crossing Washington Road at the Delaware and Raritan Canal Towpath, Mercer County proposed the installation of a Mid-Block Crosswalk with pedestrian activated rectangular rapid flashing beacons. Installation of the devices required approval from the State Historic Preservation Office, Delaware and Raritan Canal Commission and Princeton Historical Society. All required approvals were obtained. The devices were installed and activated in September of 2016.

Implement Roadway Safety Enhancements using Federal Safety Funding – Goal partially accomplished. Locations have been identified and preliminary plans have been prepared to install rumble stripes and raised pavement markers along centerlines and edge lines. Next steps include the finalization of plans, specifications and estimates for submission to NJDOT for approval to authorize federal funding for construction.

Construct traffic signal upgrades at the intersection of South Broad Street and Kim Valley in the Township of Hamilton – Goal not accomplished. Prepare plans and install new foundations and signal equipment as well as ADA compliant sidewalk enhancements. We propose to complete this project using outside traffic engineering design services.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Complete the construction of Intersection Improvements using Quick Obligation Federal funding – Goal partially accomplished. Plans specifications and estimates were completed for the upgrade of three (3) traffic signals at the following intersections: North Olden Avenue and Artic Parkway; North Olden Avenue and Princeton Avenue; and Princeton Avenue and Spruce Street. We are also incorporating milling and resurfacing of North Olden Avenue and Princeton Avenue into the overall project. The progress of this project was delayed due to the Executive Order 210 issued for all projects funded through the Transportation Trust Fund (TTF).



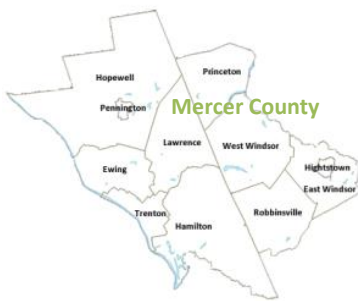
Intersection of North Olden Avenue and Artic Parkway



Intersection of North Olden Avenue and Princeton Avenue

Procure and implement a Flood Alert System on Nottingham Way in the Township of Hamilton - Goal not accomplished. Prepare bid documents to procure a Flood Alert System for Nottingham Way between East State Street and Mulberry Street. This project was not pursued since the flooding issue has been recently addressed.

Complete the Whitehorse-Mercerville Road (County Route 533) Signal Coordination Project – Goal not accomplished. Complete plans, specifications and estimates and obtain authorization to bid the proposed improvements. Final plans were submitted to NJDOT in July, 2016. The progress of this project was delayed due to Executive Order 210 issued for all projects funded through the Transportation Trust Fund (TTF).



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Other Accomplishments

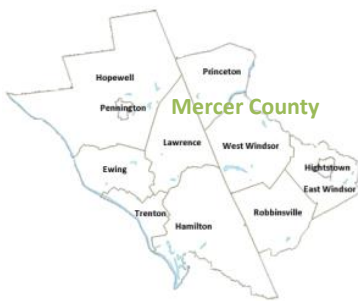
In addition to the goals set forth in 2016, the following traffic and roadway related projects have also been undertaken:

Brunswick Circle Extension and Princeton Pike, Lawrence Township – Mercer County is advancing a project to convert the existing intersection of Princeton Pike and the Brunswick Circle Extension into a Modern Roundabout. The project is being advanced through the Federal Highway Administration Highway Safety Improvement Program, which would provide 100 per cent of funding for design and construction. At this time, we have selected a consultant to undertake design of the project.



Proposed roundabout to replace the existing intersection

Robbinsville – Allentown Road (CR 526), Robbinsville Township – A Jurisdictional Agreement was approved by the Mercer County Board of Chosen Freeholders on June 23, 2016 for the maintenance and control of County Route 526 and the Robbinsville Bypass. The Township of Robbinsville requested a jurisdictional exchange of roadways wherein the County would assume jurisdiction of the Robbinsville Bypass from Robbinsville-Allentown Road to New Jersey State Route 130 and the Township would assume jurisdiction of County Route 526 from the New Jersey State Route 33 to New Jersey State Route 130 and between New Jersey Route 130 and the Robbinsville Bypass, both roadways located within the Township of Robbinsville.



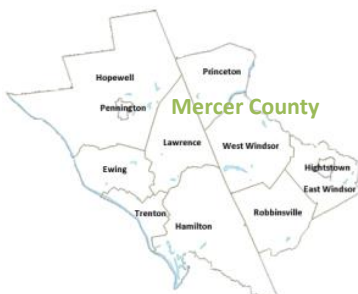
Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Arena Drive and Hempstead Drive Intersection, Township of Hamilton - In response to recent concerns from local elected officials, Mercer County developed concept plans for restriping Arena Drive at Hempstead Avenue. Plans were submitted to Hamilton Township officials for review and concurrence. Revisions to the pavement markings provide a single through lanes and dedicated left turn lanes in both directions of Arena Drive. Pavement markings on the Hempstead Avenue approaches were also modified to provide separate right turn lanes. Striping modifications were implemented in December. Feedback from local officials and residents regarding the changes has been mostly positive. A more comprehensive review of the intersection will be undertaken by an outside contracted engineering consultant.

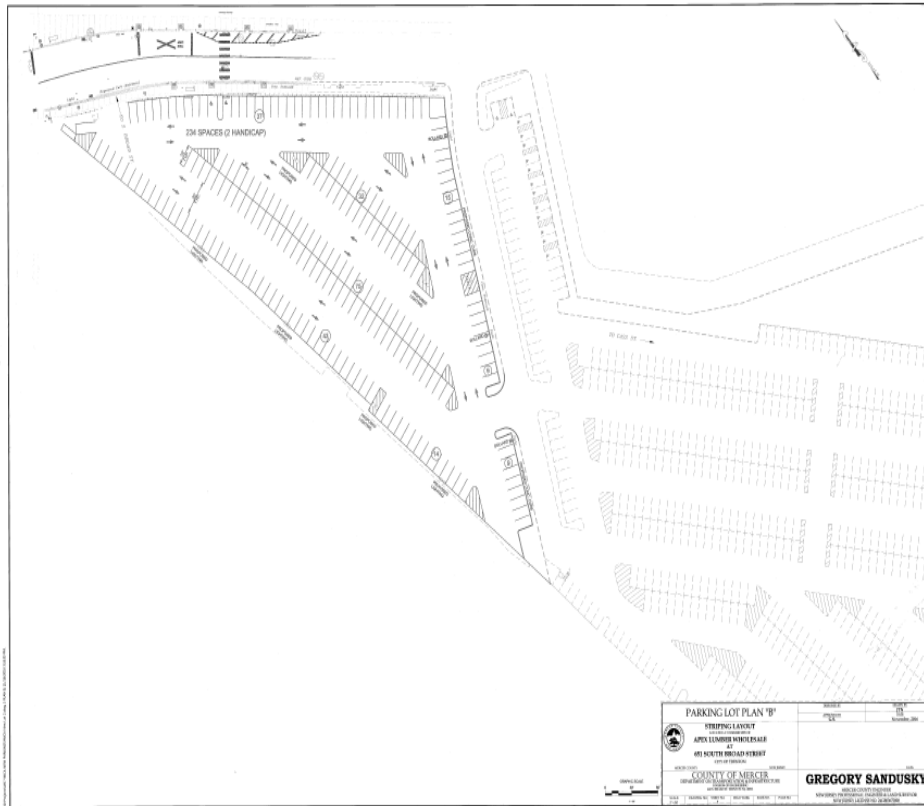


New pavement markings on Hempstead Avenue at
Arena Drive

640 South Broad Street Parking Lot - The Deputy Administrator requested a review of the vacant lot located directly across the street from 640 South Broad Street building for the possibility of providing additional parking spaces for employees and visitors. Engineering staff completed survey work in the parking lot and plans are being finalized. The Mercer County Highway Department's Road Unit will begin clearing the area in sections and filling the sections with millings provided. The parking lot will be paved and striped in 2017.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



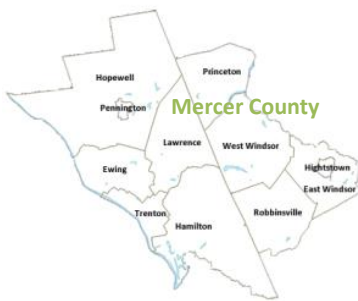
Preliminary concept layout plan for 640 South Broad Street parking lot

2017 Goals

Install Bicycle Lanes at various locations throughout Mercer County – We propose to install bike lanes for the routes identified in 2016. Implementation will require preparation of plans, specification and an engineer’s estimate. We propose to use outside funding for construction, which would include minimal removal of existing striping, installation of pavement markings and signs.

Implement Roadway Safety Enhancements using Federal Safety Funding –In 2017, we propose to finalize plans, specifications and estimates to install raised pavement markers (RPMs) on centerlines, lane lines and edge lines. We are also considering adding centerline rumble stripes to the overall project.

Complete the construction of Intersection Improvements using Quick Obligation Federal funding – Construction of traffic signal upgrades and



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

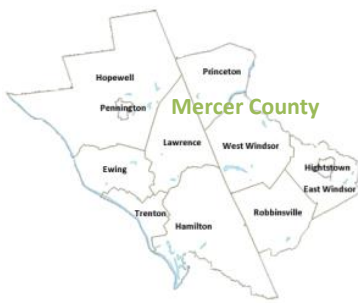
sidewalk ramp improvements at North Olden Avenue and Artic Parkway; North Olden Avenue and Princeton Avenue; and Princeton Avenue and Spruce Street is an important goal for 2017.

Construct traffic signal upgrades at the intersection of South Broad Street and Kim Valley in the Township of Hamilton –In 2017, we propose to use a contracted traffic engineering consultant to assist in the preparation of bid documents needed to construct improvements, including eliminating signal equipment in the median islands and construction of ADA compliant sidewalk ramps at these intersections.

Complete the Whitehorse-Mercerville Road (County Route 533) Signal Coordination Project – Construction of improvements at eleven (11) intersections as well as implementation of a coordinated signal system to better improve traffic flow in the entire corridor is a high priority for 2017. We propose to use outside construction inspection services, funded through the New Jersey Department of Transportation (NJDOT), to conduct daily inspections and oversight of the project.

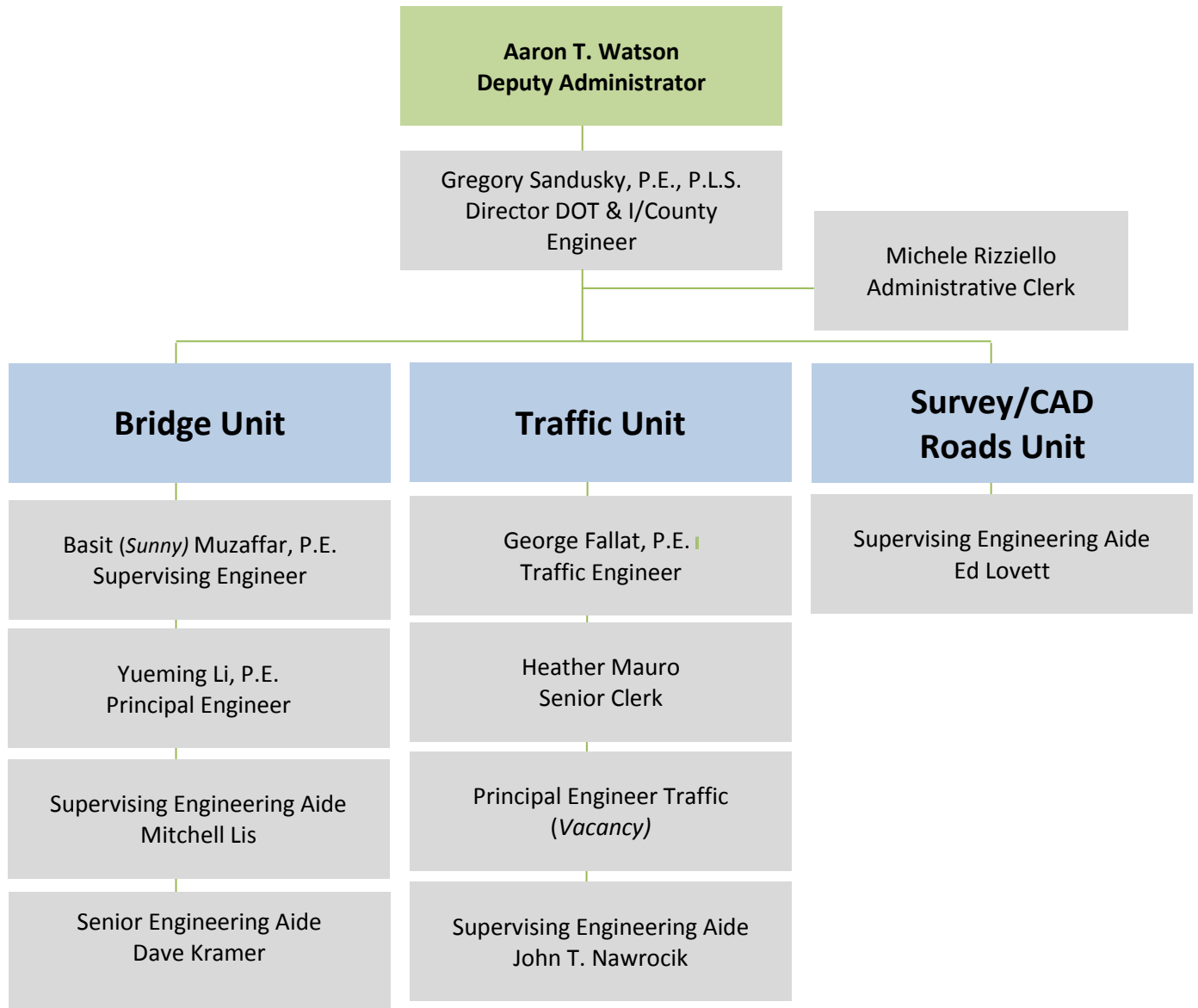
640 South Broad Street Parking Lot - Expansion of the parking lot across from the 640 South Broad Street Building to provide additional employee and visitor parking for the Mercer County McDade Administration Building. Milling, paving and striping will be scheduled at the beginning of the paving season in 2017 to complete this project.

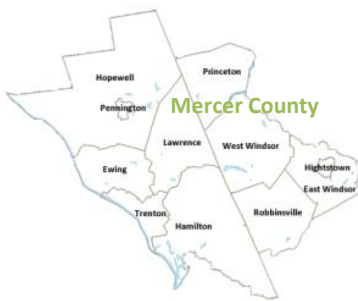
Crosswalk on Carter Road - We are proposing to install Rectangular Rapid Flashing Beacons (RRFBs) for a future crosswalk on Carter Road. Bristol Meyers Squibb (BMS) will be constructing the trail. BMS agreed to provide assistance with excavation work to accommodate the RRFB foundations when they construct the path from their property to Carter Road. The portion of Carter Road along which the trail intersects is scheduled to be milled and resurfaced in 2017. We would look construct the RRFBs at the same time.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Engineering Division Table of Organization





Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Highway Division

Gregory Sandusky, P.E., P.L.S., Director of DOT & I/County Engineer
Chris Markley, Superintendent of Public Works
Al Rhodes, Director of Public Works

Under direction and control of the Director of DOT & I/County Engineer, along with the Superintendent and Director of Public Works, the division manages an annual budget comprised of capital and operating expenses in the approximate amount of \$9,398,287.00 and is staffed with 137 employees. The division encompasses six (6) units: Bridges & Culverts; Mosquito Control; Motor Pool; Roads; Shade Tree; Traffic & Signal. The Highway Division recently merged with the Motor Pool Division of the Central Services Department to create one unified division. The merger will increase the efficiency of the operation and will lead to a more integrated and streamlined Division. All Units work together in many facets of the Division to provide services necessary for a safe, clean and healthy environment. Supporting the Division, DOT&I's Transportation Asset Management Information System (TAMIS) project assists in increasing efficiency levels regarding maintenance and operations procedures.

Bridges & Culverts Unit – Maintains 681 Viaducts and cross drainage structures located below Local and County Roadways.

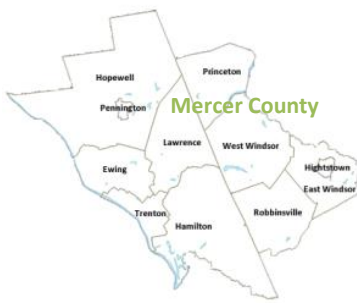
Mosquito Control Unit – Manages the reduction of the Mosquito population throughout the County.

Motor Pool – Ensures the safe, cost-effective maintenance of the County's vehicles and equipment including vehicle disposal and 2 auctions yearly.

Road Unit – Maintains 180 Centerline (425 Lane Miles) of County Routes.

Shade Tree Unit – Controls tree and scrub growth through the Roadside Vegetation Management Program.

Traffic & Signal Unit – Services and maintains 200 Traffic Control Devices and 10,000 Traffic Signs.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Bridges & Culverts Unit

Wayne Schultz, General Supervisor

Paul Krueger, Supervisor

2016 Accomplishments

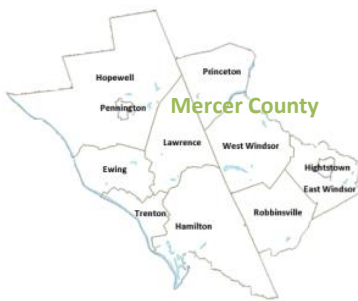
State-mandated Priority Repairs – *Goal partially accomplished.* State mandated bi-annual priority repairs for all structures greater than twenty (20) feet and less than (20) feet. The State of New Jersey Bridge Inspection Program is essential to ensure the safety of the 681 County maintained bridges and culverts. The inspections determine structure sufficiency ratings which the department uses to prioritize bridge rehabilitation or replacement projects. 2016 was the fourth year of the new mandatory inspection program for all structures less than twenty (20) feet in addition to the inspection program for structures over (20) feet. Additionally the Bridge Unit identifies structure to replace in-house. In 2016, the Bridge Unit identified 36 structures in need of repairs. All repairs were done in-house. The repairs or reconstruction of bridges occurred in the following municipalities:

City of Trenton

- Broad Street (Bridge No.140.2) – Placed new barriers at west curb line. *(Priority Repair)*
- Lincoln Avenue (Bridge No. 140.9) – Repaired pedestrian sidewalk. *(Priority Repair)*
- Enterprise Avenue (Bridge No. 6-540.1) – Stripped and repainted parapet rails.

East Windsor Township

- Ward Street (Bridge No. 862.5) – Major repair of bridge deck.
- Ward Street (Bridge No. 863.5) – Repaired bridge deck and painted rail.
- Disbrow Hill Road (Bridge No. 863.9) – Replaced deteriorated wood parapet rails with composite rails.
- Bank Street (Bridge No. 864.1) – Replaced deteriorated wood parapet rails with composite rails.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Ewing Township

- Wilburtha Road (Bridge No. 411.1) – Rebuilt collapsed stone parapet wall and reset coping. (*historical*)
- Upper Ferry Road (Bridge No. 441.7) – Repaired guiderail.



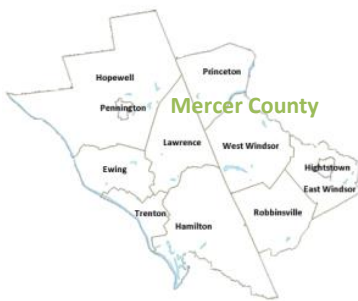
Structure 411.1 – Wilburtha Road
Bridge Unit personnel repairing stone parapet wall

Hamilton Township

- Klockner Road (Bridge No. 641.2) - Replaced deteriorated wood parapet rails with composite rails; repaired bridge deck with pavement SLQ; Repaired guiderail.
- Hughes Drive (Bridge No. 641.8) – Replaced split rail fence rails.
- Estates Boulevard (Bridge No. 642.7) – Replaced deteriorated wood parapet rails with composite rails.
- Sawmill Road (Bridge No. 679.2) – Replaced guiderail.

Hopewell Township

- Valley Road (Bridge No. 211.4) – Replaced deteriorated wood parapet rails with composite rails.
- River Road (Bridge No. 212.12) – Replaced guiderail.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

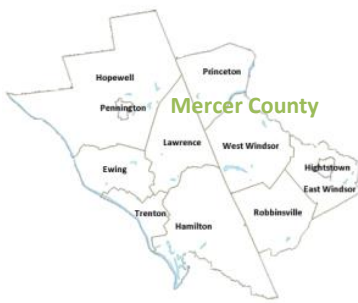
- Fiddlers Creek Road (Bridge No. 214.4) – Stripped and repainted parapet rails.
- Bear Tavern Road (Bridge No. 212.9) – Removed collapsed inlet and replaced with new inlet and pipe which is part of culvert. *(priority report)*



Structure 212.9 – Bear Tavern Road
Completion of new inlet and pipe

- Dublin Road (Bridge No. 216.17) – Removed culvert and replaced with concrete reinforced elliptical pipe. *(priority report)*





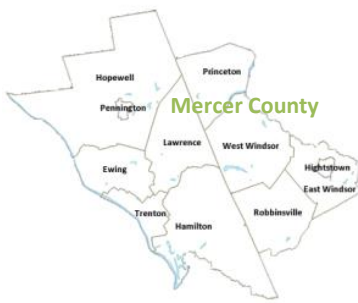
Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



Dublin Road (Bridge No. 216.17)
Completed the removal/replacement of elliptical pipe

- River Road (Bridge No. 217.5) – Replaced stone in wall and repointed areas in need.
- Wargo Road (Bridge No. 232.8) – Total reconstruction of historical stone arch bridge. Opened to traffic on November 23, 2016 with an estimated stone façade completion date of May 15, 2017.





Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

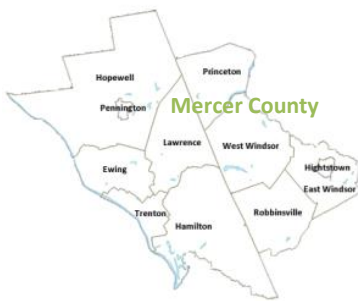


Wargo Road (Bridge No. 232.8)
Opened to traffic on November 23, 2016

- Pennington-Hopewell Road, (Bridge No. 235.1) – Removed and installed new collapsing headwall.



Pennington-Hopewell Road (Bridge No. 235.1)
Installation of new headwall



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Woosamonsa Road (Bridge No. 236.5) – Replaced guiderail.
- Stony Brook Road (Bridge No. 237.1) – Removed loose concrete on support beams and painted with rust converter as per bridge engineer.
- Marshall Corner-Woodsville Road (Bridge No. 239.2) - Replaced deteriorated wood parapet rails with composite rails.

Lawrence Township

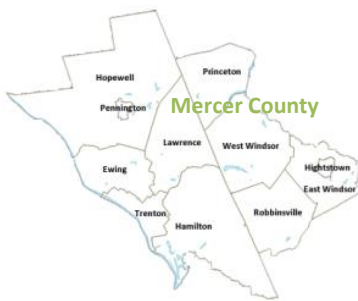
- Eldridge Avenue (Bridge No. 530.2) – Removed debris clogging culvert.
- Provinceline Road (Bridge No. 541.10) – Replaced and repaired bollards at bridge.
- Keefe Road (Bridge No. 543.16) Replaced guiderail.

Princeton Township

- Great Road (Bridge No. 335.8) – Installed new parapet rails to bring up to current standards for bicycle traffic.
- Harrison Street (Bridge No. 360.2) - Removed debris from scupper inlets and repaired inlet grates.
- Snowden Lane (Bridge No. 364.1) - Stripped and painted parapet metal rails.
- Roper Road (Bridge No. 364.10) – Filled wash-out with core stone.
- Alexander Road (Bridge No. 761.2) – Replaced deteriorated wood parapet rails with composite rails.



Great Road (Bridge No. 335.8)
Bridge Unit personnel installing new parapet rails



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- Quaker Road (Bridge No. 332.2) - Repaired parapet wall. (*Historical*)



Quaker Road (Bridge No. 332.2)
Completed parapet wall

Robbinsville Township

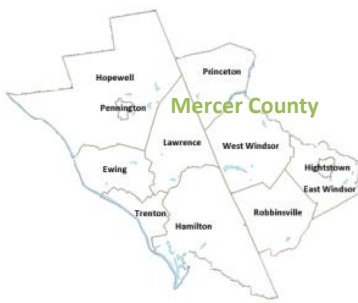
- Pond Road (Bridge No. 941.4) – Repaired chain-link fence, replaced expansion joint seals and installed new wood guiderail along sidewalk.
- Sharon Road (Bridge No. 941.11) - Replaced deteriorated wood parapet rails with composite rails.
- Hankins Road (Bridge No. 961.6) – Replaced damaged guiderail.

West Windsor Township

- Cranbury Road (Bridge No. 762.1) – Replaced deteriorated wood parapet rails with composite rails.

Snow Removal and Ice Control Assistance – *Goal achieved* – Unit personnel participated in Highway Division response to 6 storm events in 2016

Interdepartmental Assistance Program (IAP) – *Goal achieved* – Equipment, labor and assistance was provided to assist other County departments upon request. In 2016, assistance was provided to the following DOT & I divisions:



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

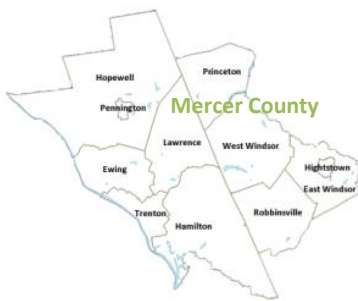
Trenton – Mercer Airport

- Poured concrete pad and moved bus stop structure in the Cell Phone Waiting Lot.

Terminal

- Excavated and poured new concrete pads.
- Excavated, back-filled and compacted extension to terminal tarmac for new airline.
- Built temporary room for secure server.
- Excavated and poured new sidewalk for new airline.





Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

DOT & I Facility

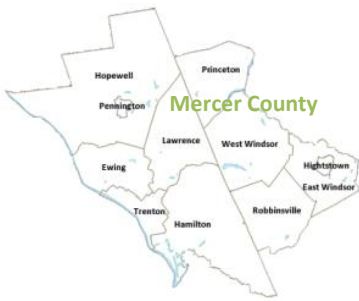
- Removed and poured new concrete at fuel pumps.



DOT & I Facility
New concrete pour

North and South Salt Domes

- Excavated formed and built new material storage bins.
- North Salt Dome – (*ongoing*) – Utilizing a screener to make clean fill dirt for departmental use.



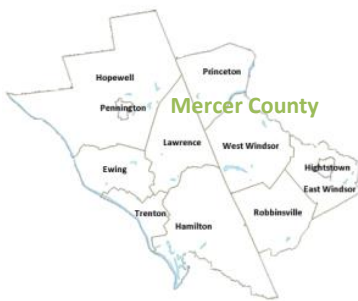
Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



Above: North Salt Dome located at Trenton-Mercer Airport

Below: South Salt Dome Pole Barn located at Mercer County Park





Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Installed concrete deck for the installation of a new propane tank for Buildings & Grounds, Central Maintenance.
- Constructed new greenhouse for the Mosquito Division.

Park Commission

- Milled cart paths at Princeton Country Club.

Prosecutor's Office

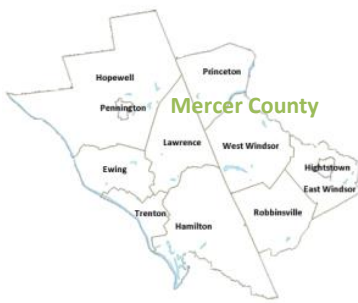
- Formed and poured new concrete dog runs for the Prosecutor's Office K-9 Unit.

2017 Goals

State-mandated Priority Repairs – The State of New Jersey Bridge Inspections will continue to determine structure sufficiency ratings which the Department uses to prioritize bridge rehabilitation or replacement projects. As directed by the Engineering Division, priority repairs will be completed.

2017 Construction Projects – Under continued direction by the Engineering Division, the Unit will complete reconstruction of the following structures:

- Pennington-Harbourton Road (Bridge No. 213.13), Hopewell Township over a tributary of Jacobs Creek.
- Pennington-Harbourton Road (Bridge No. 213.14), Hopewell Township over a tributary of Jacobs Creek.
- Blackwell Road (Bridge No. 5-233.1), Hopewell/Lawrence Townships over a tributary of Stony Brook.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

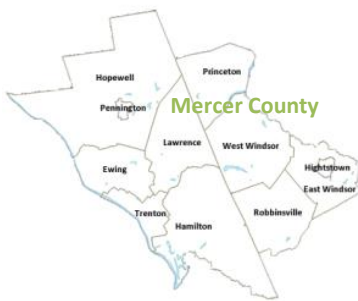
Maintenance – Provide any incidental maintenance to 681 structures, such as guiderail repair after motor vehicle collision and debris removal after a storm.

Respond to Emergency Calls and Potential Threats – Respond to emergencies and remediate potential threats as warranted.

Interdepartmental Assistance Program (IAP) – Provide resources, equipment and labor to assist other departments/divisions within the County.

Snow Removal and Ice Control Assistance – Provide assistance during snow/ice events.

Training Opportunities – Provide opportunities for professional development to Unit members as well as update skills, knowledge and required certifications through classroom and on-the-job instruction, access to written manuals and books, related professional memberships, conferences and workshops.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Mosquito Control Unit

Isik Unlu, Superintendent
Mike Milewski, Supervisor

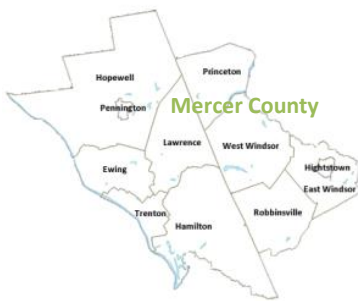
2016 Accomplishments

Zika Virus Prevention – Goal accomplished – Our operation is scientifically guided and fundamentally designed to control all of Mercer County’s mosquito species, most notably *Aedes albopictus* (Asian Tiger Mosquito), which is implicated as a vector of Zika virus, second to *Aedes aegypti* (*the yellow fever mosquito*) which is not established in New Jersey. The unit was among the first in New Jersey to test mosquitoes for the presence of Zika. No local transmission was detected. The report below contains details of our efforts to control mosquito populations, helping to protect the residents of Mercer County.



Pictured left: *Aedes aegypti* (the Yellow Fever Mosquito) NOT established in NJ
Pictured right: *Aedes Albopictus* (the Asian Tiger Mosquito) well established in NJ

Provide larvicide and adulticide control measures – Goal accomplished - 2016 will be remembered for the unprecedented warmth felt year-round. Not only did the winter rank as the 2nd warmest of all time, but 43 days of over 90 degrees helped the summer of 2016 rank as the 2nd warmest of all time as well. Besides a warm winter and hot summer, the year was relatively dry. By summers end, pollen was coated on cars, flowers wilted, and lawns browned as drought like conditions prevailed. The intermittent rain events that did occur were just enough to flood low



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

lying areas and fill containers. There were a total of 500 service requests from residents; most of which originated from Hamilton and were container inhabiting mosquito issues. June and August were our busiest months this year. The predictability of our floodwater habitats and routine larval surveillance campaigns enabled us to initiate proactive measures which target larval mosquitoes minimizing adult emergence, thereby reducing the presence disease vectors and nuisance mosquitoes.

In response to local mosquito populations, mosquito inspectors used the following amounts of pesticide:

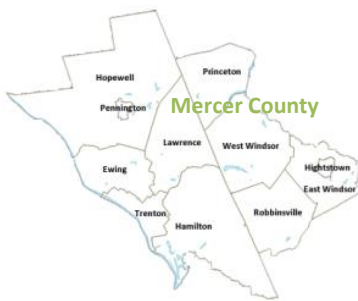
2560 pounds of Spheratax	79 pounds of Natular G-30
813 pounds of Vectobac GS	53 gallons of Co-Co Bear Oil
97 pounds of Vectoprime FG	48 gallons of Scourge
426 Altosid XR briquettes	41 gallons of Duet
572 Altosid briquettes	18 gallons of Anvil
93 pounds of Altosid pellets/granules	6 gallons of Delta Guard
	3 gallons of Suspend SC

In 2016, larvicide treatments took place Countywide on 372 acres of land during 1,400 inspections. Adulticide treatments covered approximately 2,600 acres of land and the following 21 applications were conducted throughout the County:

June 4, 17, 24, 30	September 2, 9, 16, 23, 28
July 15, 19, 22, 27	October 1, 7
August 3, 9, 12, 17, 19, 25	

Culex pipiens specimens were sent to Kansas State University to be tested for Zika vector competence. The findings suggested the likelihood of *Culex* species being a secondary vector of Zika is very low, and our control efforts should remain on *Aedes* species.

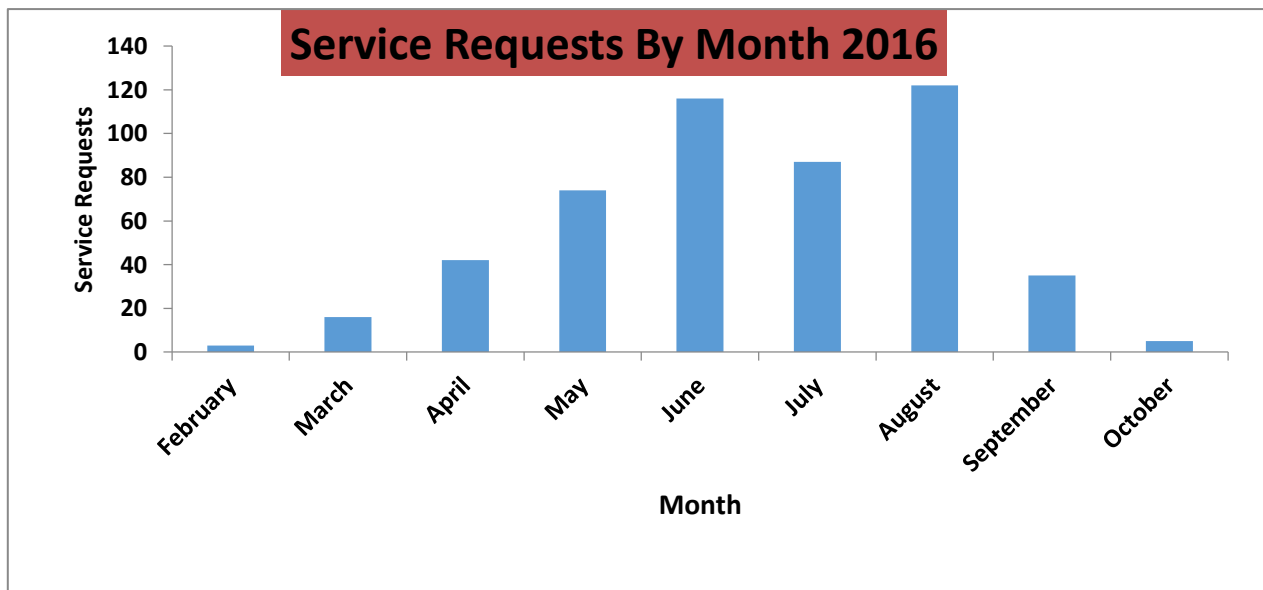
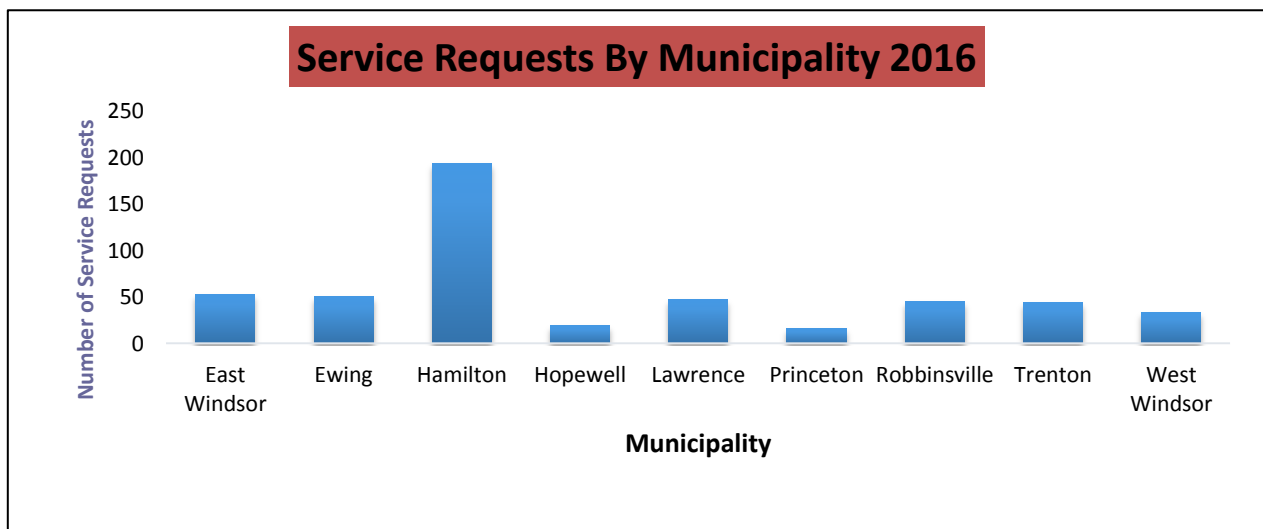
Routine larval surveillance throughout the County was conducted yielding 249 samples which inspectors brought to the lab for identification to species.

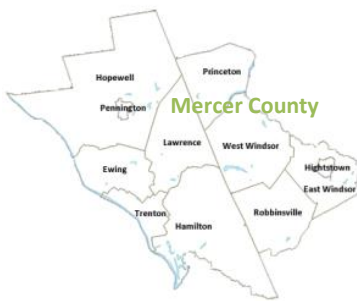


Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Our annual light trap program for adult mosquito surveillance provides us information on population dynamics both presently and historically at 14 locations around the County. These traps allow us to make insightful decisions regarding the implementation of various control methods.

Respond effectively to service requests – *Goal accomplished* – In 2016, a total of 500 service requests were received and responded to in a timely manner.





Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Disease Surveillance – *Goal accomplished* – During the 2016 season, the unit carried out extensive vector surveillance operations. A total of 375 pools were submitted for West Nile Virus (WNV) testing from 290 locations throughout the county. Of the pools submitted, 18 returned positive giving us an overall minimum field infection rate of 1.84 (*MFIR = the number of infected mosquitoes per 1,000*). Chikungunya and dengue virus surveillance continued this year with 180 *Aedes albopictus* pools submitted, all of which returned negative. This year the unit sent a total of 200 mosquito pools to Cape May to be tested for Zika, all of which returned negative as well.

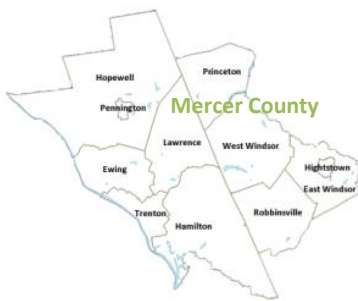
Increase Training Staff – *Goal accomplished* – The unit attended the 103rd annual convention of the New Jersey Mosquito Control Association for training and to update the necessary pesticide license credits. Staff was also in attendance for a Rutgers Entomological Seminar as well as several webinars viewed in our office hosted by the American Mosquito Association.

Other training acquired by our staff includes respirator fitting and training, diversity training, CPR and AED; forklift certification, chainsaw safety and fire safety. Training that is up to date includes hazardous material safety, defensive driving and shop and tool safety.



Above: Water Management unclogging a detention basin allowing water to flow.

Water Management – *Goal accomplished* – The unit completed 125 water management projects throughout the county including deconstructing beaver dams, unclogging ditches and detention basins, up righting blown down tree stumps where water accumulates in the void left by the root ball.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Tire Removal Program – *Goal accomplished* – The unit took a proactive approach this year concerning the Zika public health threat, and ramped up our source reduction tire removal. This year more than 660 tires were collected from abandoned tire piles, residents needing assistance, and routine inspections.

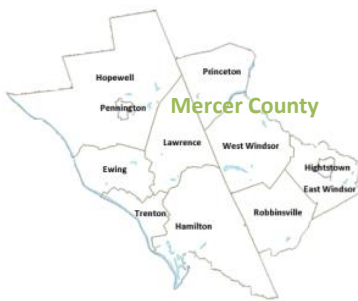
Subject – Matter Leadership – *Goal accomplished* – Under the guidance of the Superintendent, the unit has continued to disseminate operational and biological information about mosquitoes through scientific publications and presentations. This year the unit attended 8 national and regional meetings in order to present the findings of scientific research. Five manuscripts were published this year:

Meetings attended:

1. New Jersey Mosquito Control Association (NJMCA)
2. American Mosquito Control Association (AMCA)
3. Society of Vector Ecologists (SOVE)
4. Pennsylvania Vector Control Association (PVCA)
5. Louisiana Mosquito Control Association (LMCA)
6. International Congress of Entomology (ICE)
7. 13th Annual Arbovirus Surveillance and Mosquito Control Workshop
8. Rutgers Entomology Seminars

Publications:

- Faraji, A., Unlu, I., Crepeau, T., Healy, S., Crans, S., Lizarraga, G., ... & Gaugler, R. (2016). Droplet Characterization and Penetration of an Ultra-Low Volume Mosquito Adulticide Spray Targeting the Asian Tiger Mosquito, *Aedes albopictus*, within Urban and Suburban Environments of Northeastern USA. *PloS one*, *11*(4), e0152069.
- Unlu, I., Faraji, A., Indelicato, N., & Rochlin, I. (2016). TrapTech R-Octenol Lure Does Not Improve the Capture Rates of *Aedes albopictus* (Diptera: Culicidae) and Other Container-Inhabiting Species in Biogents Sentinel Traps. *Journal of medical entomology*, *tjw068*.



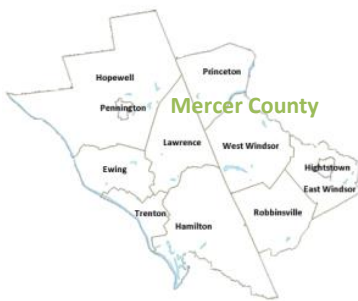
Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- Faraji, A., & Unlu, I. (2016). The Eye of the Tiger, the Thrill of the Fight: Effective Larval and Adult Control Measures Against the Asian Tiger Mosquito, *Aedes albopictus* (Diptera: Culicidae), in North America. *Journal of Medical Entomology*, *tjw096*.
- Johnson, B. J., Hurst, T., Quoc, H. L., Unlu, I., Freebairn, C., Faraji, A., & Ritchie, S. A. (2016). Field Comparisons of the Gravid Aedes Trap (GAT) and BG-Sentinel Trap for Monitoring *Aedes albopictus* (Diptera: Culicidae) Populations and Notes on Indoor GAT Collections in Vietnam. *Journal of Medical Entomology*, *tjw166*.
- Huang, Y. J. S., Ayers, V. B., Lyons, A. C., Unlu, I., Alto, B. W., Cohnstaedt, L. W., ... & Vanlandingham, D. L. (2016). *Culex* species mosquitoes and Zika virus. *Vector-Borne and Zoonotic Diseases*, 16 (10), 673-676.

Public Outreach and Education – *Goal accomplished* – This year staff attended public events helping to increase public awareness and emphasizing the importance of mosquito control, empowering them to take corrective actions to reduce mosquito populations on their own properties. Public outreach was strongly emphasized as we distributed educational materials, brochures, and home prevention kits. In total, 2,900 informative pamphlets were circulated to residents of Mercer County at community events, public health departments, libraries, hospitals, and various households while conducting service requests.



2016 Mercer County 4H Fair



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

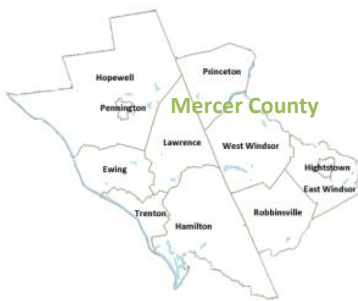
Functions attended include:

- City of Trenton's Youth Fishing Derby
- Mercer County's 4H Fair
- Master Gardeners of Mercer County's 14th annual Insect Festival
- MCIA's Touch a Truck Day
- Valley Forge Educational Services' Community Day

Assist other state and regional programs in the suppression of the Asian Tiger Mosquito (ATM) – Goal accomplished – The unit has continued their partnership with Rutgers University, NIH, SpringStar and Hudson County to use auto dissemination stations for the control of *Aedes albopictus*. We have also continued our partnership with Biogents using newly designed traps to reduce adult *Aedes albopictus* populations.



Auto dissemination station



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Media Coverage:



Dr. Isik Unlu, Mosquito Control Superintendent speaking to local news

A marketing specialist with Girl Scouts of Central & Southern New Jersey produced a video that highlights what “*girls can do*” and reached out to our Superintendent Dr. Unlu; a short piece was filmed in our mosquito laboratory.

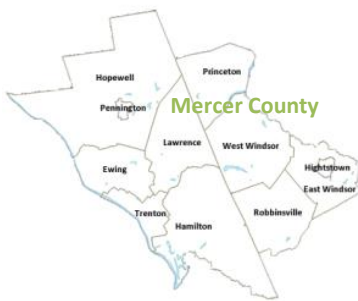
Our Superintendent Dr. Unlu, served as a subject matter expert at Congressman Frank Pallone’s news conference addressing efforts to combat the ZIKA Virus.

Dr. Unlu gave a presentation before the Board of Chosen Freeholders concerning our ZIKA prevention efforts and Integrated Pest Management Program.

Our office would like to send our best wishes Madison Rittley who is continuing her education perusing a Degree in Law, from the University of Dayton. She served as a seasonal employee and Inspector Trainee for 2 years. She was a valuable asset to our department, specializing in laboratory maintenance, data entry, and operational research.

2017 Goals

Increase training of staff – Continue professional training for technical field staff during 2017. Provide opportunities for field staff to become more involved at the state and regional levels.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Acquire additional funding through grants – Continue to pursue avenues on how to supplement operational and research funding to investigate new control and surveillance measures for mosquito control.

Respond to service requests – Increase the efficiency of responding to service requests from residents, and reduce the need for recurrent inspections.

Provide larvaciding control measures – Continue to provide efficient and efficacious larval control measures for the residents of Mercer County.

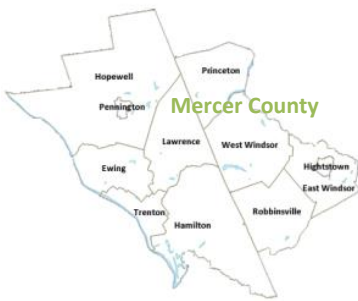
Provide adulticide control measures – Continue to provide efficient and efficacious adult control measures (*if needed*) for the residents of Mercer County.

Assist other state and regional programs in suppression of the Asian Tiger Mosquito (ATM) – Continue to investigate new and innovative measures to control the ATM and provide logistic support and guidance to support other programs that may need our help.

Tire removal program – Expand and make this service available to more residents that are in need and cannot recycle or remove their own tires.

Water management program – Provide additional services to retention/detention basins, ditches, and streams that are in need of clearing to ensure flow during the off season.

Subject-matter leadership – Under the Superintendent’s guidance, the unit staff will continue to disseminate operational and biological information on mosquitos through scientific publications. Sharing our findings and trials and tribulations with other mosquito control programs helps advance operational knowledge and better addresses health related.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Motor Pool Unit

Vehicle Maintenance

Assist departments with vehicle specification, purchase and maintenance.

Road Side Assistance

Provide employees using County vehicles with 24-hour roadside assistance and towing services.

Motor Pool Vehicles

Manages and maintains County Motor Pool vehicles including acquisition, administration and dispatching.

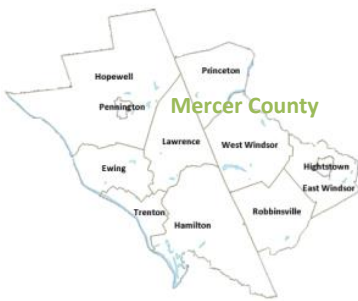


2016 Accomplishments

Administration

Fiscal Year 2016 Operating Budget – *Goal accomplished.* A realistic and end-of-year projection was formulated in preparing the budget. The total approved Fiscal Year 2016 budget for the Division of Motor Pool is \$1,848,115.

Fiscal Year 2016 Capital Budget – *Goal accomplished.* Motor Pool is responsible for the preparation of Capital Budget Requests submitted for the purchase of vehicles and equipment for all County Departments. Meetings were held with various departments to identify and assess specific needs. A 2016 Capital Improvement Plan was prepared and submitted for approval by the Mercer County Board of Chosen Freeholders. The total approved Fiscal Year 2016 Capital for the Division of Motor Pool is \$4,553,000.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Utilizing New Jersey State Contracts for Cost Effective Purchasing – Goal accomplished. Motor Pool purchases vehicles and equipment. The New Jersey State Contract provides effective cost savings to the County. State Contracts were used for the purchase of the following vehicles/equipment:

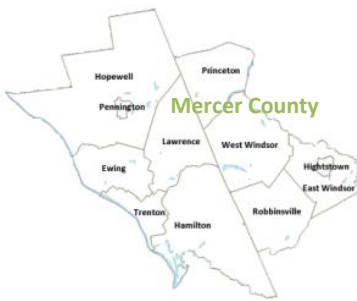
- (4) Chevy 15 Passenger Vans
- (10) Ford F250 Utility Trucks
- (3) Chevy Tahoe's
- (1) Ford Police Interceptor Utility
- (2) Jeep Patriots
- (5) Ford F450 trucks with various bodies
- (2) Ford Explorers
- (2) T770 T4 Bobcat Compact Track Loaders

Capital Budget Purchases – Goal accomplished. Bids for the purchase of equipment were advertised, received, reviewed and contracts were awarded for purchase of the following:

Equipment/Trucks

- Thermoplastic Pavement Marker
- Brush Chipper
- Portable Screening Plant
- Bobcat Toolcat 5600
- F550 with Aerial Device
- Case 621F Articulated Wheel-loader
- (2) Motor Grader
- Mini Bus for Prisoner Transport
- Falcon Hot Box
- Dump Trucks
 - (6) Single cab
 - (2) Crew cab
 - (2) Tandem
- Forestry Truck
- (4) Prisoner Transport Vans
- F450 Platform Truck

2016 Surplus Auction – Goal accomplished. A successful on-line surplus auction was held in the spring and included cars, trucks, heavy equipment and various small pieces of equipment that the County no longer needs or uses. Vehicles confiscated by the Mercer County Prosecutor's Office are also sold at the auction through an on-line bidding process. This year a total of 47 items were sold.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Emergency Services – *Goal accomplished.* Motor Pool employees handled all emergency services including but not limited to: towing, inclement weather and breakdowns.

Installation of a Propane Station – *Goal partially accomplished.* The current propane station located at the Mercer County Department of Transportation and Infrastructure (MCDOT & I) Facility is outdated and does not meet the required codes and regulations. The installation of an updated Propane Station will be used for equipment, fork lifts, paving equipment and tarpots is on-going and scheduled for completion in 2017. The installation of the tank is complete. We are awaiting additional work by the contractor for the electrical.

Interdepartmental Assistance Program (IAP) – *Goal accomplished.* Motor Pool provides assistance to other departments under Mercer County government. In 2016 assistance was provided to the following departments/division:

Correction Center

- Delivered diesel fuel, which was used for generators

Highways

- Provided fuel and tire services, including on-site, to vehicles and/or equipment

Prosecutor's Office

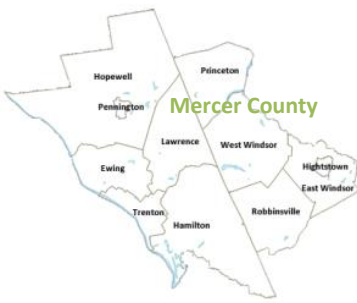
- Provided towing services on a 24/7 basis for vehicles

Sheriff's Department

- Provided towing services on a 24/7 basis for vehicles
- K9 Training

Trenton-Mercer Airport

- Provided fuel and tire services, including on-site, to vehicles and/or equipment
- Maintenance and repairs of all equipment used for snow removal



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Other Accomplishments

In addition to the goals set forth in 2016, the following accomplishments have also been undertaken:

Emergency Upgrades to DOT & I Complex Fueling Stations – Goal accomplished. These upgrades were mandatory to keep in compliance with the New Jersey Department of Environmental Protection (NJDEP). This was a three (3) month project that replaced the tank sumps and piping. This required the use of three (3) large temporary fueling stations.



Contractor R.J. Walsh Associates
Replacement of tank sumps and piping

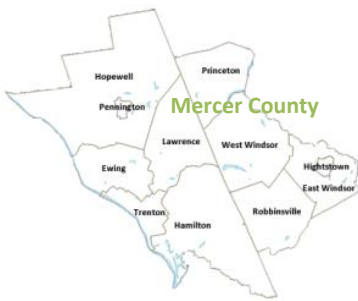


Temporary above ground fueling tanks
Used in the interim

Take your Child to Work Day
Motor Pool staff participated in the annual event.



Take your Child to Work Day
Demonstration of equipment



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Training

Motor Pool employees participated in the following training opportunities:

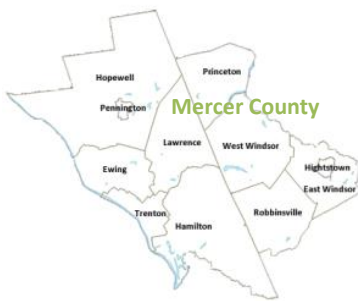
- Defensive Driving
- Fire Safety
- Fire Extinguisher
- Forklift
- Lockout/Tagout
- Shop & Tool Safety
- Hazmat Awareness/Hazmat Communication
- CDL Controlled Substance & Safety Regulations
- Turf Equipment University
- GDI (Gasoline Direct Injection) import & domestic operation and testing
- General Motors Technician Training
- Broom Bear & Eagle Service School
- Diagnosing Fuel Trim, MAF and O2 Problems

Additionally, six (6) mechanics attended New Jersey Inspector's Training in Burlington County and are now certified to perform New Jersey State Inspections on County vehicles.

Somerset County Co-Op Purchase – Utilized Somerset County Co-Op for the purchase of a Shuttle Bus with luggage rack for the Trenton-Mercer Airport.



National Intergovernmental Purchasing Alliance (IPA) – Utilized the National Intergovernmental Purchasing Alliance (IPA) for the purchase of two (2) Toro Groundsmaster 7210's to include sweeper and attachments; one (1) for Buildings & Grounds and one (1) for Trenton-Mercer Airport.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

2017 Goals

Operating and Capital Budgets – Complete 2017 Budgets and continue to look for ways to reduce expenses.

Utilize Contracts for Purchasing – Continue to look for opportunities to save County funds by utilizing advantageous pricing offered by the New Jersey State Contract, Somerset County Co-Op and National Intergovernmental Purchasing Alliance (IAP).

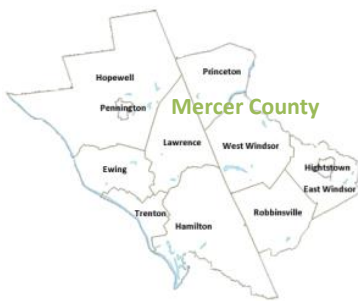
Coordinate 2 on-line Surplus Auctions – In conjunction with the Prosecutor’s Office, coordinate two (2) auctions of surplus and confiscated vehicles.

Completion of the Propane Station – Coordinate the completion with of the project with Buildings & Grounds to ensure that the project proceeds as planned and stays on schedule to be completed by the end of 2017.

Provide Emergency Services – Continue to provide emergency services to all County Departments.

Update Current Fleet Management System – This will be done as part of the County Asset Management System.

Install Diesel Emission Fluid (DEF) Tank – This project will be completed in conjunction with the installation of the updated propane station. DEF is a requirement on new trucks.

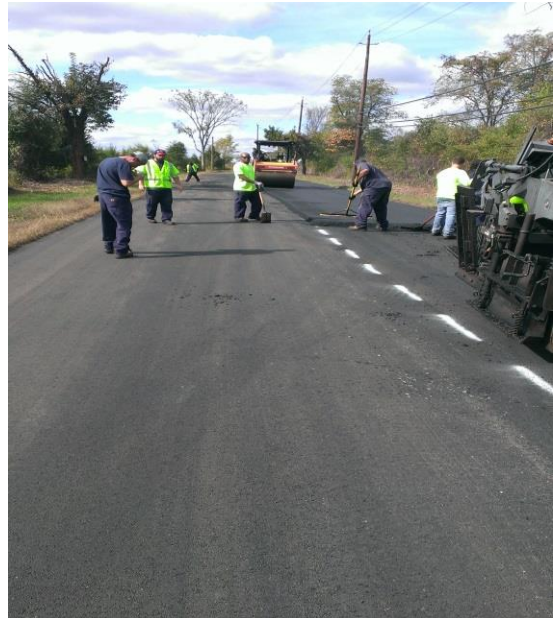


Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Roads Unit

2016 Accomplishments

Roadway Resurfacing Program - Goal accomplished. Large-scale Capital Projects for road reconstruction are funded annually and approved by the Mercer County Board of Chosen Freeholders. This year, the following 16 Capital Projects were budgeted and completed in the following municipalities:



Milling and Resurfacing Project
Road Unit Personnel

City of Trenton

- Parkside Avenue from West State Street to Parkway Avenue

East Windsor Township

- Old York Road from the NJTP to Perrineville Road
- Old York Road Bridge over Herbertville to Perrineville

Ewing Township

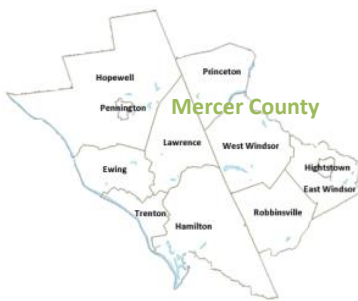
- Mercer County Department of Transportation & Infrastructure Facility
- Lower Ferry Road from Upper Ferry Road to the Township Line
- Sam Weinroth Road from the Hotels to Scotch Road
- Scotch Road from Sam Weinroth to Upper Ferry Road
- Nursery Road from the Bridge to Scotch Road

Hightstown Borough

- Etra Road from Ward Street to South Main Street

Hopewell Township

- Bear Tavern Road from Janssen to Washington Crossing Road
- Carter Road from Elm Ridge Road to Cleveland Road
- Elm Ridge Road from Pennington-Rocky Hill Road to Carter Road



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- Lambertville-Hopewell Road from the County Line to Harbourton-Rocktown Road
- Nursery Road from Bear Tavern Road to the Bridge

Lawrence Township

- Carter Road from Rosedale Road to Elm Ridge Road

Princeton

- Harrison Street to Princeton Avenue to the Old Borough Line



Maximizer 3
Applying liquid asphalt

West Windsor Township

- Old Trenton Road from New Village Road to Dorchester Road

Municipal Assistance Program (MAP) – Goal accomplished. The Municipal Assistance Program provides labor and equipment for milling and resurfacing of roadways, not under the jurisdiction of Mercer County. Under this program, the following roadways were completed this year:

Ewing Township

- HomeFront Driveway, Nonprofit Corporation

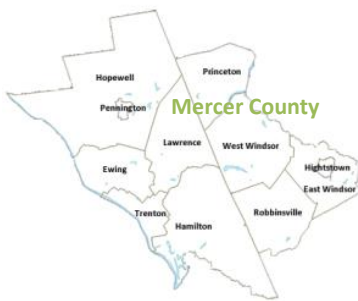
Hopewell Borough

- Milled and paved Somerset Street

Pennington Borough

- Paving of Pennington Road Fire Company
- Supplied millings for municipality on an as needed basis





Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Implement Opportunities with Municipalities performing projects as requested - *Goal accomplished.* The Road Unit provided equipment, labor and other resources to many municipalities, including the following:

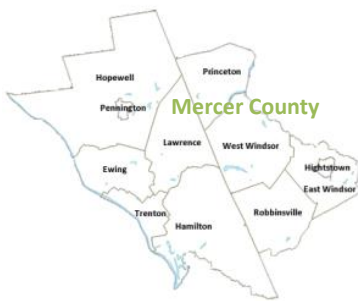


Resurfacing Project
Road Unit Personnel

- Tack Truck was utilized for paving
- Stock piling of salt supplies at the Salt Dome
- Utilized the street sweeper
- Milling and paving driveways
- Hauled wood chips

Maintenance of County Roadways – *Goal accomplished.* The maintenance of County roadways is routinely inspected year-round for potholes and repairs, ensuring the safety of the drivers, bicyclists, and pedestrians alike. This year, approximately 550 potholes were repaired, utilizing more than 150 tons of hot/cold patches.

Road Opening Permits – *Goal accomplished.* In order to ensure the safety and integrity of the County road network, road cuts must be closely monitored. Contractors, utility companies and other government agencies are required to obtain a permit prior to performing any work in the County right-of-way. This year, 117 road opening permits were submitted, reviewed and granted. Each submission was checked for completeness and compliance with Department-established rules and regulations. Once a permit was granted and applicable fees secured, the submitting company could commence work with the Unit's Road Safety Inspectors monitoring for satisfactory completion.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

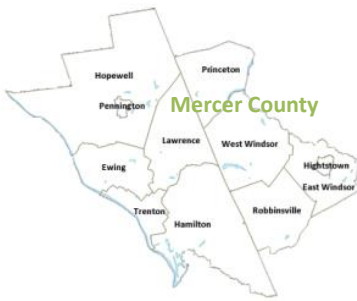
Interdepartmental Assistance Program (IAP) – Provide resources to other departments within the County. *Goal accomplished.* The Highway Division provides resources (skilled personnel, equipment and time) to assist other County departments accomplish their mission or better perform their functions. Unit personnel responded to the requests of other departments and provided the following services:

- Sheriff’s Department
- Park Commission
- Milling and paving of the Dempster Center Fire School parking lot

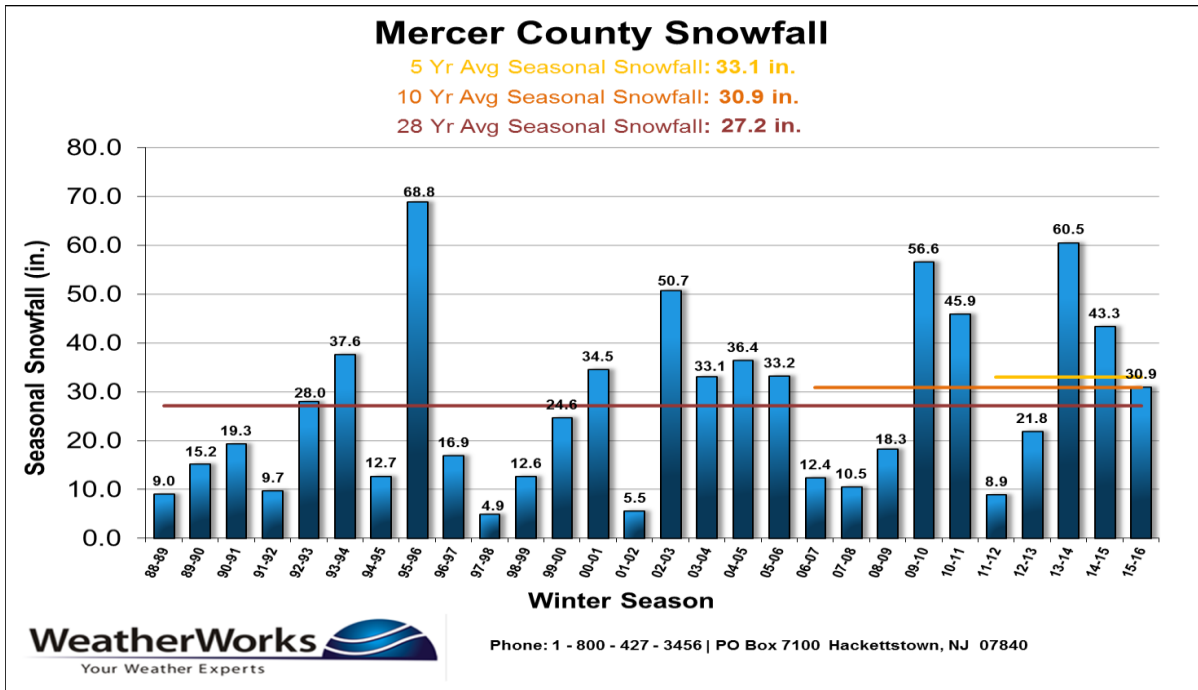


Interdepartmental Assistance Project
Dempster Center Fire School Parking Lot
Completed milling, resurfacing and striping

Snow Removal and Ice Control – *Goal accomplished* - Personnel from all Highway Division Units responded to 6 storm events during the 2015-2016 winter season. Over 2,625 tons of pre-treated salt was utilized and \$465,042 was devoted to staffing the sanding and salting vehicles and equipment to ensure safe roadway conditions throughout these storms. To be properly equipped, staffed and well organized, the Unit continues to employ the WeatherWorks weather reporting and projection service.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

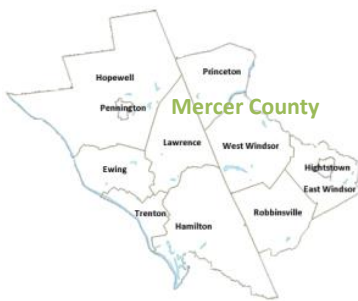


Snow Event Equipment and Staffing

Changing conditions will affect which chart below drives our response and our response will change accordingly.



Snow Removal



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- * **Ice Emergency Service Requests** - Staff & Equipment as needed
(Voluntary)
- * **Small Snow/Ice Storm - Up to 1” Predicted by Weather Service**
 - 11 Plow/Salt Trucks with Operators – 2 Routes per Truck
 - 2 Front-end Loaders with Operators – 1 at each Salt Dome *(North & South)*
 - 1 General Supervisor – In Office
 - 4 Crew Supervisors – 2 for North Routes & 2 for South Routes

If Sun Bank Arena, McDade Administration Building or Mercer County Court activities warrant attention to parking lots, the below will be added:

- 2 Power Brooms with Operators
- 1 Plow/Salt Truck with Operator

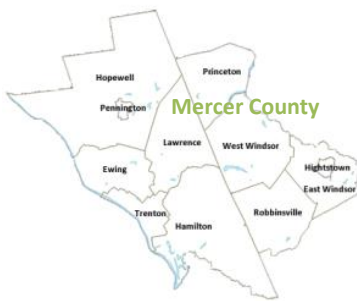
- * **Mid-Size Snow/Ice Storm - 1” to 3” Predicted by Weather Service**
 - 22 Plow/Salt Trucks with Operators – 1 Route per Truck
 - 2 Front-end Loaders with Operators – 1 at each Salt Dome (North & South)
 - 2 General Supervisors – In Office *(in Field as needed)*
 - 8 Crew Supervisors – 1 for each Plowing Zone *(4 North & 4 South)*

If Sun Bank Arena, McDade Administration Building or Mercer County Court activities warrant attention to parking lots, the below will be added:

- 2 Power Brooms with Operators
- 1 Plow/Salt Truck with Operator
- 3 Pickup Trucks with attached plows and Operators
- 1 Crew Supervisor – On site(s)



Snow Removal



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

*** Large Size Snow/Ice Storm - Over 3" Predicted by Weather Service**

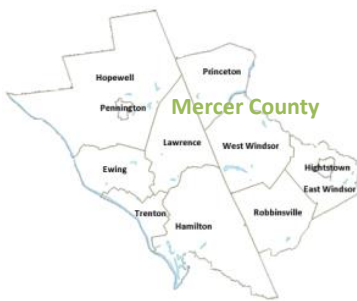
All equipment and available qualified personnel will be used

- 35 Plow/Salt Trucks with Operators
- 3 Front-end Loaders with Operators
- 3 Road Graders with Operators
- 4 Backhoes with Operators
- 15 Pickup Trucks with attached plows and Operators
- 2 General Supervisors – In Office (*in Field as needed*)
- 11 Crew Supervisors – In Field

Installation of snow fence, County-wide – Goal accomplished. Snow accumulated on the side of the road has the potential to blow back on the roadway surface and cause hazardous driving conditions. Snow fencing has been erected to reduce or eliminate this potentially dangerous situation. This year approximately 10,000 feet of snow fence (*just shy of two miles*) was utilized.

Stormwater Management Plan – Compliance Requirement - Goal accomplished. In accordance with U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) monitoring program and the New Jersey Department of Environmental Protection (NJDEP) Municipal Stormwater Regulation Program (MSRP), storm control inlets were inspected, cleared, repaired, and retrofitted. In addition, roadways routinely swept and cleared of debris that would clog the stormwater drainage system. In 2016, the following maintenance activities were performed:

- **Storm Control Inlet Inspections** – Of the 4521 inlets maintained by the Unit, over half (2360 inlets) were field examined in 2016 during data collection operations by seasonal assistants. Routine inspection of the remainder of the inlets was performed by the Unit's inlet team.
- **Inlet Retrofit** – 72 steel opening plates and 75 bicycle-safe grates were installed to better control debris from entering the stormwater drainage system and roadway improve safety.



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- **Jet/Vac Maintenance** – 124 inlets were cleared of sediments and debris and 70 yards of material collected and disposed.
- **Street Sweeping** – In 2016, 1,095 yards of material was collected and disposed by the Unit’s street sweepers. In assistance, the Shade Tree Unit collected larger branches and detritus along County roadways.
- **Erosion Control/Herbicide** – Erosion control vegetation planted to stabilize exposed soil along right-of-ways was mowed by Unit personnel. In assistance, the Shade Tree Unit applied 1,100 gallons of herbicide to control the growth of weeds.

Roadside Deer Carcass Removal and Disposal – *Goal accomplished.* The Mercer County Purchasing Agent advertised for bids to provide roadside deer carcass removal and disposal for the period of 2 years for use by the Mercer County Cooperative Contract Purchasing System. This service is provided through Kelly Winthrop, an outside vendor. This year, approximately 380 carcasses were removed and disposed of properly.

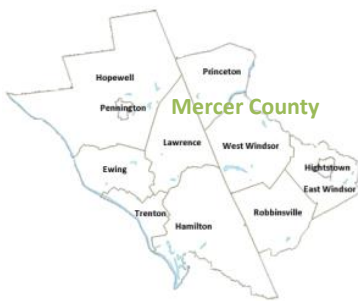
2017 Goals

Roadway Resurfacing Program – Conduct large-scale road reconstruction, resurfacing, and repair projects as directed by County Engineer.

Maintenance of County Roadways – Inspected County roadways year-round for potholes and rapidly repair discovered potholes to ensure the continued safety of drivers, bicyclists and pedestrians alike.

Road Opening Permits – Uphold the 5 year Moratorium on openings in county-maintained rehabilitated road surfaces by reviewing all submitted utility and contractor road cut requests. Make sure Road Safety Inspectors monitor and document all permitted work performed for compliance with established standards by the County Engineer.

Snow Removal and Ice Control - Respond to storm events, ensuring the safe passage of roadways



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2016 Accomplishments/2017 Goals

Shared Services Program (SSP) – Realize opportunities to borrow municipal equipment in an effort to reduce operational costs and respond to requests to lend Unit equipment to municipal Public Works agencies within Mercer County, when not in use by the Unit, to assist in maintaining better roads countywide.

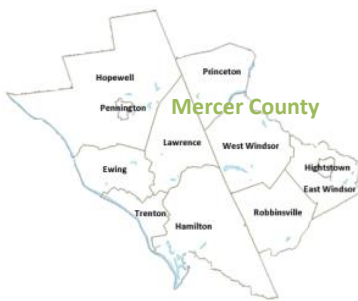
Municipal Assistance Program (MAP) – Response to requests from municipal agencies within Mercer County for assistance with local road maintenance and rehabilitation project, when Unit resources are available.

Stormwater Management Plan – Sweep all County-maintained roadways on a regular schedule and according to municipal statutes to Comply with U.S. Environmental Protection Agency’s National Pollutant Discharge Elimination System (NPDES) monitoring program and the New Jersey Department of Protection (NJDEP) Municipal Stormwater Regulation Program (MSRP) by inspecting, clearing, repairing, and retrofitting storm control inlets and controlling erosion control vegetation growth by mowing or with herbicide application.

Interdepartmental Assistance Program (IAP) – Provide Unit resources (skilled personnel, equipment, and time) to assist other County departments accomplish their mission or better perform their functions.

Annual Leaf Collection Program – Create a Leaf Collection schedule for all county-maintained roadways and promote schedule to residents via the County website in order to keep leaves from clogging stormwater drainage inlets. Contact the Mercer County Improvement Authority (MCIA) to determine if the leaf collection schedule can be part of their My Waste app or otherwise locally promoted through their Department.

Removal and Disposal of Deer Carcasses – Document the location of discovered and reported deer carcasses along county-maintained roadways and convey location to the contracted removal service provider as quickly as possible to maintain clear and safe roads for travelers.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Transportation Asset Management Information System (TAMIS) Project

Janel McCoy, Geospatial Information System (GIS) Specialist

The TAMIS project exists to assist the Department with increasing efficiency levels regarding maintenance and operations procedures relating to County transportation assets. The success of the TAMIS project continues to be achieved through adaptive innovation to support and enhance current Department practices.

2016 Accomplishments

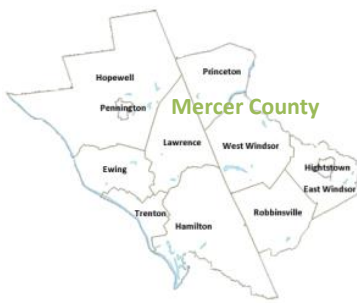
Combining Functions of CMMS, TAM and EAM

A significant goal was achieved in 2015 – Combining the functions of Computerized Maintenance Management System (CMMS) and Transportation Asset Management (TAM) applications, the enterprise asset management (EAM) system acquired by the Department in 2014 made significant progress. Emergency Services Communication Center (ESCC) dispatchers started using the EAM system’s Service Request portal for reporting night service calls for the Department beginning January 2016.



In addition, the EAM system has been loaded with traffic regulatory and wayfaring signs along and overhead County-maintained roadways and intersecting streets as well as signs associated with County-maintained bridges and culverts and County facility thoroughfares and parking lots.

The Highway Division’s Traffic & Signal supervisor is reporting any repair and replacement activities to maintain these signs daily through the system’s web interface in a test environment to work out a process for tracking the individual parts and assure sign plaque retro-reflectivity.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

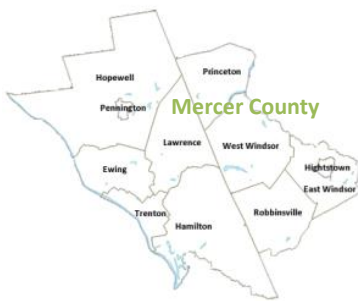
Asset Inventory

The Department's Geographic Information Systems (GIS) Specialist is primarily tasked with asset inventory, mapping and data coordination. *Through the TAMIS project, the Department realizes improved asset data management and communication.*

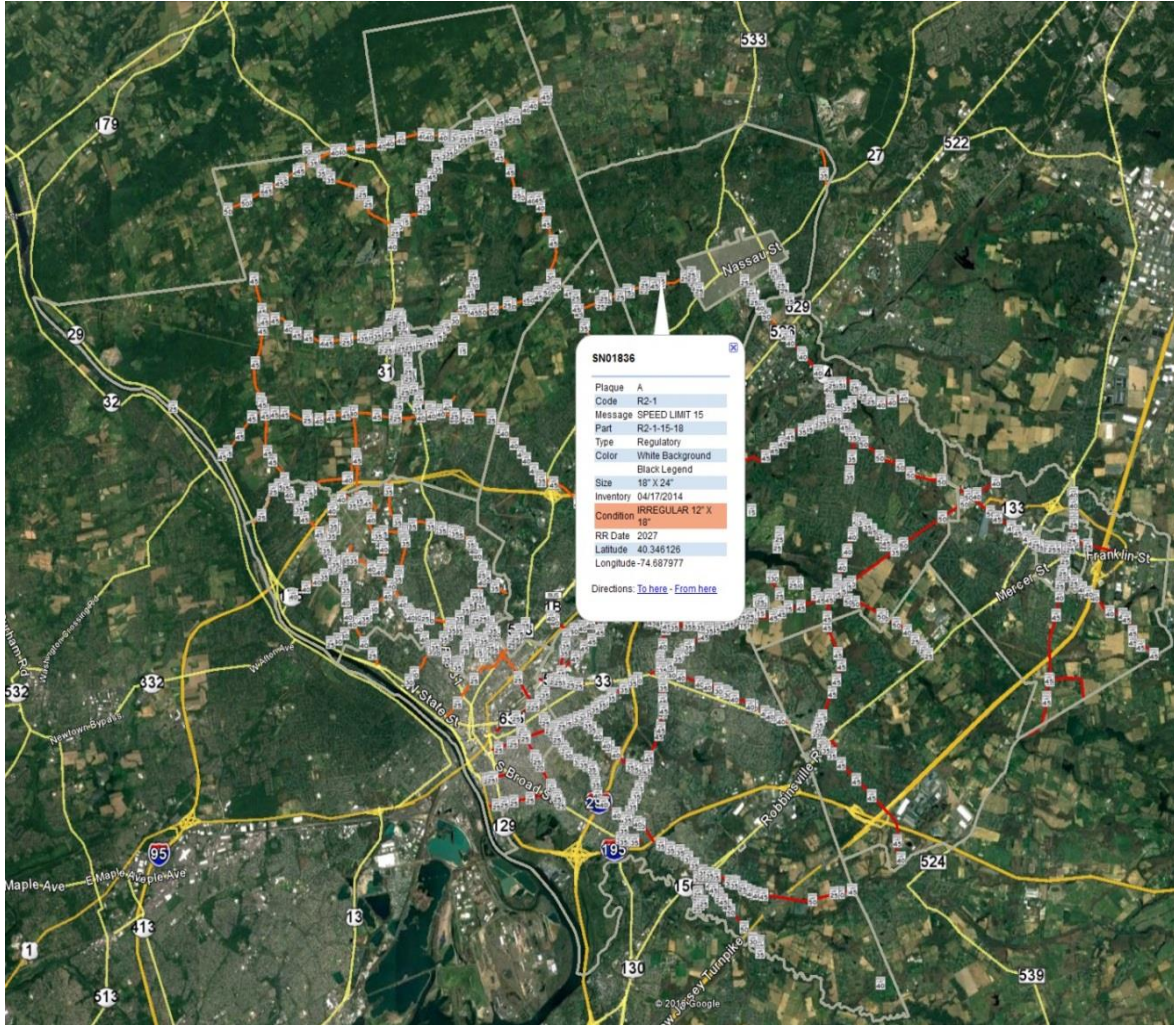
Most staff resources were focused on the preparation, conversion and loading of existing asset data for incorporation into the AssetWorks EAM system followed by testing and troubleshooting of the resulting EAM asset data interface displays and table designs. Collection of information on the County's major transportation assets and distributing that information to County staff continued in 2016.

- The consultant-submitted Traffic Sign Inventory collected all roadside signs along County-maintained roadways, side streets intersecting County roads (for a length of 500 feet from intersection), and County Park thoroughfares as well as those within County facility parking lots and associated with County-maintained off-network bridges & culverts (with spans over 5 feet) was reviewed and corrections to the data continue. Basic identification information as well as photographs of each sign plaque was loaded into the EAM system.

The accumulated data was farther used to fulfill a request from the NJDOT to identify all trailblazing signs for Interstate 95 on County-maintained roadways for an upcoming change in the Interstate's path in August 2018.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals



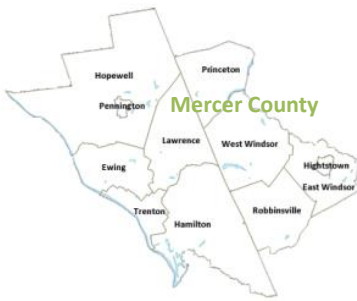
TAMIS Google Earth Viewer – Speed Limit Sign (R2-1) Plaque Information
 The County-maintained Roads are colored to designate north district roads (orange) and south district roads (red).
 Speed Limit Sign Plaque locations along County-maintained Roads are represented by their Manual of Uniform Traffic Control
 Device (MUTCD) plaque representations.



The inventory of all Intersections along County Routes continued in conjunction with defining markers for roadway linear assets loaded into the EAM system.



Intersections form the principal location identifier for individual traffic signals as well as crosswalks, curb ramps and other pedestrian safety systems. These roadway markers also form reference locations for New



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Jersey Department of Transportation (NJDOT) straight line diagrams (SLDs) mileposts (MP) as well as the extents of speed limit zones, carriageway lanes, roadside curbing and Highway Division roadway maintenance segments. Defining these features was the major focus of asset inventory activities in 2016.

- A field review of some Guiderail assemblies associated with County-maintained bridges on local roads was completed in the first quarter of 2016. A reference document for each assembly group reviewed was prepared describing their location and lengths. A count of all guiderail assemblies associated with County-maintained bridges on County-maintained routes and local roads was also completed in preparation for a Request for Proposal (RFP) for field collection of Guiderail attributes and photographs to support safety upgrades as well as a thorough engineering and safety stud. The RFP was submitted and responded to this year with a kick-off meeting to be held in December.

GUIDERAIL INVENTORY
DOT&I - HIGHWAY DIVISION
PROJECT: 2016-01-04

HAZARD GROUPS FOR
CR 604 ROSEDALE RD AND ELM RD

Legend:
■ Bridge / Culvert 20ft or over span
● Hazard Group
■ Bridge / Culvert 5ft to under 20ft span
■ County-maintained Roadway
■ Other Roadway
■ Town Boundary

DIRECTIONS

HAZARD GROUP	SRID	Center	MC-ID	Over	Location	Length	In
604-030	61000	Northahls Corner Woodville Rd CR 612	2793	WOODVILLE BR	1,100' @ 100' Spine Dr		Highway Test
604-030	61000	Northahls Corner Woodville Rd CR 612	2793	WOODVILLE BR	2,800' @ 100' Spine Dr		Highway Test

MEASUREMENTS

HAZARD GROUP	SRID	Center	MC-ID	IC	Resource	Substrate	Condition	Material	Assembly	Total Length	Post	Spacing	Block	Condition	Length	Post	Spacing	Block	Condition
604-030	61000	Northahls Corner Woodville Rd CR 612	2793	NO	MC	MC	MC	MC	MC	5	2,778'	5'	NO	NO	100'	5'	NO	NO	NO
604-030	61000	Northahls Corner Woodville Rd CR 612	2793	NO	MC	MC	MC	MC	MC	5	2,778'	5'	NO	NO	100'	5'	NO	NO	NO

TOTALS: 5, 2,778', 5', NO, NO, 100', 5', NO, NO, NO

GUIDERAIL INVENTORY
DOT&I - HIGHWAY DIVISION
PROJECT: 2016-01-04

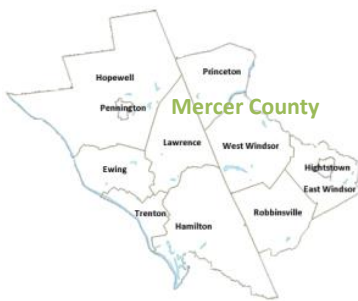
HAZARD GROUP 604-030
MERCER BC # 330.5
SPANS 20FT OR OVER
01-18-2016 11:46:00 AM

330.5 - Rosedale Rd CR 604 over Stony Birk
0.27mi EB from Lambert Dr in Princeton

GR	6.25ft SPACING	BLOCKS	CONDITION
GR0196	YES	COMPOSITE	NO DAMAGE NOTED
GR0197	YES	METAL	NO DAMAGE NOTED
GR0198	YES	COMPOSITE	NO DAMAGE NOTED
GR0199	YES	COMPOSITE	NO DAMAGE NOTED

FIELD CHECKED 01/12/2016

- A Municipal Separate Storm Sewer System Outfalls test project was undertaken to locate, identify and photograph outfalls with the assistance of seasonal assistants and a Mosquito Control supervisor. In the preparation, wayfinding descriptions were added to direct field crew to each outfall group and the watershed into which each outfall drains was determined.
- Funding for the acquisition of data collection devices that may realize better location accuracy on remote assets like the Street Shade Trees canopies and



Department of Transportation & Infrastructure

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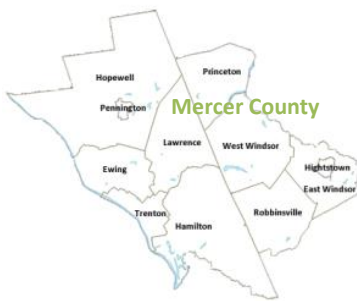
allow for multiple target and multiple dimension measurement recordings was secured and delivery is expected early in 2017.

Asset Management

The Department's GIS Specialist acts as a project manager coordinating internal asset performance reviews as well as external subject matters experts and contractors assisting the Department with similar evaluations. *Through the TAMIS Project, the Department realizes improved asset management and coordination as well as enhanced asset condition analysis for project planning.*

In 2016, performance measurements and conditions of the County's major transportation assets were collected and evaluated and management planning tools were augmented based on the results of these evaluations.

- With the help of the comprehensive data presented in the Capital Project Planning Spreadsheet, Department staff planned and submitted budgets for surface paving projects for 2018. In addition, the 5-year Road Work Moratorium List published by the Department was automatically generated by organizing this spreadsheet by the latest project completion date for each maintenance segment.
- The Department's biannual pavement distress survey identifying roadway distresses by extent and severity in accordance with ASTM D6433 pavement distress standards and Pavement Condition Index (PCI) requirements utilized Automated Laser Crack Measuring system (LCSM) pavement data acquired through a NJDOT project contractor collecting geo-located imagery for 500- and 600-level routes. The resulting data will be delivered early in 2017 and will allow the Department to continue to produce maintenance plans to achieve overall road system condition goals.
- Working with the Engineering Division and a selected contractor, a Guiderail replacement and improvement program kicked off late in 2016. The resulting documentation is intended to augment and update the current contractor-generated inventory of guiderail locations, and provide information on the hazard safety features and material details on each guiderail assembly for future emergency repairs, replacement ordering and budget planning.



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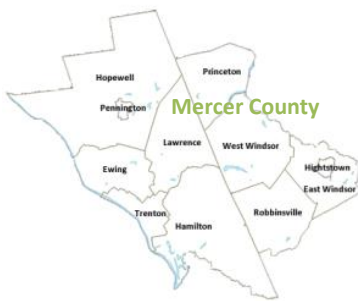
- Corrected Traffic Sign Inventory data supported better traffic sign replacement planning. Incorporating the current maintenance process into the EAM system, traffic sign locations, identifications and predicted replacement dates were made available for daily work scheduling and in-field reference within a map viewer as well as automated listing by route.
- Dry weather conditions for potential Municipal Separate Storm Sewer System (MS4) Outfall dry-flow inspection dates were tracked throughout the year and communicated to the Highway Division's Mosquito Control Unit supervisor conducting the inspections. Outfalls exhibiting dry weather flow and intermittent flow may indicate improper storm sewer system links from private or commercial sources that may overload or damage the system or the receiving surface water.

Process Enhancement

The Department's GIS Specialist acts as a business systems analyst to integrate and clarify the work processes and technologies used to manage and maintain the County's transportation assets. *Through the TAMIS project, the Department realizes enhanced internal and public communication, standardized data management capabilities and organization, and improved activity tracking and reporting.*

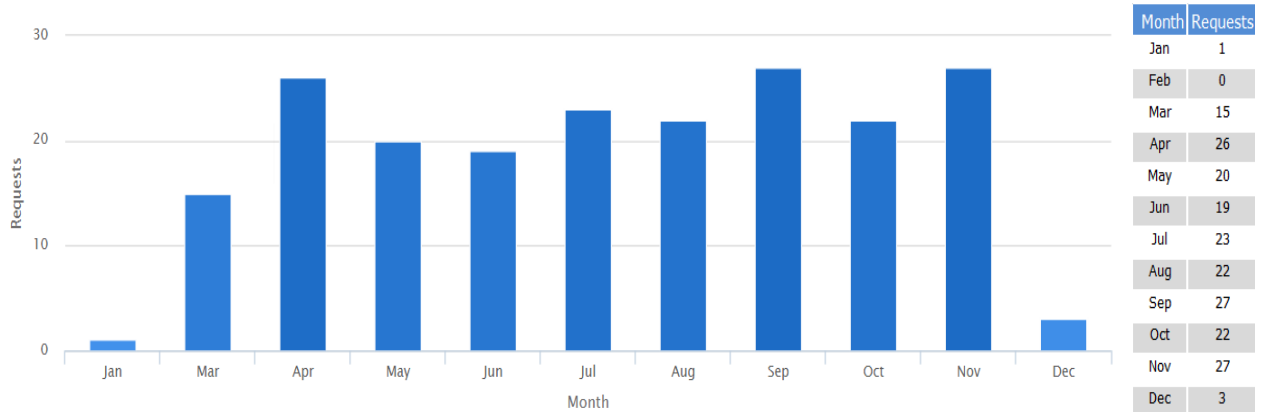
In 2016, enhancements to Department-wide data management were made and current trends in service requests for Highway Division action were summarized.

- The EAM Portal was used by the County's Emergency Service Communication Center (ESCC) Dispatchers to enter after-hours/off-operations service requests for the Highway Division and transmit email notices to the Division's Unit Supervisors. A total of 205 service requests were entered in 2016.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

2016 ESCC Dispatcher Entered Service Requests by Month

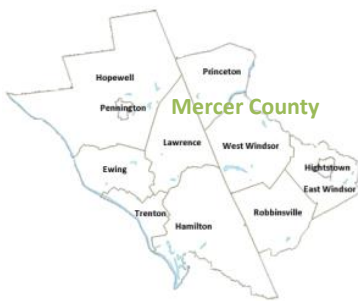


More than half of those service requests (103) entered were designated to Road Unit responses. The Traffic & Signal Unit received the majority of the other service calls – 88 in total. The Bridges & Culvert Unit received only 4 service requests through this service and the Shade Tree Unit had 10 designated requests.

The ESCC Dispatchers and their Director have access to a constantly updating a combined list of all ESCC-entered service requests showing minimum details as well as an analytical chart of monthly totals (shown above). An email with the same minimal details is transmitted to both Supervisors of the appropriate Division Unit based on the entered service request’s issue/asset selection. If the issue is pre-programmed with a Priority of 1 – Now, the ESCC Dispatchers follow up the email with a call to the designated on-call Unit Supervisor.

It is anticipated that in the first quarter of 2017, the minimal details of the service request email will be improved and the EAM Portal will be used by the Highway Division’s Call Center Dispatcher as well.

A digital archive of the Highway Division’s Road Unit work history was created by scanning in daily work assignment supervisor overviews, weather service reports, service request weekly tally sheets, storm response assignment and miscellaneous dispatch communications. The dispatch documents for 2015 and 2016 are relatively complete and organized by month. However, the archive contains emergency service request logs and some dispatch documents back to

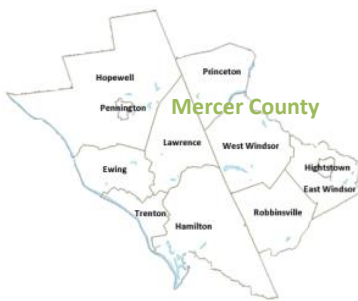


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2005. The Division's dispatcher and Public Works Superintendent have access to search and view the archive for easy recall of Unit activity inquires.

- Spreadsheet and database automations have been developed to calculate hourly and overtime staff wages including longevity awards and fringe overhead from the biannual salary updates received by the Highway Division's Public Work Superintendent. The calculations are used to project and report total staffing costs for emergency event operations such as overnight snow removal and storm cleanup.
- Based on the updated Capital Project Planning Spreadsheet, Capital Budget costs and descriptions for 2018 surface paving projects were programmatically prepared and submitted to the County Engineer for review and approval.
- Software for the test Traffic Signal along the northern segment of Scotch Road was configured on Traffic & Signal Unit and Engineering personnel workstations to support easy remote scheduling, pre-emption and revision of individual signals. A manufacturer software training overview was hosted for Department staff with more in-depth training to program the signals and analyze traffic patterns scheduled in 2017.
- Department-wide internal communications were continued to be enhanced by troubleshooting and upgrading County-issued smartphones, laptops and tablets for wireless mobile data delivery. All current devices, wireless hot spots and peripheral components were maintained in working order or replaced for over two dozen Department staff. In addition, two additional Road Crew Supervisors were provided smartphones and Motor Pool Diesel Inspection and Reporting System equipment was upgraded.



Department of Transportation & Infrastructure

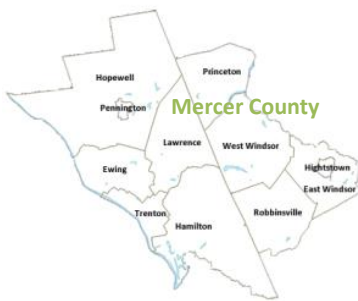
2016 Accomplishments/2017 Goals

- Network upgrade



DOT Complex – 300 Scotch Road, Ewing, NJ – denoting locations for data network connectivity

- After the County records retention policies were reviewed, sorting of the Highway Division’s project archive boxes was undertaken and completed by an enthusiastic seasonal assistant under supervision by the Department’s GIS Specialist. To further enhance important records retrieval, a large-format scanner was acquired, installed and employed to digitize plans for the DOT Complex. These plans were disseminated to the Maintenance Supervisor of the Buildings & Grounds Division and stored on a County server for future reference.
- Corrections to all workstations employed by the Division’s Mosquito Control Unit were preformed to remediate a particularly troublesome network printer problem not able to be fixed remotely by the County’s Office of Information Technology staff or its technical support consultant. The intermittent printing problems were determined to be due to incorrect driver installation during automatic updates.
- A backup and replication system and storage media were acquired to assist with the Highway Division’s computer workstation upgrades, data backup and sharing.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Regional Leadership

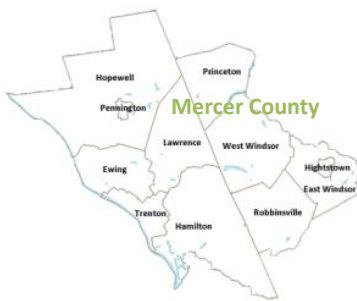
The Department's GIS Specialist represents Department interests and standards at various regional GIS and transportation data meetings. Contributions to conferences, committees and workshop presentations also promote adoption of County best practices by the larger transportation community. Moreover, external agency communications (via email queries and office visits) offer opportunities to deliver an understanding of the effectiveness of Department-established processes to government decision-makers at all levels. *Through regional event participation, the TAMIS project helps improve federal, state, county and municipal agency coordination, information dissemination and decision making related to transportation asset management.*

In 2016, goals to share the County's best practices throughout the region were exceeded.

- Updated the County and Municipal Traffic Engineer's Association (CAMTEA) on Mercer County's Traffic Sign Assembly Inventory & Maintenance Management Program.
- Served on the Mid-Atlantic Geospatial Transportation Users Group (MAGTUG) Steering Committee. Continued to coordinate and co-host the Group's webinar series.




- Coordinated and co-host the MAGTUG Spring Symposium on Open Source GIS and Open Data with the Mid-Atlantic Chapter of the Urban and Regional Information Systems Association (MAC URISA).
- Presented a demonstration of Quantum GIS at the MAC URISA 2016 Conference.



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- Shared Mercer County's MS4 Inlet Inventory process, field identification manual and data dictionary as well as information, specifications and costs for modern bluetooth global position system (GPS) units for enhancing positional accuracy on mobile devices with Somerset County's GIS Coordinator.
- Represented Mercer County on the NJ Geospatial Forum (NJGF) Address and Tax Parcel Boundary Taskforces. 
- Represented Mercer County DOT&I at the Regional Municipal Outreach Session for the NJDEP's Preliminary Draft Tier A MS4 Permit.

Municipal Assistance Program (MAP)

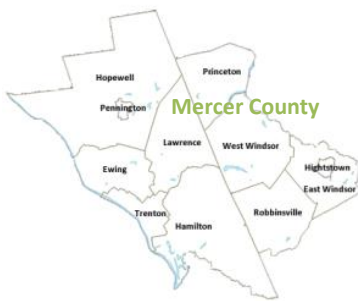
The Department's GIS Specialist endeavors to share knowledge and resources acquired in better managing County transportation assets with local municipal agencies and staff. *Through the TAMIS project, transportation asset management practices throughout Mercer County are improved.*

In 2016, the goal to share the County's best practices with municipal partners was not realized but several invitations to share knowledge were fulfilled.

- Showed Hopewell Township's Engineer the County's maintenance practices to meet the new NJDEP MSRP and potential data collection applications that can help inventory the Township's stormwater control assets.
- Shared information, specifications and costs for modern Bluetooth global position system (GPS) units for enhancing positional accuracy on mobile devices with Princeton's Engineering Department.

Interdepartmental Assistance Program (IAP)

The Department's Geographic Information Systems (GIS) Specialist is called upon to use her skills in data mapping and coordination, database development, and systems analysis to enhance the work processes and technologies used by other County Departments and better integrate with DOT&I practices. *Through the*



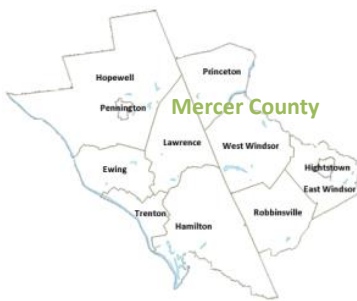
Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

TAMIS project, Department enhances interdepartmental coordination and the County achieves better utilization of GIS and other information systems.

- Coordinated site visits and obtained quotes to plan for implementation the AssetWorks Enterprise Asset Management (EAM) system for both the Motor Pool and Buildings & Grounds Divisions of the Central Services Department and the County Parks Commission.
- Provided on-call technical support and instruction to all current County GIS Users and potential GIS Users.
- Served as technical advisor on new and ongoing County GIS projects, such as NJDOT & NJOGIS centerline naming clarification and edits for Mercer County Roads.
- Reviewed potential GIS support applications, upgrades and services for County purchase, such as possible data collection projects funded by the DVRPC GIS-T grant.
- Served as County GPS unit custodian – maintained working GPS units for all County Departments, reviewed new GPS products from multiple vendors and selected two for purchase.
- Assisted the Emergency Services Communications Center (ESCC) with list of all roads in the County with addresses and the location of the ham radio association building and tower of the Trenton-Mercer Airport property.
- Continued to support the Office of Emergency Management (OEM) by being an ad hoc Emergency Incident staff for the Emergency Operation Center (EOC).
- Upgraded Central Services Department – Motor Pool Division mechanic equipment and software for diesel inspection reports to the NJ Department of Environmental Protection (NJDEP).





Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Prepared the annual Capital and Operations Computer/IT Budget Requests for the Motor Pool Division of the Central Service Department in conjunction with preparation of the same for DOT&I. The coordinated Special Budget allows for holistic implementation to be achieved through the DOT Complex.
- Served as on-site technical support, office system troubleshooter, and hardware and software maintenance for County agencies located in Ewing to augment the Office of Information Technology efforts.
- Printed welcome banner for Bring Your Child to Work Day.

Training

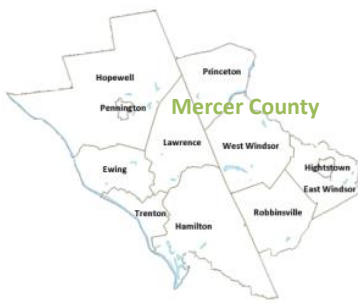
In order to best service the roles required by the TAMIS project, the Department's GIS Specialist stays informed in developments in managing and maintaining each type of transportation asset, performance measurement techniques and technologies related to asset management; GIS; data collection, management and analysis; and information delivery.

Three 2016 Training goals were realized:

- AssetWorks Academy in San Diego, California
- Transportation Innovation GIS-T Conference in Charlotte, North Carolina
- MAC URISA (Mid-Atlantic Chapter of the Urban and Regional Information Systems Association) 2016 Conference, Atlantic City

In addition, the following training opportunities were attended:

- NJ Digital Government Summit, Trenton, New Jersey
- MAC URISA and MAGTUG Joint Symposium on Open Source GIS and Open Data, Rutgers Eco Complex, Columbus, New Jersey
- New Jersey Geospatial Forum (NJGF), Trenton, New Jersey
- National Traffic Incident Management (TIM) Responder Training Program at NJ Homeland Security, Hamilton
- NJGF County User Group, Flemington, New Jersey

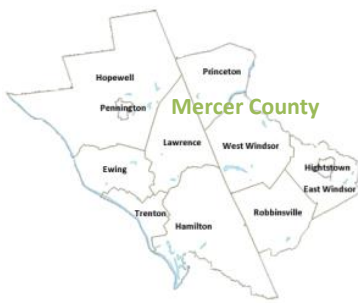


Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Virtual training webinars which afford updates and information without travel and large time expenditures were also taken advantage of:

- Vermont Center for Geographic Information (VCGI) - Creating a Map Atlas in QGIS: A Map Series from One Project
- VCGI - Contracting for Unmanned Aircraft Systems (UAS) Services
- VCGI - Geoprocessing in a Web Browser
- ESRI - Fighting Snow Smarter: City of Boston Uses GIS to Fight Snow More Efficiently
- GPS World - BYOD GPS Gets Real: Lessons Learned with the New Rules of GPS Data Collection



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Shade Tree Unit

*Bill Voorhees, General Supervisor
Chris Cerino, Supervisor*

The Highway Division's Shade Tree Unit is responsible for the maintenance of trees and roadside vegetation within Mercer County's right-of-way – a service area of 180 linear miles. Shade Tree also maintains the grass within traffic islands and controls weed growth around all guiderail systems along County Routes.



Removal of Large Oak Tree
Shade Tree Personnel

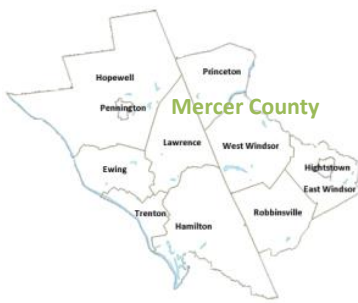
2016 Accomplishments



Roadside Vegetation Management Program – Goal accomplished.

Approximately 1,100 gallons mixed and 28 gallons concentrated of weed killer was applied along County Route roadsides in non-residential areas to retard vegetation growth and maintain a clear roadway line-of-sight for drivers. In less rural area, landscaping equipment like mowers, brush cutters and string trimmers were employed to suppress obstructing vegetation at corners, along curves and around guiderail systems on a routine schedule

throughout the growing season. All 180 linear miles of county-maintained roadways were routinely inspected for overhanging tree branches and dead or



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

dangerous trees threatening the cartway. Remediation was undertaken and warranted.

Traffic Island Maintenance – *Goal accomplished.* Grass mowing and weed control was scheduled and carried out routinely on the 23 traffic islands (15 different locations) that provide safety zones at complex intersections or divide highways within the County Route System.

Ewing Township

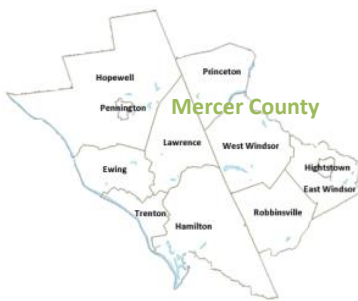
- Jacobs Creek Rd (CR 637) exit and entrance ramps at Bear Tavern Rd (CR 579) – Coordinates: 40° 17' 20.79" N, 74° 50' 29.13" W
- Transit Bus Turn-around along Bear Tavern Rd (CR 579) – Coordinates: 40° 17' 7.10" N, 74° 50' 17.24" W
- Scotch Rd (CR 611) exit ramps at Sam Weinroth Rd (CR 600) – Coordinates: 40° 17' 3.32" N, 74° 48' 35.36" W
- Princeton Ave (CR 583) southbound exit lane at N Olden Ave (CR 622) – Coordinates: 40° 14' 25.76" N, 74° 45' 8.11" W
- Federal City Rd exit lane at Ewingville Rd (CR 636) – Coordinates: 40° 16' 33.10" N, 74° 46' 23.31" W

Hamilton Township

- Large Oak Tree within Quakerbridge Rd (CR 533) – Coordinates: 40° 15' 7.96" N, 74° 40' 58.09" W
- Arena Dr (CR 620) and Arena Dr (Former Alignment) at Bradford Ave – Coordinates: 40° 11' 50.81" N, 74° 42' 35.42" W

Hopewell Township

- Reed Rd exit lane at Washington Crossing-Pennington Rd (CR 546) – Coordinates: 40° 18' 27.70" N, 74° 47' 47.22" W
- Pennington-Rocky Hill Rd (CR 624) north of Titus Mill Rd – Coordinates: 40° 20' 50.36" N, 74° 45' 47.80" W



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Lawrence Township

- Province Line Rd (CR 569) exit ramp at Quakerbridge Rd (CR 533) – Coordinates: 40° 18' 6.00" N, 74° 40' 58.94" W
- Grovers Mill Rd (CR 638) exit and entrance ramps at Renaissance Blvd and Office Rd – Coordinates: 40° 17' 14.95" N, 74° 41' 12.61" W
- Quakerbridge Mall exit and entrance ramps at Grovers Mill Rd (CR 638) – Coordinates: 40° 17' 11.18" N, 74° 41' 4.53" W

Princeton

- Rosedale Rd (CR 604) exit ramp at Elm Rd (CR 604) – Coordinates: 40° 20' 54.29" N, 74° 40' 35.21" W

West Windsor Township

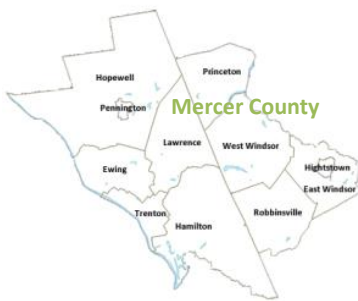
- Princeton-Hightstown Rd (CR 571) and S Mill Rd (CR 526) – Coordinates: 40° 18' 11.34" N, 74° 36' 36.96" W
- Old Trenton Rd (CR 535) east and west of Mercer County Community College entrance – Coordinates: 40° 15' 3.63" N, 74° 39' 10.53" W

Road Unit Support – Provide tree clearance for milling and resurfacing operation - Goal accomplished.

In 2016, 16 roadway surface rehabilitation project right-of-ways were cleared of overhanging tree branches, dead or dangerous trees, overgrown brush and other roadside vegetation prior to commencement of milling and resurfacing operations, providing proper clearance for the milling machine and asphalt delivery trucks. This year, 13.2 miles of roadway was cleared to provide clearance for the milling machine.



Removal of Branches
Shade Tree Supervisor Chris Cerino



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Bridges & Culverts Unit Support – Goal accomplished. The 680 bridge structures maintained by the Highway Division’s Bridges & Culverts Unit were routinely inspected for overhanging tree branches, dead or dangerous trees threatening the structure’s cartway, overgrown brush and weeds. Remediation was undertaken when warranted. In addition, the Unit assisted with service requests for debris clearance in raceways.

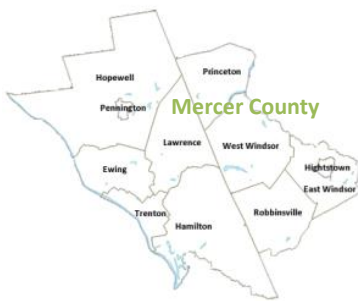
Traffic & Signal Unit Support – Goal accomplished. Routine inspection of traffic control devices (signs, signals and beacon systems along 180+ linear miles of County Routes and select local road intersections) for driver, biker and pedestrian line-of-sight was performed in cooperation with the Highway Division’s Traffic & Signal Unit. Remediation of traffic control device viewsheds blocked by brush, tree branches, tall grass or weeds was undertaken when warranted to ensure the safety of all travelers.

Snow Removal and Ice Control – Goal accomplished. Unit personnel participated in Division response to 6 storm events in the 2015-2016 winter seasons. In addition to snow plow and salt truck operations, supervisors took shifts overseeing crews and Unit staff, responded to support requests using the Unit’s unique equipment.

Respond to Emergency Calls and Potential Threats – Goal accomplished. Over 80 calls were received from local Police Departments and Residents. Emergency operations were enacted to remediate dangerous situations immediately during both day and nighttime hours. Less critical follow-up operations were undertaken during normal



Emergency Call
Fallen branch



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

operation hours, once the event or danger was resolved. Inspections of potential threats were also performed in a timely manner warranted by the circumstances conveyed by the caller.

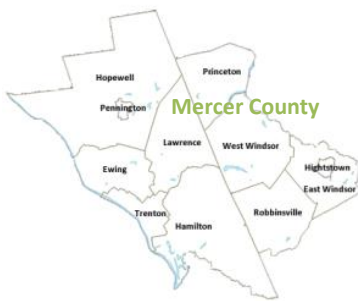
Assist Electrical Utility Operations in High Voltage Areas – Goal accomplished. For safety and OSHA Guidelines reason, the County will not remove any dangerous trees and/or limbs in high voltage areas. This year, the Unit assisted Nelson Tree Service, Central Jersey Power & Light (JCP&L) and Public Service Electric & Gas (PSE & G) for a total of 29 days



Municipal Assistance
Topped off Cherry Trees

Participate in the Municipal Assistance Program (MAP) – Goal accomplished. Removed dead or dangerous trees, trimmed branches, and performed weed control activities on local roads at the request of municipal partners. In 2016, the assistance was provided to the following municipalities:

- City of Trenton
- Ewing
- Hamilton Township
- Hopewell Township
- Hopewell Borough
- Pennington Borough
- Robbinsville Township



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Interdepartmental Assistance (IAP) – Goal accomplished. Equipment, labor and assistance were provided to assist other County departments upon request. In 2016, assistance was provided to the following departments:

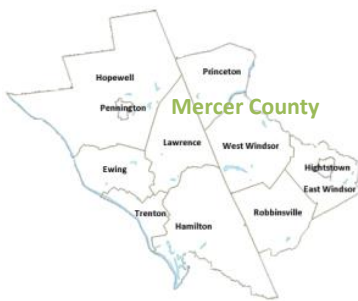
- Bridges & Culverts Unit
- Buildings & Grounds (*Central Maintenance*)
- Dempster Fire Academy (*Fire School*)
- Detention Center
- Correction Center
- Court House
- Extension Service
- Human Services
- Libraries
- Park Commission
- Prosecutors Office
- Traffic Unit
- Trenton - Mercer Airport



Removal of Large Oak Tree
Shade Tree Personnel

Snow Removal and Ice Control – Goal accomplished. Unit personnel participated in Division response to 17 storm events in the 2015-2016 winter seasons. In addition to snow plow and salt truck operations, supervisors took shifts overseeing crews and Unit staff, responded to support requests using the Unit’s unique equipment.

Respond to Emergency Calls and Potential Threats – Goal accomplished. Over 67 calls were received from local Police Departments and Residents. Emergency operations were enacted to remediate dangerous situations immediately during both day and nighttime hours. Less critical follow-up operations were undertaken during normal operation hours, once the event or danger was resolved. Inspections of potential threats were also performed in a timely manner warranted by the circumstances conveyed by the caller.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Training Opportunities – *Goal accomplished.* In 2016, Unit personnel attended the following training opportunities:

- Roadside and Right-of-Way Management
- Hazardous Tree Identification
- Tree Planting and Installation
- Forklift Certification
- Initial Right to Know
- Work Zone Safety
- Large Tree Climbing and Rigging
- Emerald Ash Borer Conference
- Diseases and Pests of Trees

2017 Goals

Roadside Vegetation Management Program - Eliminate or control vegetation through a variety of strategies including mowing, brush cutting and use of herbicide.

Traffic Island Maintenance – Provide maintenance on the 23 county maintained traffic islands.

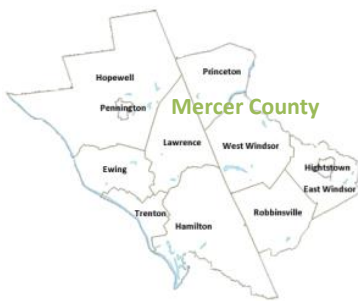
Undertake Roadside Vegetation Management Program - Eliminate or control vegetation through a variety of strategies including mowing, brush cutting and use of herbicides.

Road Unit Support – Coordinate 2016 milling and resurfacing projects with the Roads Unit to ensure proper clearance of trees, brush and roadside vegetation.

Traffic and Signal Unit Support – Route maintenance of traffic control devices blocked by brush, trees, grass or weeds.

Bridges and Culverts Unit Support – Provide maintenance to 680 bridge structures.

Municipal Assistance Program (MAP) – Provide resources, equipment and labor to local municipalities.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

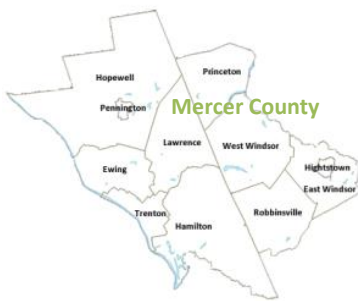
Interdepartmental Assistance Program (IAP) – Provide resources, equipment and labor to assist other departments/divisions within the County.

Respond to Emergency Calls and Potential Threats – Respond to emergencies within 24-48 hours.

Assist Electrical Utility Operations in High Voltage Areas – Coordinate assistance in the removal of trees in high voltage areas.

Snow Removal and Ice Control Assistance – Continue to provide assistance during snow events.

Training Opportunities – Provide opportunities for professional development to Unit members as well as update skills, knowledge and required certifications through classroom and on-the-job instruction, access to written manuals and books, related professional memberships, conferences and workshops.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Traffic & Signal Unit

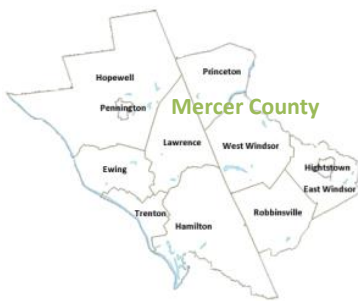
Paul Scherer, General Supervisor
Mark Mattaliano, Supervisor

The Traffic & Signal Unit sustains safe navigation and traffic regulation for Mercer County travelers with continued upgrades and maintenance of signs, pavement markings and traffic signals. The Traffic & Signal Unit is responsible for the installation, maintenance and repair of approximately electrical 200 traffic control devices, including school crossing and pedestrian crossing beacon systems. This is accomplished by employing modern standardized and verified materials, equipment, technology, best practices following Federal guidelines and professional engineering judgment.

2016 Accomplishments

Traffic Signal Maintenance and Repair - *This goal has been achieved.* The Traffic & Signal Unit seeks to maintain safe travel for residents of Mercer County with continued upgrades and positive maintenance of signs, pavement markings and traffic signals. This is accomplished by providing the latest materials, equipment, technology and standards. We also make this possible by using good maintenance practices and professional engineering judgment. This year, the following upgrades, improvements and repairs were undertaken:

- **Princeton-Hightstown and Old Trenton Road-** Installed Spectrum Smartlink Wireless Connectivity Hub in the control cabinet for the traffic signal at the intersection of Princeton-Hightstown Road and Old Trenton Road in East Windsor Township. The device enables remote monitoring of the intersection and sends SMS messages to technicians when a fault occurs.
- **Princeton-Hightstown Road and Slayback Drive-** Modification to the traffic signal phasing and signal heads to provide lead left turn green movements for the east and west bound approaches to the intersection.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- **Princeton-Hightstown Road and Southfield Road-** Modification to the traffic signal phasing and signal heads to provide lead left turn green movement for the south bound approach to the intersection.

Scotch Road Wireless Interconnect- The Traffic & Signal Unit personnel assisted with the installation of a wireless interconnected traffic signal system on Scotch Road in Hopewell Township encompassing four intersections. The system facilitates remote monitoring and the ability to efficiently address changes in traffic demands. The following lists the intersections involved and the work performed at them:

Scotch Road and Nursery Road

- Installed underground conduit to facilitate access to cable utility.
- Assisted with installation of wireless radio and cable modem.

Scotch Road and American Boulevard South

- Installed two additional video detection cameras.
- Upgraded traffic controller.
- Assisted with installation of wireless radio.

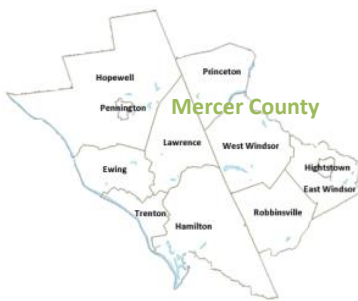
Scotch Road and American Boulevard North

- Installed two additional video detection cameras.
- Upgraded traffic controller.
- Assisted with installation of wireless radio.

Scotch Road and Washington Crossing-Pennington Road

- Replaced traffic control cabinet
- Upgraded traffic controller.
- Installed one additional video detection camera.
- Assisted with installation of cellular modem.

As part of this improvement project, traffic signal heads are being upgraded to replace the existing incandescent bulbs with Light Emitting Diodes (LEDs) using less electricity and have a significantly longer useful life.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

The Unit has also started a program to install video systems to detect vehicles and bicycles at traffic signals. These video detection systems (VDS) replace in-pavement loop detector systems. In addition to continuing this replacement, the Unit inspects and services previously installed VDS with necessary adjustments and lens cleanings. In 2016, Video Detection Systems were installed at the following intersections:

Hamilton Township

- Hamilton Avenue and Cypress Lane

Hopewell Township

- Pennington-Rocky Hill Road and Elm Ridge Road

Lawrence Township

- Quakerbridge Road and Quakerbridge Mall Exit

City of Trenton

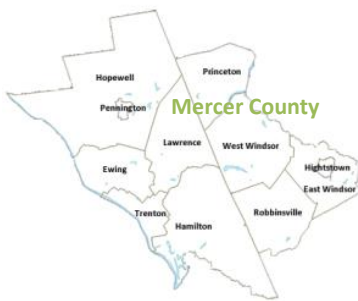
- Parkside Avenue and Stuyvesant Avenue

Installation of Rectangular Rapid Flashing Beacons – Goal accomplished.

These devices are pairs of rectangular high intensity signal heads, which flash in a wig-wag, rapid flickering pattern. The alternating signals provide direct, ultra-bright concentration as well as wide-angle intensity. Studies confirm very high rates of motorist compliance to “stop for pedestrians” (approximately. 80%-95%) compared to standard (round) beacons (15%-20% range). The Unit performed inspections of the RRFB installations at the following location:



Rectangular Rapid Flashing Beacon



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- **Etra Road at the Peddie School Athletic Fields** - Periodic inspection of contractor installation.
- **Scotch Road and The Sanctuary at Ewing** - Periodic inspection of contractor installation.
- **Washington Road at Delaware-Raritan Canal Towpath** - Full installation.

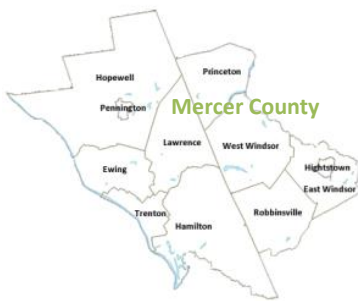
Emergency Service Calls – *Goal accomplished.* The Unit responded to 298 emergency calls from local municipal police and public works departments as well as residents. In 2016, emergencies service requests included:

- **Malfunctioning Traffic Control Devices**
- **Motor Vehicle Accidents** – Damage to traffic signal supports, control boxes, and traffic control signs and supports
- **Emergency Road Closures** – Placement of detour directional signs, traffic safety cones and barrels, and wooden and cement barricades.

Roadside Guide, Regulatory and Warning Signs – *Goal achieved* – Roadside traffic signs along the 180 linear miles of County Routes are routinely inspected. Damaged signs are fabricate and replaced, when warranted and in the respond to emergency service calls. In addition, the signage upgrades are undertaken to improve safety and wayfaring. In 2016, the following sign improvements and replacements were completed:



Pedestrian Crossing



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- **Ingleside Avenue-** Fabricated and installed oversized 25 M.P.H. Speed Limit signs requested by residents.
- **Edinburg-Dutchneck Road-** Fabricated and installed new Speed Limit signage in accordance with speed amendment ordinance within recently approved West Windsor Township Resolution No. 2016-R 079.

In support of the Roads Unit's roadway resurfacing program, the Unit replaced guide, regulatory and warning signs to meet Federal Highway Administration (FHWA) retro-reflectivity standards along projects right-of-ways. In addition, break-away sign posts were installed for signs along these projects to improve driver safety. The following current and past roadway resurfacing projects were supported in 2016:

County Route 518

- Lambertville-Hopewell Road, from the County Line to Harbourton-Rocktown Road.

County Route 533

- Whitehorse-Mercerville Road, from Klockner Road to Nottingham Way.
- Quakerbridge Road, from Nottingham Way to Collins Avenue.

County Route 535

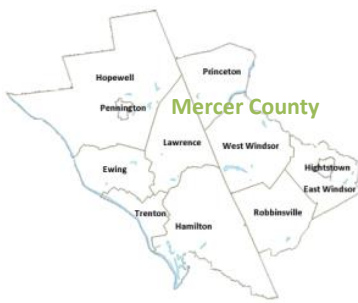
- Old Trenton Road, from Edinburg-Dutchneck to Bridge No. 762.11.

County Route 539

- Old York Road, from Herbert Road to Eastwood Drive.
- North Main Street, from Wyckoffs Mill Road to the County Line.

County Route 546

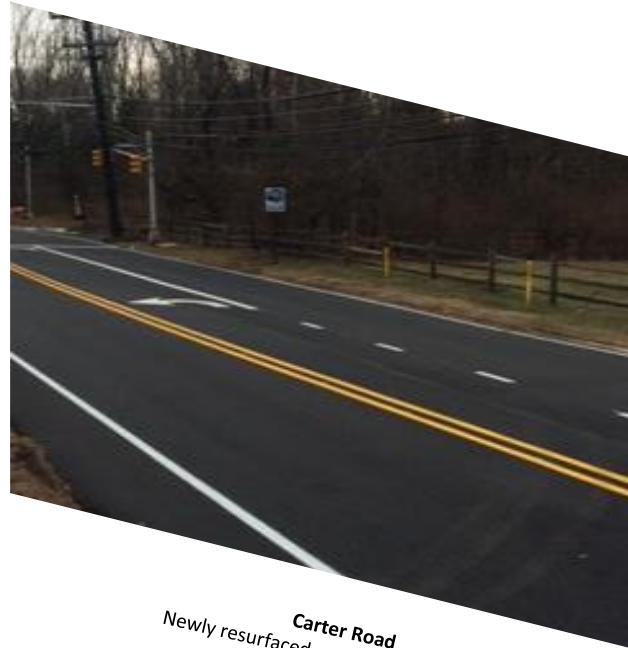
- Washington Crossing-Pennington Road, from Bear Tavern Road to Jacobs Creek Road.
- Washington Crossing-Pennington Road, from Ingleside Avenue to Pennington Road.
- Pennington-Lawrenceville Road, from Blackwell Road to Stephenson Road.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

County Route 569

- Carter Road, from Rosedale Road to Pennington-Rocky Hill Road.
- Hopewell-Princeton Road, from Pennington-Rocky Hill Road to the Town Line.



*Carter Road
Newly resurfaced and re-stripped roadway*

County Route 571

- Etra Road, from the County Line to South Main Street.

County Route 579

- Bear Tavern Road, from Jacobs Creek Road to Pennington-Harbourton Road.

County Route 611

- Scotch Road, from Upper Ferry Road to Sam Weinroth Road.

County Route 625

- Elm Ridge Road, from Pennington-Rocky Hill Road to Carter Road.

County Route 629

- Harrison Street, from the Town Line to Brunswick Pike.

County Route 636

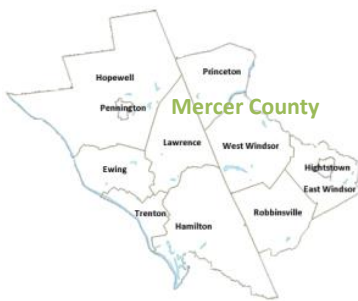
- Parkside Avenue, from West State Street to North Olden Avenue.

County Route 637

- Jacobs Creek Road, from River Road to Bear Tavern Road.

County Route 643

- Lower Ferry Road, from Parkway Avenue to the Town Line.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

County Route 647

- Nursery Road, from Bear Tavern Road to Scotch Road.

Pavement Markings – *Goal accomplished.* Pavement markings provide important information while allowing minimal diversion of attention from the roadway. Pavement markings can enhance roadway delineation with the addition of audible and tactile features such as bars, differential surface profiles, raised pavement markers, or other devices intended to alert drivers that delineation on the roadway is being traversed. Thermoplastic pavement marking durability is affected by material characteristics, traffic volumes, weather, and location. The Unit inspects all pavement markings along county-maintained routes and re-applies markings when warranted and reconfigures markings for better clarity. In 2016, thermoplastic traffic control markings were applied to pavement surfaces at the following locations:



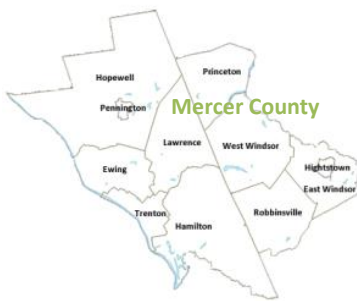
Thermoplastic Pavement Markings

East Windsor Township

- Old York Road and Sharon Road

Ewing Township

- Bear Tavern Road and Nursery Road
- Bear Tavern Road and Sam Weinroth Road
- Lower Ferry Road and Phillips Boulevard
- Lower Ferry Road and Upper Ferry Road



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Lower Ferry Road and NJDOT Entrance
- Scotch Road and Sam Weinroth Road

Hamilton Township

- Cedar Lane and Olden Avenue
- Hamilton Avenue and Cypress Lane
- Quakerbridge Road and Terrill Avenue
- Whitehorse Avenue and Olden Avenue
- Whitehorse-Mercerville and Cypress Lane
- Whitehorse-Mercerville and Justice Samuel Alito Way
- Yardville-Allentown Road and Springdale Avenue

Hightstown Borough

- Etra Road Crosswalk at Peddie Athletic Fields
- South Main Street and Ward Avenue

Hopewell Township

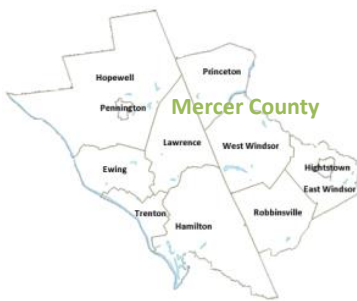
- Carter Road and Elm Ridge Road
- Pennington-Rocky Hill Road and Elm Ridge Road
- Scotch Road and Pennington-Harbourton Road
- Washington Crossing-Pennington Road and Dublin
- Washington Crossing-Pennington Road and Reed Road

Lawrence Township

- Princeton Avenue and Betts Avenue
- Princeton Avenue and Freedom Boulevard

City of Trenton

- Parkside Avenue and Bellevue Avenue
- Parkside Avenue and Carteret Avenue
- Parkside Avenue and Oakland Street
- Parkside Avenue and Stuyvesant Avenue
- Parkside Avenue and West State Street



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Decal Applications – *Goal achieved* – The Unit’s sign shop created and applied vinyl decals, text and number to new Highway Division fleet vehicles and equipment to identify them as County property and distinguish individual Units and radio call numbers. The Unit also creates and applies similar decals to vehicles, equipment and signboards upon the request of individual County Departments and approval by the Deputy Administrator.

Road Closures – *Goal achieved* – The Unit designed and implemented traffic control plans for 3 bridge repair projects and 14 milling and resurfacing projects. The Unit’s supervisor coordinated with local police officer schedules to have officers assist with traffic control during the projects. Advanced Notification, Construction Warning and Detour Signs were installed prior to each improvement project’s start date.

Snow Removal and Ice Control Assistance – *Goal achieved* – Unit personnel participated in Division response to 6 storm events in the 2015-2016 winter seasons. In addition to snow plow and salt truck operations, the Unit assists in the replacing residential mail boxes and supports that are damaged during snow removal on County Routes.

Municipal Assistance Program (MAP) – *Goal achieved* – The Unit provides the delivery, installation and removal of equipment requested by Local Municipalities, Police Departments, Fire Departments and Local Organizations for planned events and emergencies at no charge to the municipal partners. In 2016, 7 requests were fulfilled through this program:

City of Trenton

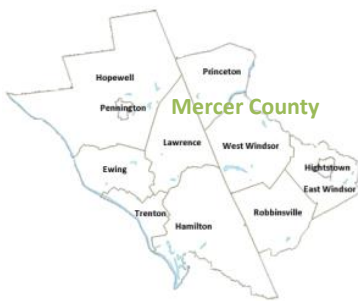
- St. Patrick’s Day Parade, painted “*green line*” on Hamilton Avenue.
- (2) Portable Light Towers requested by the Trenton Police Department.

Ewing Township

- Variable Message Sign for residential noise reduction enforcement.

Hamilton Township

- (4) Portable Light Towers for Fourth of July



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Lawrence Township

- The Unit performed periodic inspections and assisted with the activation of the new traffic signal at the township intersection of Princeton Pike and Locust-Lenox Drive

Princeton

- Installation of video detection for the traffic signal at the intersection of North Harrison Street and Terhune Road.
- Installation of video detection for the traffic signal at the intersection of North Harrison Street and Valley Road.

Robbinsville Township

- (2) Variable Message Signs, (2) Portable Light Towers and (100) Traffic Cones for D.U.I. Checkpoint.

Shared Services Program (SSP) – Goal achieved –The Unit provides delivery, installation, programming, and removal of equipment requested by Local Municipalities, Police Departments, Fire Departments and Local Organizations for a minimal usage fee. The Program saves municipal partners the costs for storing and maintaining the otherwise seldom used equipment and the need for skilled operators. In 2016, 14 requests to borrow equipment were received from municipalities for special events, planned projects and emergencies:

“Capital Health Carnival”

(2) Variable Message Signs

“Ewing Township National Night Out”

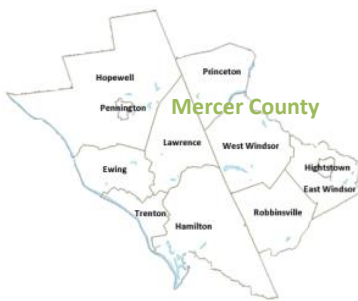
(2) Variable Message Signs

“Hightstown Triathlon”

(2) Variable Message Signs (100) Traffic Cones

“Hightstown Harvest Festival”

(3) Variable Message Signs



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

“Hopewell Valley Veteran’s Association Concert and Fireworks”

(3) Portable Light Trailers

“Lawrence Township Independence Day Fireworks Display”

(100) Traffic Cones

“Lawrence Township Bike Rodeo”

(150) Traffic Cones

“Menorah Lighting at the State House”

(1) Aerial Platform Lift Truck and Operator

“Pennington Day”

(100) Traffic Cones

“Rider University Graduation”

(150) Traffic Cones

“Robbinsville Community Festival”

(4) Variable Message Signs

“Ryan’s Quest Festival”

(100) Traffic Cones, (2) Variable Message Signs

“Sunshine Foundation Operation Dream Lift”

(3) Portable Light Trailers, (2) Variable Message Signs and (10) Trailblazer Signs

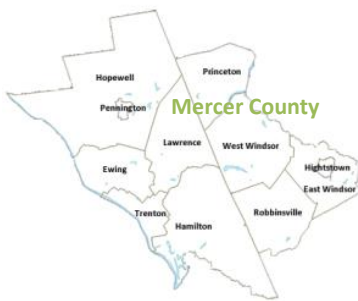
“West Windsor Fire Company Pancake Breakfast”

(2) Variable Message Signs

Interdepartmental Assistance Program (IAP) – Goal accomplished. In 2016, the Unit provided assistance to the following County departments and divisions:

Central Maintenance

- Provided the aerial platform lift truck for overhead lighting repair at several county facilities.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Administration Building

- Design and fabrication of office door labels.
- Provided portable light towers during the Mercer County Board of Chosen Freeholder meetings.

Correction Center

- Provided portable light towers during power outages.

Extension Services

- Fabricated signs requested by the Mercer County Extension Service for the Mercer County 4H Fair.

Mercer County Improvement Authority (MCIA)

- Provided variable message signs and traffic cones for several events at the Sun National Bank Center.
- Installed directional trailblazers, waste designation signs, traffic cones and variable message boards for Household Hazardous Waste Disposal Day held in March, June and September at the Dempster Fire Training Center.
- Installation and removal of Holiday Decorations at the Sun National Bank Center.

Mosquito Control Unit

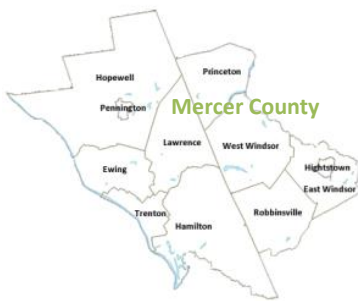
- Saw cut through asphalt at the DOT & I Complex prior to excavation necessary to install Mosquito Control's greenhouse.

Motor Pool

- Installed new underground conduit and wire to repair fuel card reader system.

Park Commission

- Provided variable message boards and portable light towers for several events at Mercer County Parks.
- Installed thermo-plastic parking stalls at the Princeton Country Club parking lot.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Installed thermo-plastic traffic markings and signs on the golf cart path at Mercer Oaks Golf Course.

Prosecutor's Office

- Fabricated and installed signs at the K-9 Training Facility in Ewing Township.

Road Unit

- Saw cut through asphalt in the Furman Street parking lot prior to excavation necessary to repair sink hole.
- Saw cut through asphalt on Etra Road prior to excavation for drainage improvements.

Sheriff's Office

- Design, fabrication and installation of interior labels and exterior signage for Sheriff's offices.
- Provide barricades for crowd control during high profile court cases.

Superintendent of Elections

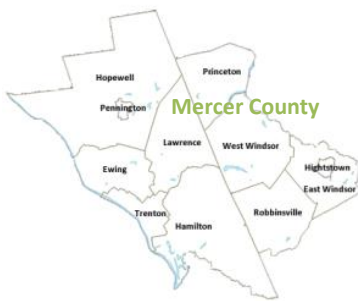
- Provided portable light towers at the McDade Administration Building during County Elections.

Trenton – Mercer Airport (TTN)

- Fabricated and installed directional signage for the relocated cell phone lot.

Training Opportunities – *Goal accomplished.* The following training classes were attended by Unit staff:

- Back Safety/Material Handling Training
CDL Controlled Substance and Safety Regulations Training
Chain Saw Safety Training
Confined Space Training



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

- Defensive Driving
 - Excavation/Trenching and Shoring Training
 - Fall Protection Training
 - Fire Safety
 - Fire Extinguisher Training
- Flagger/Work Zone Training
- New Jersey One Call Safety Seminar
- Reasonable Suspicion Training for Supervisors - DOT Signs and symptoms awareness
- Shop and Tool Training
- Traffic Incident Management Training

Other Accomplishments

In addition to the goals set forth in 2016, the following accomplishments have also been undertaken:

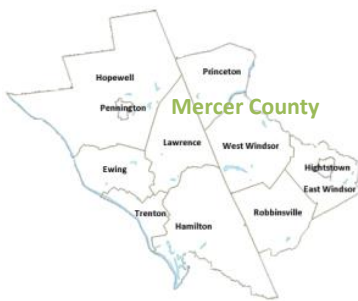
- Fabrication and installation of signs required at all Mercer County parking facilities disclaiming any responsibility for damage or loss occurring to vehicles parked there or to their contents.

2017 Goals

The Traffic & Signal Unit proposes to continue to improve safety and traffic control for Mercer County travelers with continued upgrades and proactive maintenance of signage and signalized intersections.

Bridge Lighting – The Unit will continue to maintain and repair street lighting associated with all county-maintained bridges. All lights will be inspected on a routine preventative maintenance schedule to verify proper operation. Improvements to inspection scheduling and performance tracking are planned.

Driver Speed Feedback Signs (DSFS) – These devices will continue to be monitored and repaired for optimal performance. Improved inspection scheduling and performance tracking documentation is planned.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Rectangular Rapid Flashing Beacons (RRFB) – These devices will continue to be monitored and repaired for optimal performance. Improved inspection scheduling and performance tracking documentation is planned.

Traffic Signals – All signal locations will be reviewed on a routine preventative maintenance schedule to verify proper operation. Improved inspection scheduling and performance tracking documentation is planned. The Unit also plans more upgrades to standardize maintenance processes and minimize materials stock required to repair signals. As a cost savings effort, the incandescent halogen bulbs of additional traffic signals will be replaced with energy saving Light Emitting Diodes (LEDs). Video detection systems will be installed at intersections that are impacted as a result of Road Unit 2017 milling and resurfacing project.

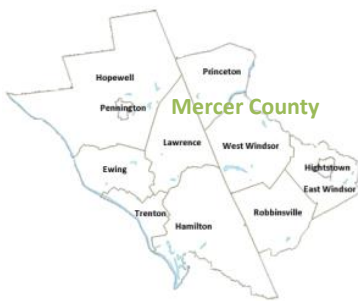
Pavement Markings – The Unit will continue to inspect all pavement markings along county-maintained routes and re-apply thermoplastic markings, when warranted. The Unit will continue to assist the Roads Unit by applying thermoplastic markings on roadways milled and resurfaced in 2017.

Roadside Guide, Regulatory and Warning Signs – Roadside traffic signs along the 180 linear miles of County Routes will continue to be routinely inspected. Improved inspection scheduling and performance tracking documentation is planned. Damaged signs will be purchased or fabricate and replaced, when warranted and in the respond to emergency service calls. The Unit will replace signs along County roadways that are resurfaced in accordance with its traffic sign retro-reflectivity maintenance plan. Break-away sign posts will also be installed during Road Unit resurfacing project to improve driver safety.



Newly installed traffic signage

Decal Applications – The Unit's sign shop is seeking to limit the creation and application of vinyl decals, text and number to new Highway Division fleet



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

vehicles and equipment only. The Unit will create and apply decals to vehicles, equipment and signboards only upon the request of individual County Departments that have obtained approval by the County Deputy Administrator.

Road Closures – The Unit will continue to design and implemented traffic control plans for bridge repair projects and milling and resurfacing projects as well as coordinated with local police to have officers assist with traffic control during the projects. Advanced Notification, Construction Warning and Detour Signs will be installed prior to each improvement project’s start date. Improved scheduling and detour plan documentation is planned.

Respond to Emergency Service Requests – The Unit will continue to respond emergency calls of malfunctioned traffic control devices, motor vehicle damage to signs and signals and emergency road closures from local municipal Police and Public Works departments as well as residents in a timely manner.

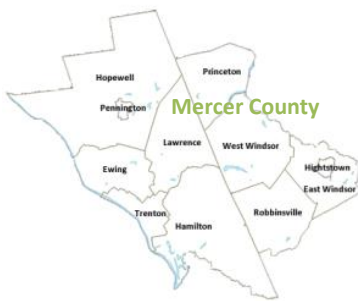
Snow Removal and Ice Control Assistance – Provide assistance during snow events including snow plow and salt truck operations and replacement residential mail boxes and supports that are damaged during snow removal.

Municipal Assistance Program (MAP) –The Unit will continue to provide the delivery, installation and removal of equipment for planned events and emergencies at no charge that are requested by municipal partners, with Deputy County Administrator approval.

Shared Services Program (SSP) – The Unit will continue to provide delivery, installation, programming, and removal of equipment requested by Local Municipalities, Police Departments, Fire Departments and Local Organizations for a minimal usage fee to save these agencies the costs of storing and maintaining otherwise seldom used equipment and skilled operators.

Interdepartmental Assistance Program (IAP) – The Unit will continue to provide assistance to other County departments and divisions.

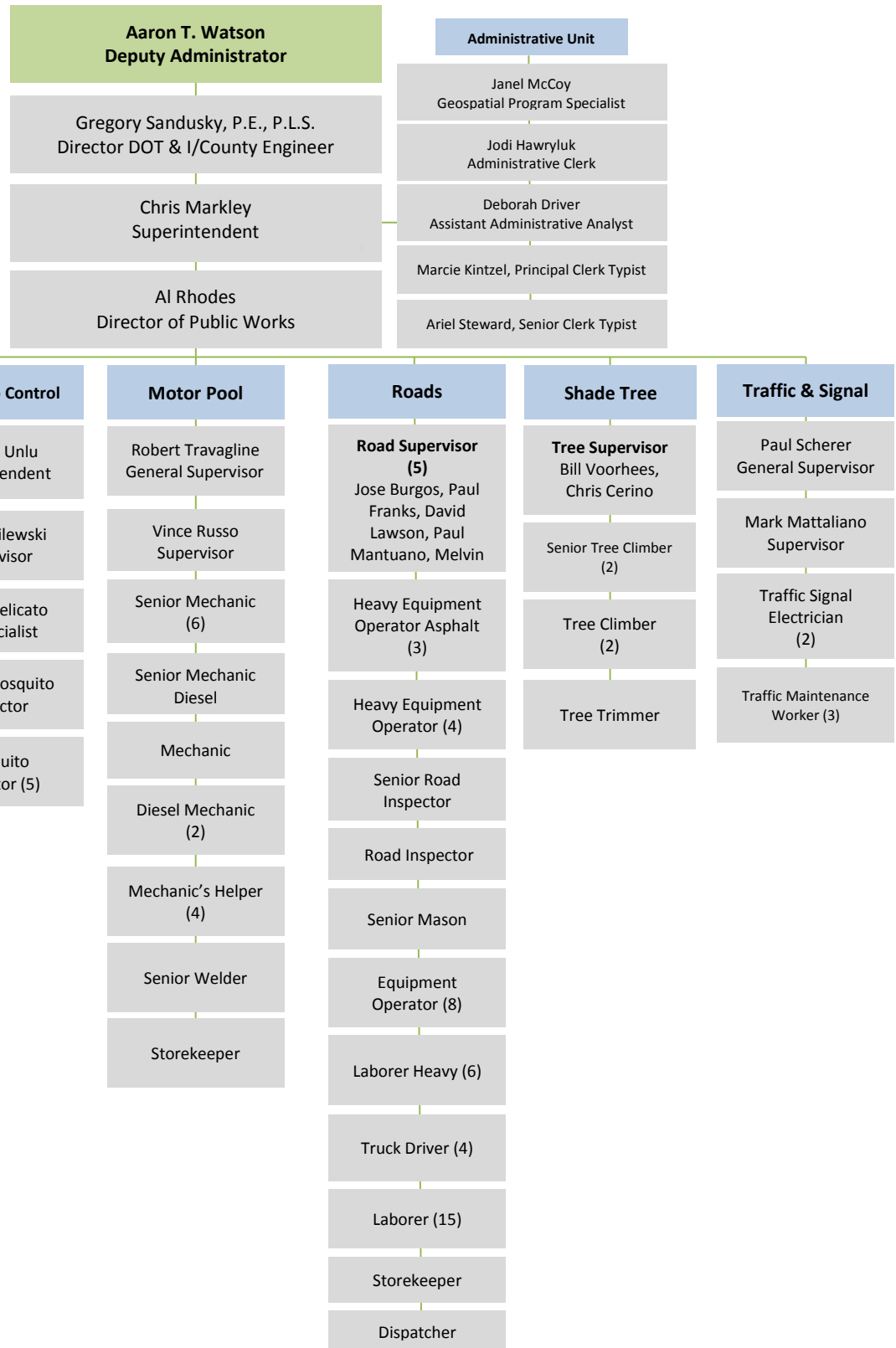
Training Opportunities – The Unit will continue to provide training opportunities to its personnel.

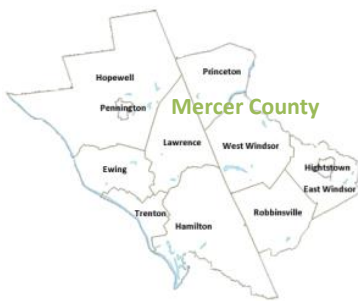


Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Division of Highways





Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

TRADE Transportation

(Transportation Resources to Aid the Disadvantaged and Elderly)

*Gregory Sandusky, Director of DOT & I/County Engineer
Martin DeNero, Director, TRADE Transportation*

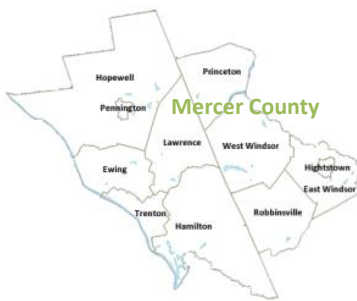
The Department of Transportation and Infrastructure (DOT & I) and TRADE Transportation developed goals for 2016, which provided a framework for action during the year. In the first section of this report for TRADE, the goals for 2016 are listed, along with information about TRADE's accomplishments in meeting these goals. Other accomplishments from 2016 are also listed. The second section documents TRADE's goals for 2017.



18 Passenger Mini-bus

2016 Accomplishments

2016 Goal: Continue to Upgrade Scheduling Software and Implement Other Technologies - TRADE continued to make improvements to the scheduling and dispatch software in 2016. The technology vendor is named TripSpark. A project was completed and the software was migrated to a hosted environment operated by TripSpark. This helps to provide a solid platform for other improvements scheduled for 2017. It also provides Customer Service assistance with any problems that might occur during operation at *all* hours that TRADE operates (5:30 a.m. to 5:30 p.m.). This goal will be continued in 2017.



Department of Transportation & Infrastructure

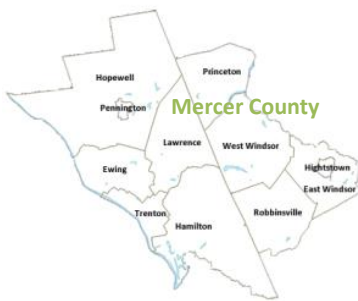
2016 Accomplishments/2017 Goals

2016 Goal: Coordination Plan - The Mercer County Human Services Transportation Coordination Plan involves multiple strategies and action steps to be accomplished over the short and long-term. The Mercer County Coalition for Community Transportation (Coalition) is a stakeholder group that works to develop the Coordination Plan, and TRADE provides leadership and support to the Coalition, acting as Co-Chair. The general purpose of the Coalition is to work together to enhance transportation options for residents of Mercer County who are elderly, people with disabilities and people with low incomes.



TRADE participated on a project undertaken by the Delaware Valley Regional Planning Commission, to update their Human Service Transportation Coordination Plan. The Project, “Equity through Access” provides useful and technical information on the locations of critical travel destinations (medical offices, shopping locations, etc.) and their proximity to transportation resources, along with information on demographics and location of residences. DVRPC developed a very useful website tool and the link is provided: <http://www.dvrpc.org/eta/>

The Mercer County Coalition members also have made improvements to local transportation services, including: working with the Mercer County Workforce Investment Board to make changes to the Route 130 Shuttle, with service provided to Mercer County College; providing training on transportation alternatives to 60 Health Professionals and students graduating from local high schools and the Mercer County Special School District; and development of transportation services during evenings and weekends.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**



2016 Goal: Continue development of alternative revenue through vehicle advertising - The contract for vehicle advertising was not successful in 2016, with no revenues realized by the contractor. The contract was advertised for procurement in 2016 and a new vendor was selected at the end of 2016, named Interstate Transit Media. TRADE will work closely with the new vendor and this goal will continue in 2017.

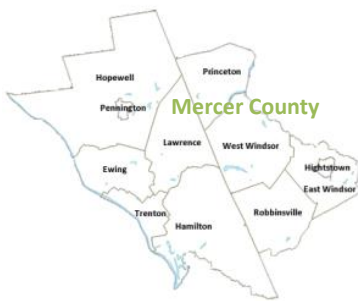
2016 Goal: Continue to explore all available funding sources to enhance revenues, including making application to grant sources for replacement vehicles.

Other Accomplishments

In addition to the goals set forth in 2016, the following Administrative and Transportation Projects have also been undertaken:

Transportation Services

Dialysis Center Customers: TRADE made a concerted effort in 2015 to reduce the waiting list of customers needing transportation to dialysis centers. The problem of transportation for customers needing transportation has been worsened over the past four years as the number of dialysis centers increased from six to nine centers. At the beginning of 2015 a total of 45 customers were on the waiting list for transportation. This was improved in 2015, as, 11 customers remained on the waiting list at years end. TRADE continued to address this problem in 2016 and at years end the waiting list had been eliminated, with no customers waiting for TRADE Transportation.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

City of Trenton Senior Centers - The Senior Centers in the City of Trenton have experienced significant problems with the transportation services available to them. TRADE coordinated with City staff to establish a bi-monthly schedule of trips for participants at the five (5) City Senior Centers on a rotating schedule, without impacting TRADE's regular services. During 2016, City staff has had success in utilizing these services offered to them by TRADE every two weeks.

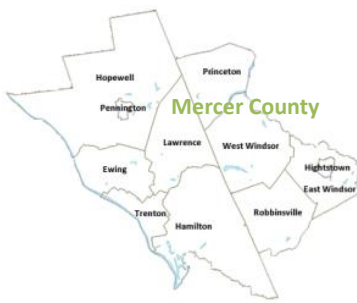
Shuttle service was provided to the New Jersey Disability Pride Parade in the City of Trenton, in cooperation with Alliance Independent Living Center.



New Jersey Disability Pride Parade

Transportation Services were provided throughout the year to support multiple community agencies, for special events. Transportation services were provided for the following events:

- Shuttle service to the New Jersey Disability Pride Parade in the City of Trenton, in cooperation with Alliance Independent Living Center.
- Holiday Festivities, East Windsor Township and the Princeton Senior Resource Center.
- Senior Picnic, Hopewell, Hamilton and East Windsor Townships.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- Annual “Take Your Child to Work Day”, shuttling to Trenton-Mercer Airport.
- TRADE Advisory Council Meetings, transported members.
- Mercer County Office on Aging’s Annual Nutrition Picnic held at Mercer County Park.
- West Windsor New Year’s Celebration.
- Shuttle from Trenton Train Station to NJ State House for “Get out to Vote”.
- Boehme Opera.

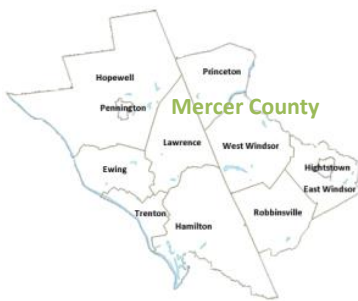


Senior picnic at Mercer County Park

Public Outreach Activities

TRADE participated in regular meetings with community agencies and also made presentations to community groups to explain services offered by TRADE. They are listed below:

- Meetings with participants at County Nutrition Sites
- Meetings held with Members of the Coalition for Coordinated Transportation
- Participation in Health Fairs (i.e., Ewing)
- Monthly meetings of the Mercer County Nutrition Council
- Quarterly meetings for grantees of the Mercer County Office on Aging
- Participation in staff meetings of community agencies
- Bromley Seniors CYO – Hamilton Township
- Catholic Charities – Partners in Recovery



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

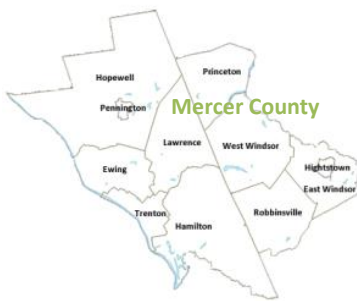
- Interfaith Care Givers – Mercer County Connection
- South Village Senior Apartments
- VA Clinic – Quakerbridge Road
- Firststat – PAC (Professional Advisory Committee) – Lawrence Township
- Hamilton FMC Dialysis Unit
- Ewing FMS Dialysis Unit
- Lawrence Plaza Senior Apartments

Administrative

Grant-funded Vehicles - TRADE has continued to make application for grant funds through the Federal Transit Administration (FTA) Section 5310 Program administered by NJ Transit and the Congestion Mitigation and Air Quality Program (CMAQ). New Jersey Transit has experienced delays in the delivery of vehicles to community agencies. Vehicles originally applied for in 2013 have not yet been delivered. Participation in these programs avoids utilizing County funds to replace aged vehicles. One vehicle from NJ Transit is expected to be delivered in 2016. TRADE has requested county funding for 4 vehicles through the County Capital Equipment Program in 2017, to be reviewed by Administration.

Joint Meetings with the TRADE Citizen Advisory Committee, the Mercer County Office on Aging Advisory Committee, the Mercer County Advisory Committee for Persons with Disabilities and the Nutrition Council. TRADE staff coordinated with staff from the Mercer County Office on Aging to hold joint meetings of the Citizen Advisory Councils. The Joint Meetings were very successful, as they increase participation of public members in the work of the Advisory Councils. They also allow for enhanced communication among community members and provide a vehicle for improved advocacy. Three meetings were held during 2016 and they will continue in 2017.

New Jersey Transit Vehicle Inspection - TRADE was subject to an annual inspection by New Jersey Transit, for maintenance of vehicles obtained through the Federal Transit Administration's Section 5310 Program. The inspection went well, and New Jersey Transit was satisfied with the preventative maintenance procedures employed by Mercer County Motor Pool.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Trenton-Mercer Airport (TTN) – While not providing actual shuttle service to the Airport in 2016 TRADE has continued to support their efforts. During 2016 TRADE coordinated with Motor Pool staff Airport staff to research procurement alternatives for purchase of a new vehicle to be utilized in the shuttle service. The vehicle delivered in December 2016. TRADE also supplies a vehicle to be used as back-up when the primary vehicle is out-of-service.

Training - TRADE coordinated with other Counties and organized training for Mercer County Motor Pool mechanics on maintenance and repair of wheelchair lifts. The training was attended by over 30 mechanics statewide.

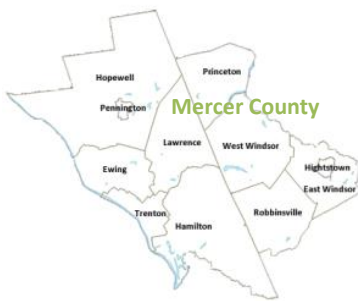
TRADE participated in meetings for the Greater Mercer Public Health Partnership (GMPHP). Transportation for County residents is one of four priorities for the Improvement Plan being developed, for implementation over the next year.

2017 Goals

Continue to Upgrade Scheduling Software and Implement Other Technologies - In 2017 TRADE will work with our vendor (TripSpark) to upgrade the software that was purchased and installed in 2008. The software is now hosted by the vendor in a stable environment. Upgrading of the software will be a smoother process but will require substantial effort and training of employees. Once this step is completed, TRADE will then begin a process to install new technology components that will include electronic communication between dispatch and drivers through tablets, inclusion of GPS capability to track on-time performance and vehicle location.

Continue Development of Transportation Improvements by providing leadership to the Mercer County Coalition for Coordinated Transportation -

The Mercer County Human Services Transportation Coordination Plan involves multiple strategies and action steps to be accomplished over the short and long-term. The Mercer County Coalition for Community Transportation (Coalition) is a stakeholder group that works to develop the Coordination Plan, and TRADE provides leadership and support to the Coalition, acting as Co-Chair. Work on this goal area will continue in 2017. The general purpose of the Coalition is to work



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

together to enhance transportation options for residents of Mercer County who are elderly, people with disabilities and people with low incomes.

Complete Project for Interagency Coordination for Long-Distance Human Service Transportation - TRADE and Mercer County Planning staff developed a planning project that will be implemented by the Delaware Valley Regional Planning Commission (DVRPC) staff to promote coordination of paratransit providers in the DVRPC New Jersey Region for long-distance paratransit trips. A regional workshop is scheduled for February 2017. The project is described further below:

Project Goal

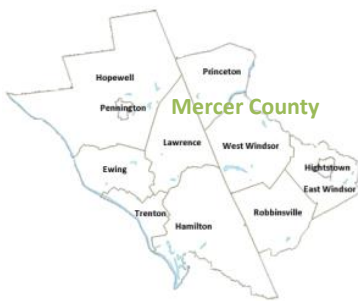
Foster strategic coordination between paratransit and human service transportation providers in and adjacent to Mercer County to increase client access to desired destinations while preserving or generating operating efficiencies.

Project Description

In Mercer County, as in the rest of New Jersey, paratransit service to and from destinations within $\frac{3}{4}$ mile of existing bus routes is provided by New Jersey Transit's Access Link. Elsewhere, the disabled, as well as elderly and low income residents must rely on county and non-profit demand-responsive services, which typically serve only local residents and limit trips outside their service areas. Those existing service constraints, along with the lack of coordination among providers and funding sources, limit customers' access to desired destinations.

This project will convene operations managers from NJ Transit's Access Link program with other providers of human service transportation in and adjacent to Mercer County to brainstorm and prioritize coordination opportunities and interconnection points. DVRPC will convene this group and facilitate the workshops to identify service area gaps and overlaps specific to human service transportation in Mercer County, regional destinations outside providers' service areas, and then brainstorm possible solutions to increase service efficiency and coordinate service to regional destinations.

The goal is to develop solutions that are implementable, specifically extending the work of previous successful coordination efforts (like the joint Mercer County



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TRADE and Middlesex County MCAT Transportation for veterans), incorporating lessons learned from prior projects that have required coordination between multiple providers (like the ZLine bus and the Pureland Community Shuttle), and road-testing some of the bridges that emerged from DVRPC's ETA project (like the creation of new data resources; the development of ways to creatively, flexibly use existing funding sources; and the identification of new funding partners).

2017 Goal: Complete planning project sponsored by NJ Transit to improve efficiency and possibly make revisions to services offered by TRADE.

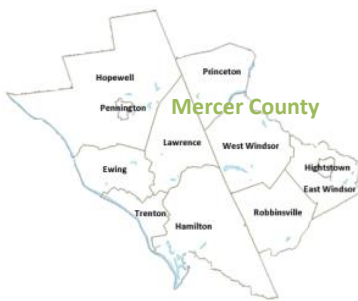
NJ Transit selected a planning consultant to review 5 counties and how their paratransit organizations are operated. TRADE requested to be included as one of the counties to be reviewed. The consultant, Marlene Connor Associates has begun work in Mercer to review TRADE's operations and will make recommendations on how to improve efficiencies and effectiveness. The project will be primarily conducted in 2017. The consultant has essentially laid the groundwork during 2016.

Continue development of alternative revenue through vehicle advertising.

A new vendor (Interstate Media) has been selected for advertisements on TRADE vehicles and TRADE will work closely with the new vendor to obtain revenues for the County.

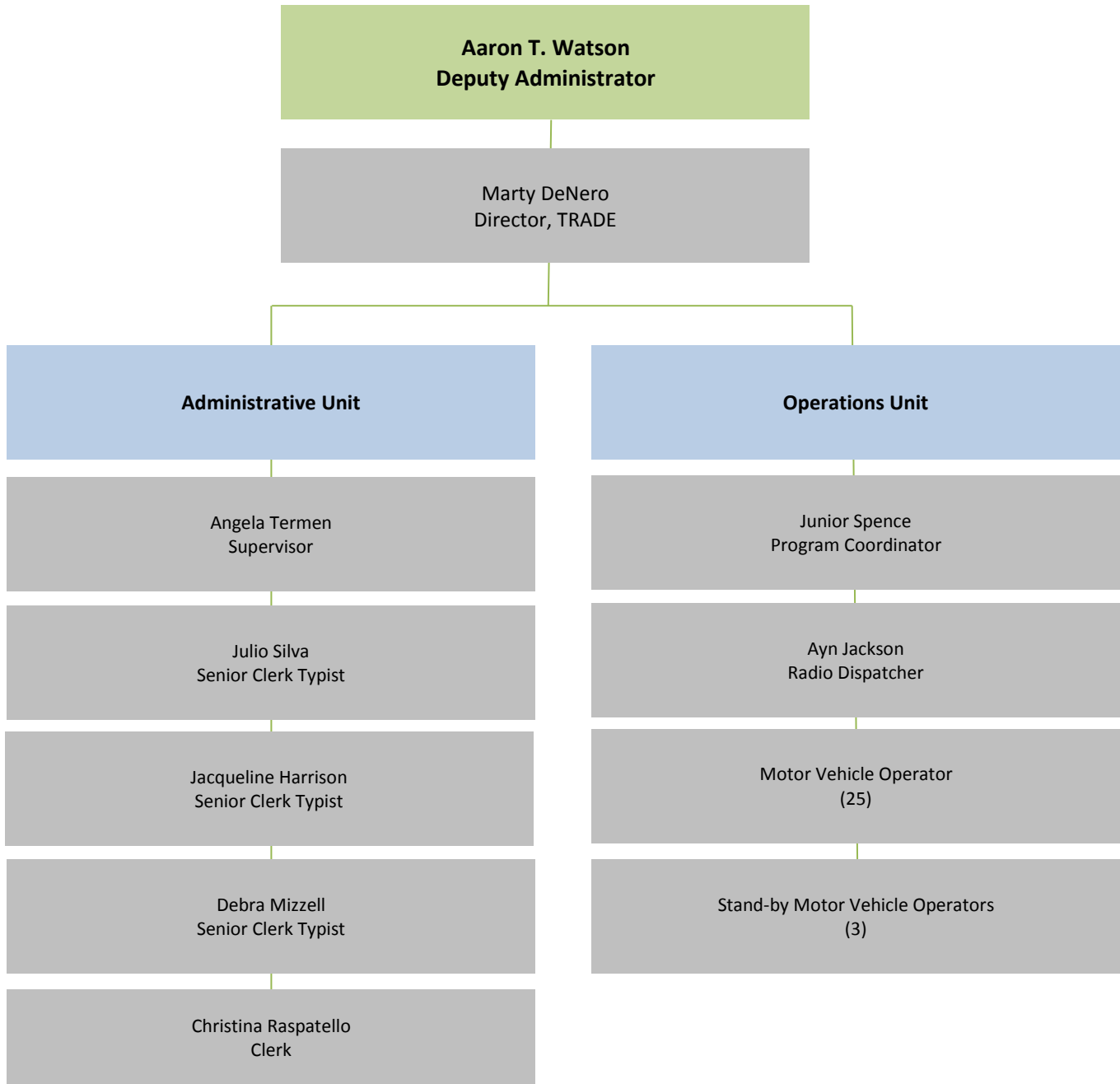
Complete Passenger Satisfaction Survey

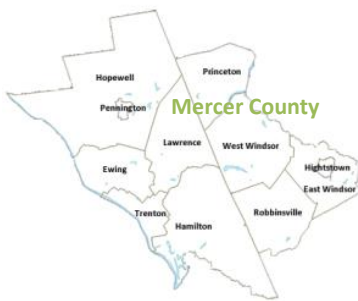
TRADE will complete a Passenger Satisfaction Survey, surveying current customers for satisfaction with driver safety, driver courtesy, on-time performance, vehicle cleanliness, office staff courtesy and effectiveness of office staff in meeting reservation requests.



Department of Transportation & Infrastructure
2016 Accomplishments/2017 Goals

TRADE
Table of Organization





Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

TRENTON-MERCER AIRPORT (TTN)

Melinda Montgomery, A.A.E., Airport Manager

Kurt Neinstedt, Assistant Airport Manager

2016 Accomplishments

Administration

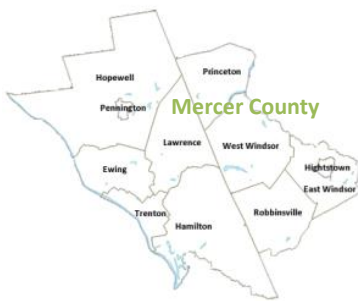
Operating an airport of this size is like managing a small city, encompassing many aviation and non-aviation tasks. TTN is concerned with providing the necessary “tools” to maintain facility infrastructures by acquiring funding, maintenance of records, compliance with regulatory requirements, personnel management, and interaction with the public.

Acquire additional commercial passenger destinations - *Goal accomplished.* Allegiant Air started service in November of this year, joining Frontier Airlines in providing numerous travel options to our users.

Focus on receiving a “perfect” (zero deficiencies) FAA Annual Inspection-*Goal accomplished.*

Continue our efforts to meet all regulatory requirements concerning environmental issues and safety standards at our facility - *Goal accomplished,* and continues to be pursued. Most recently, we have directed our environmental consultant to ascertain the impact of the operation of the cistern under the former-Crest Building on area drinking water.

Re-examine potential cost savings in various operating areas - *Goal accomplished,* and continues to be pursued, as exemplified by efforts to have existing staff perform previously contracted duties such as herbicide application, and painting.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Explore development of further revenue enhancement projects - Goal accomplished, and continues to be pursued, such as with the effort to start a ground vehicle operating permit program, and with efforts to exploit advertising possibilities in the terminal and in the parking areas.



Commercial Service
TTN

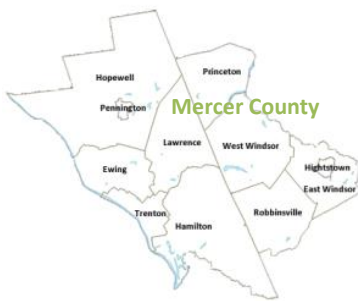
Complete the development of Standard Operating Procedures-This goal has been *partially achieved*, as work continues in order to complete this immense task.

Acquire funding for the demolition of the former-Naval Air Warfare Center (NAWC) site in order to attract potential new tenants and increase the airport's developable aviation land inventory - Goal not accomplished; however, the Airport is actively working with private developers who have expressed an interest in developing the site.

Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Prepared forty-four (44) Resolutions for various Airport projects, issues, etc.
- Acquired over \$3,000,000 in FAA grants for various projects and equipment.
- Acquired over \$167,000 in NJDOT grants for various projects.
- Collected over \$2,000,000 in terminal parking revenue.
- Collected over \$1,200,000 in Passenger Facility Charges (PFC).
- Participated in the annual Take Your Child to Work Day event.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

- Updated Airport Certification Manual.
- Updated Airport Emergency Plan.
- Completed Airport Wildlife Plan update.
- Held discussions with various potential new tenants.



An Allegiant Air jet taxis away from the TTN Terminal

Airfield

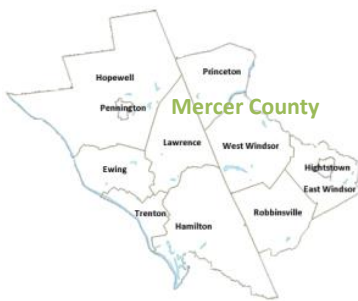
The lifeblood of an airport is its runways, taxiways, lighting, markings, navigational aids, etc. The primary function of TTN staff is the maintenance of those essentials in order to maintain a safe, efficient, and regulatory compliant airfield, capable of supporting the aircraft activities of our tenants and users. To this end, TTN has made a tremendous effort to maintain and upgrade our facility to meet or exceed industry standards.

Continue to focus on the elimination of all runway/airfield incursions - Goal partially accomplished, and continues to be pursued. There was one incursion this year.



Removal of trees that were negatively impacting aircraft navigation

Continue brush and tree removal operations to aid navigation, and minimize wildlife habitat - Goal accomplished, as exhibited by an eight (8) week tree removal operation around the airport environ.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Continue to research ways to minimize airport closures during inclement weather, construction, and maintenance projects - *Goal accomplished*, and continues to be pursued.

Continue to maintain TTN's 1,345-acre facility (this area is equivalent to 67 Giant's Stadiums) including the pavement, which could cover a single lane paved road between the Airport and Point Pleasant. This included the performance of crack sealing, rubber removal, painting, plowing, and mowing - *Goal accomplished*, and continues to be pursued.

Other Accomplishments

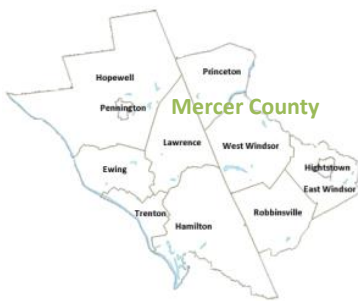
In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Initiated utilization of APP 139; a customized, computerized airfield inspection program tool that saves time and increases efficiency, by the utilization of GPS and automated issuance of work-orders, documentation, etc.
- Performed snow/ice removal during nine (9) snow events in 2016.
- Taxiways H, B, F rehabilitation complete.



Installation of Thermo-plastic Surface Painted Hold Position signs on a taxiway. Thermo-plastic is a much more visible and durable material than paint.

- Obtained access to NJ State Prison Farm in order to perform wildlife management.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Community Relations

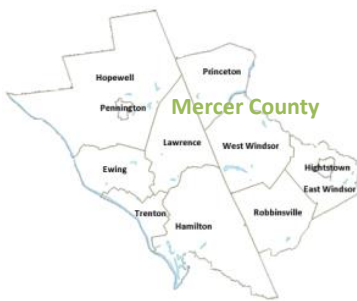
TTN has “answered the call” from the community, the Nation, and the World since 1929, and that commitment to service continues today. In addition to providing safe, convenient air transportation to commercial, corporate, and private travelers alike, TTN is involved in a number of community-based causes. Likewise, TTN is committed to keeping its neighbors informed on various issues, in various venues.

Continue to increase community awareness of special events at the airport- Goal accomplished, and continues to be pursued. For example, the Airport has continued to update website information and provided draft press announcements regarding events at the Airport.

Continued noise abatement efforts - Goal accomplished, we’ve continued to respond to residents and pilots alike swiftly and professionally.



From left to right, on the start date of service by Allegiant Air at TTN: Michele Cohen, Director of Station Field Operations at Allegiant Air; Deputy Administrator Aaron T. Watson, and TTN Airport Manager Melinda Montgomery.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Have direct communication with passengers through e-mails and web updates - *Goal not accomplished.* Upgraded web communications are hoped following completion of a County-wide web overhaul.

Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Held public meetings as part of the Airport Master Plan Review.
- Participated in the Annual “Touch-A-Truck” Event.
- Hosted the Annual “Operation Dreamlift”, in support of handicapped/seriously ill children.
- Hosted the “Young Eagles” flight event.

Facilities

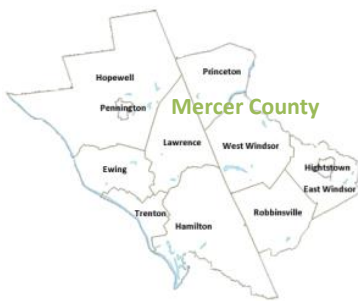
The maintenance of facilities continues to be of concern, as most of our buildings are functionally inadequate and obsolete. An aggressive safety compliance and infrastructure maintenance program on these decades’ old buildings has caused much work to be done in this regard. While we may not be able to immediately acquire new facilities, we can maintain and improve what we have already.

Continue to provide adequate space and facilities to accommodate the healthy growth of commercial passenger service at TTN - *Goal accomplished;* the terminal was renovated this year to accommodate passenger demand created by Frontier Airlines and the addition of Allegiant Air. In addition to more public and airline space; a new security camera room was added, along with new bathrooms.

Installation of a covered walkway between baggage claim and parking area- *Goal not accomplished.* Currently in design phase.

Connection of municipal water to the Air Traffic Control Tower-*Goal accomplished,* resulting in greater water safety and cost avoidance in the purchase of bottled water by the County for the tower.

Installation of an emergency generator to provide power to the Parking Trailer and the North Parking Lot - *Goal not accomplished.*

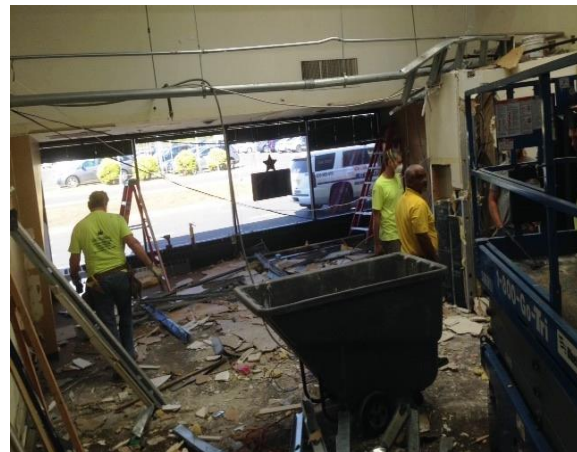
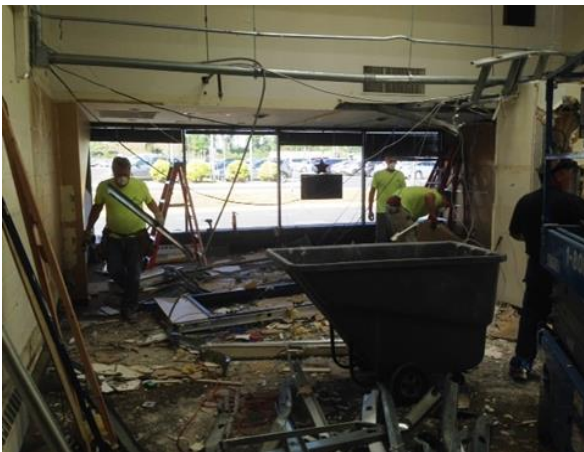


Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

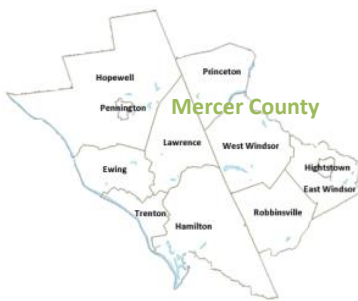
Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Relocated Mercer County Sheriff's Office sub-station to provide more public/airline space in the terminal.
- Notice to proceed was issued for the new baggage claim facility, allowing construction to commence.
- Additional pavement was added to the air carrier ramp.



Above, a space is transformed as the passenger terminal undergoes a renovation to answer the demand of passengers utilizing Frontier Airlines and Allegiant Air. Top photos show work taking place, bottom photos show the space renewed.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

- The retired jet bridge was removed from the air carrier ramp and discarded, allowing more room and flexibility for additional aircraft.
- Renovated former Crest Building to house new Mercer County Sheriff's Office sub-station.



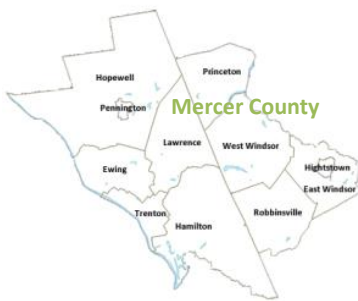
Retired jet bridge being loaded for removal

Emergency Response/Preparedness

When an incident occurs we are very fortunate to have 24/7 Aircraft Rescue and Firefighting (ARFF) coverage along with the presence of Mercer County Sheriff's Officers (MCSO). ARFF's presence (coupled with that of the MCSO) not only benefits the safety of our commercial carrier and passengers, it is a benefit to all our tenants, and in fact, is one of the many reasons that Trenton-Mercer Airport has been chosen as aviation headquarters for over 20 aviation tenants, including the aviation units of a number of Fortune 500 companies. However, countless other Federal, State, and Local agencies (such as FAA, N.J. Division of Aeronautics, N.J. State Police, Ewing Police, Trenton EMS, Pennington Road Fire Company, and the West Trenton Fire Company) are involved in maintaining the safety of TTN. It is the responsibility of airport staff to supervise these services, ensure their readiness, and coordinate operations and training of vested parties.

Conduct successful Annual Table Top Exercise and Airport Emergency Plan (AEP) Review - *Goal accomplished.*

Continue to work with all stakeholders to ensure a timely and effective response in the event of any emergency - *Goal accomplished.*



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Responded to five (5) “aircraft incidents” in 2016.
- Responded to ninety-two (92) emergency calls (non-aircraft related) in 2016.



TTN must be ready for any eventuality. Here a snowblower stands ready for winter storms. Keeping runways and taxiways clear during all types of weather is essential for aircraft safety.

Governmental Relations

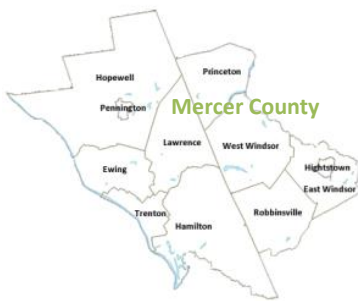
As a key economic engine and transportation center for Mercer County, Trenton-Mercer Airport is regulated by a myriad of Federal, State, and Local statutes and rules. TTN must have continual communication with every level of government, as well as with many agencies within County Government, to maintain regulatory compliance, stay abreast of statutory changes, available grants, coordinated emergency response planning, industry updates, and the like. In total, staff at TTN participated in approximately 300 meetings with representatives of numerous government entities.

Continue to ensure that the TTN Contract Air Traffic Control Tower remains open and operating, in spite of any future budget impasses on the Federal Level - Goal accomplished. We continue to monitor this situation and work with the Contract Tower Association regarding any Congressional activity in this regard.

Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Airport Manager Montgomery served as Chair of the American Association of Airport Executives (AAAE) Professional Development Committee,



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Member of the Northeast Chapter Academic Relations Committee, and a member of the AAAE National Operations and Security Committee.

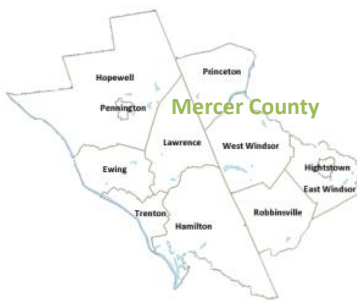
- Airport Manager Montgomery was also featured in the Fall/Winter Issue of “Centerline Magazine” as a nationally recognized woman in the aviation field.
- Attended Ewing Township Emergency Management Table Top.
- Attended various meetings with other County offices and staff, on a number of important issues, such as wildlife management, environmental compliance, new commercial service, etc.
- Attended airport users meetings to discuss TTN related subjects and enhancements.



While TTN hosts two commercial air carriers, it's also home to a robust blend of General Aviation and Corporate aircraft. It likewise is a favorite access point for VIPs transiting in and out of the area, due to its excellent facilities and exceptional law enforcement and emergency response services. Above, a U.S. Government aircraft transports an official to an unpublicized meeting.

Security

Security continues to be a major concern at our Nation's airports, so too at TTN. In addition to coordinating the disposition of Mercer County Sheriff's Office units assigned to the airport, airport staff must also coordinate with the U.S. Transportation Security Administration, and the Federal Bureau of Investigation (FBI), as well as other tenants and users of the airport, regarding compliance with security regulations. Additionally, maintenance of security assets (perimeter fence, gates, locks, doors, etc.) are also managed by Airport Administration as are security grant applications, the creation and maintenance of the Airport Security Plan (ASP), and other related matters.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Continue improvement, maintenance, and vigilance of approximately 25,000' (almost 5 miles) of perimeter fencing - *Goal Substantially Accomplished*, in particular with the upgrade of the perimeter fencing now reaching a height of 10-feet above ground and 2-feet below, on the majority of sections of fencing controlled by Mercer County.

Continue to acquire and install additional Closed Circuit Television (CCTV) cameras that will allow greater surveillance of the airfield environ - *This goal was achieved*.

Badge close-in SIDA tenants, namely condo and t-hangar tenants - *Goal was not accomplished*.

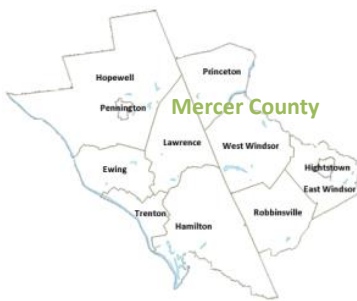
Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Completed installation of new access control system.
- Completed airport-wide SIDA rebadging.
- Revised the Federally required Airport Security Plan (ASP).
- Continued monitoring of TSA Watch Lists, as required.
- Maintained records for TSA registered Security Identification Display Area (SIDA) employees, as required.
- Conducted background checks for all necessary airport employees, and foreign flight students, as required.
- Participated in regularly scheduled “Law Enforcement Working Group” meetings aimed at enhancing information sharing between Federal, State, and Local law enforcement and the Airport.
- MCSO airport unit member attended AAAE security symposium.

Training

The relatively large size of the airport, and the numerous types of activities/projects occurring at TTN, really require us to train for any eventuality, and so, our training is varied. Whether its snow, employee safety training, or regulatory compliance, TTN is prepared to do battle in order to maintain the highest standards of professionalism and effectiveness.



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Improve airport driver training program - *Goal accomplished*, and continues to be pursued. For example, scenarios were added to training sessions to address previous unwanted occurrences and incursions.

Continue and expand safety training of airport staff - *Goal accomplished*, and continues to be pursued, such as with HazCom Training, BBP Training, CDL, and PPE Training, etc.

Attend airport training through AAAE, and other specialized training outlets- *Goal accomplished*, and continues to be pursued, such as with App 139 training, Pavement Maintenance training, Construction Management training, ASOS School, Airport Finance training, and the Snow Symposium.

Other Accomplishments

In addition to the goals set forth for 2016, the following accomplishments have also been undertaken:

- Provided snow removal training for staff and tenants.
- Provided TSA Regulation Part 1542 training to staff, ARFF, and airport tenants and contractors.
- Participated in annually required FAA wildlife training.
- Completed required AOA training.

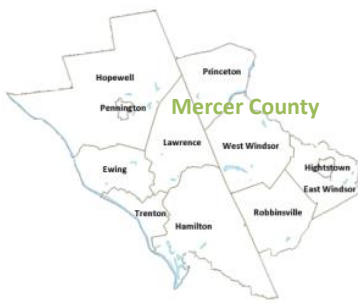
2017 Goals

In order to perpetuate the high level of safety, professionalism, and structural integrity we currently enjoy, we will continue to maintain and upgrade our existing airport facilities, continue to train and manage our staff in an efficient and thorough manner, communicate with the public in an efficient manner, and be prepared for any eventuality.

Administration

Acquire additional passenger destinations.

Focus on receiving a “perfect” (zero deficiencies) FAA Annual Inspection.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Continue our efforts to meet all regulatory requirements concerning environmental issues and safety standards at our facility.

Explore development of further revenue enhancement projects.

Complete the development of Standard Operating Procedures.

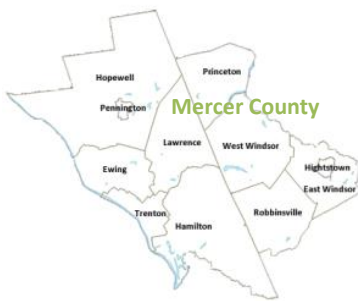
Acquire an additional Fixed Base Operator (FBO) as the new tenant in the former Air Hangar facility.



Acquire interested developer to demolish the former-Naval Air Warfare Center (NAWC) site and return it to being a financially productive airside property.

This weather-beaten water tower, original to the 1940s installation known as the Naval Air Warfare Center, is emblematic of the need and potential of this very important parcel at TTN.

- Complete development of the Airport Minimum Standards.
- Complete Master Plan update.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Airfield

Continue to focus on the elimination of all runway/airfield incursions.

Continue brush and tree removal operations to aid navigation, and minimize wildlife habitat.

Continue to research ways to minimize airport closures during inclement weather, construction, and maintenance projects.

Facilities

Continue to provide adequate space and facilities to accommodate the healthy growth of commercial passenger service at TTN, guided by the future findings of the Master Plan Review.

Installation of an emergency generator to provide power to the Parking Trailer and the North Parking Lot.



TTN Parking Attendant providing directions and information to air travelers arriving at TTN.

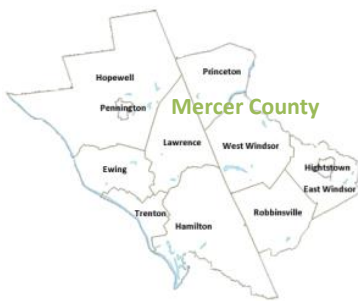
Community Relations

Start process of communication with residents from whom the County may seek to obtain easements, and in some cases property ownership in order to mitigate negative impact on the airport's Runway Safety Area (RSA).

Have better direct communication with passengers through e-mails and web updates.

Continue our Noise Abatement efforts.

Continue to increase community awareness of the airport.



Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Emergency Response/Preparedness

Conduct successful Annual Table Top Exercise.

Conduct successful Full Scale Emergency Drill.

Continue to work with all stakeholders to ensure a timely and effective response in the event of any emergency.

Governmental Relations

Continue to ensure that the TTN Contract Air Traffic Control Tower remains open and operating, in spite of any future budget impasses on the Federal Level.

Security

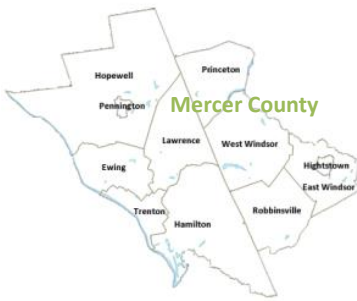
Badge close-in SIDA tenants, namely condo and t-hangar tenants.

Training

Continue safety training of airport staff. Attend airport training through AAAE, and other specialized training outlets.

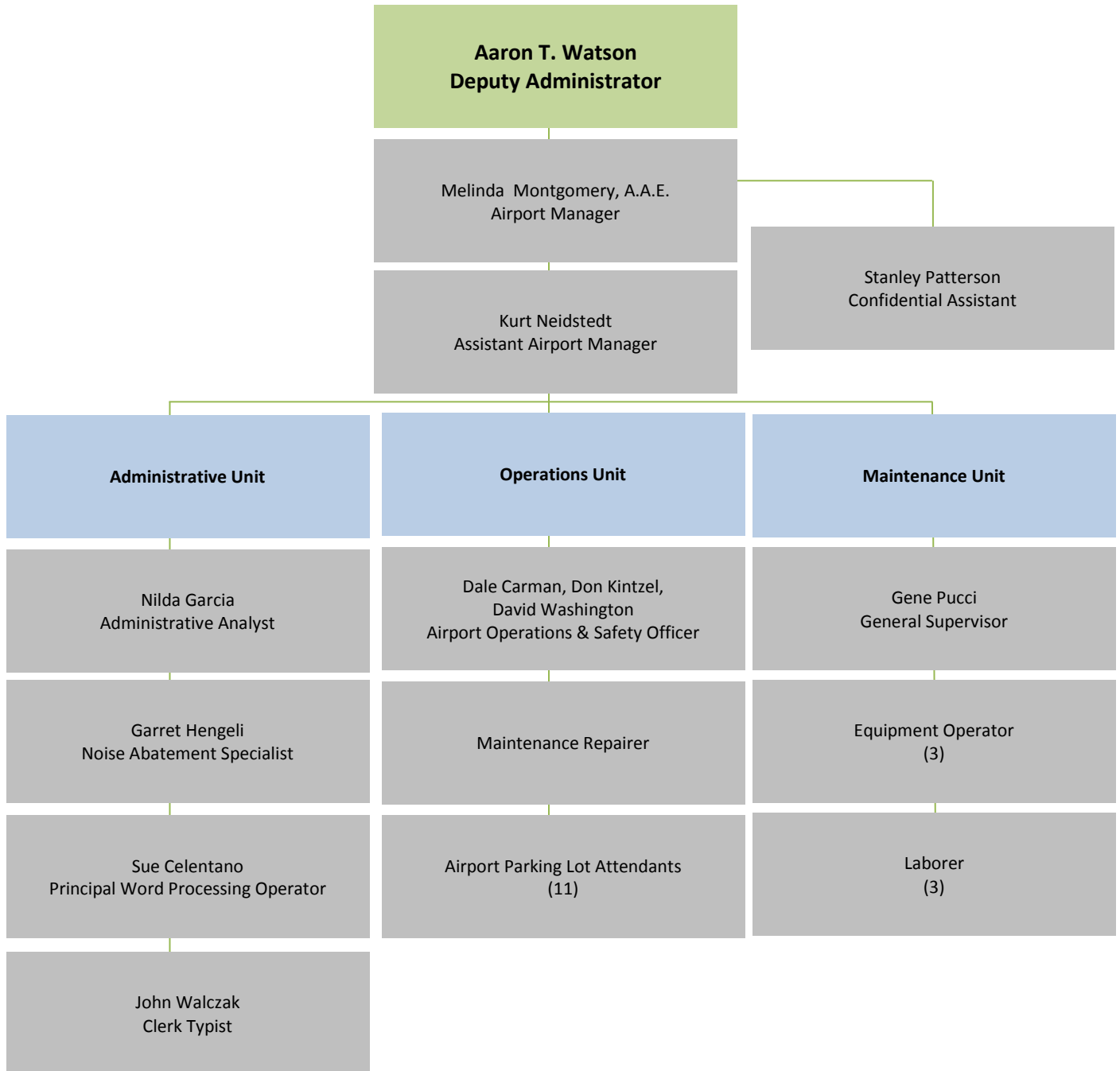


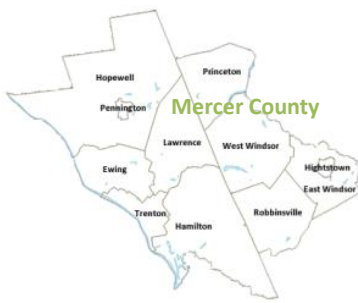
Passengers arriving at Trenton-Mercer Airport, deplane from an Allegiant Air jet.



Department of Transportation & Infrastructure 2016 Accomplishments/2017 Goals

Trenton – Mercer Airport Table of Organization





Department of Transportation & Infrastructure **2016 Accomplishments/2017 Goals**

Retirees and 25 Years of Service Recognition

Sincere congratulations to each of you for your years of service and dedication to the Mercer County Department of Transportation and Infrastructure. You all have certainly made a positive impact to all that we represent. Best wishes for health, pleasant memories and continued service.

Buildings & Grounds

Retirees

Jose Cintron – 14 years
Ronald Kvester – 33 years
Pat Pragliola – 17 years
Frank Pinto – 26 years
Julius Sombatti – 13 years

25 Years of Service Recognition

Joseph Budd

Highways

Retiree

Richard LoBue – 41 years

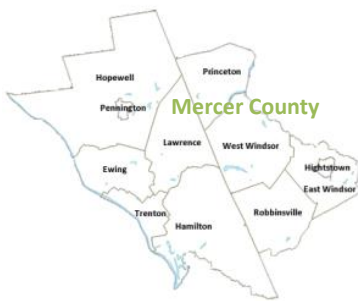
25 Years of Service Recognition

Joseph McClendon

Trenton – Mercer Airport

Retiree

Clive McKnight – 31 years



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Staff Directory

Office of the Deputy Administrator

Aaron T. Watson, Deputy Administrator/Director	Main: (609) 989.6629
Michele DeBlois, Administrative Clerk	989.6629

Buildings and Grounds

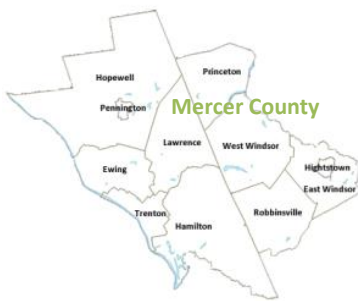
Main: (609) 281.7189	
<i>Karl Thomas, General Supervisor of Trades</i>	989.6181
Peter Berkin, Supervisor of Trades	530.7506
Joseph Termen, Senior Clerk	281.7174
Brittany Stevenson, Clerk Typist	281.7189

Engineering

Main: (609) 989.6600	
<i>Gregory Sandusky, P.E., P.L.S., Director of DOT & I/County Engineer</i>	989.6600
Michele Rizziello, Administrative Clerk	989.6642
George Fallat, P.E., Traffic Engineer	989.6642
Heather Mauro, Senior Clerk	989.6641
Basit (<i>Sunny</i>) Muzaffar, P.E., Supervising Engineer (<i>Bridges & Highways</i>)	989.6606
Yueming Li, P.E., Principal Engineer	989.6541
John T. Nawrocik, Supervising Engineering Aide	989.6605
Mitchell Lis, Supervising Engineering Aide	989.6648
Ed Lovett, Supervising Engineering Aide	989.6605
David Kramer, Senior Engineering Aide	

Highways

Main: (609) 530.7500	
<i>Bridges & Culverts, Mosquito Control, Motor Pool, Roads (TAMIS), Shade Tree, Traffic & Signal</i>	
<i>Gregory Sandusky, Director of DOT & I/County Engineer</i>	(609) 989-6600
Chris Markley, Superintendent of Public Works	Ext. 107
Al Rhodes, Director of Public Works	Ext. 104
Wayne Shultz, General Supervisor of Bridges & Culverts	Ext. 103
Paul Krueger, Supervisor of Bridges & Culverts	Ext. 103
Isik Unlu, Superintendent of Mosquito Control	Ext. 125
Mike Milewski, Supervisor of Mosquito, Control	Ext. 125
Jodi Hawryluk, Administrative Clerk, Motor Pool	530.7525
Robert Travagline, General Supervisor Garage, Motor Pool	530.7521
Vince Russo, Supervising Mechanic, Motor Pool	530.7524
Chris Cerino, Supervisor of Trees	Ext. 106
Bill Voorhees, Supervisor of Trees	Ext. 106
Paul Scherer, Supervisor of Traffic & Signal	Ext. 109
Mark Mattaliano, Supervisor of Traffic & Signal	Ext. 155
Janel McCoy, Geospatial Information System (GIS) Specialist	Ext. 101



Department of Transportation & Infrastructure

2016 Accomplishments/2017 Goals

Deborah Driver, Assistant Administrative Analyst	Ext. 130
Marcie Kintzel, Principal Clerk	Ext. 102
Ariel Steward, Senior Clerk	Ext. 105

TRADE

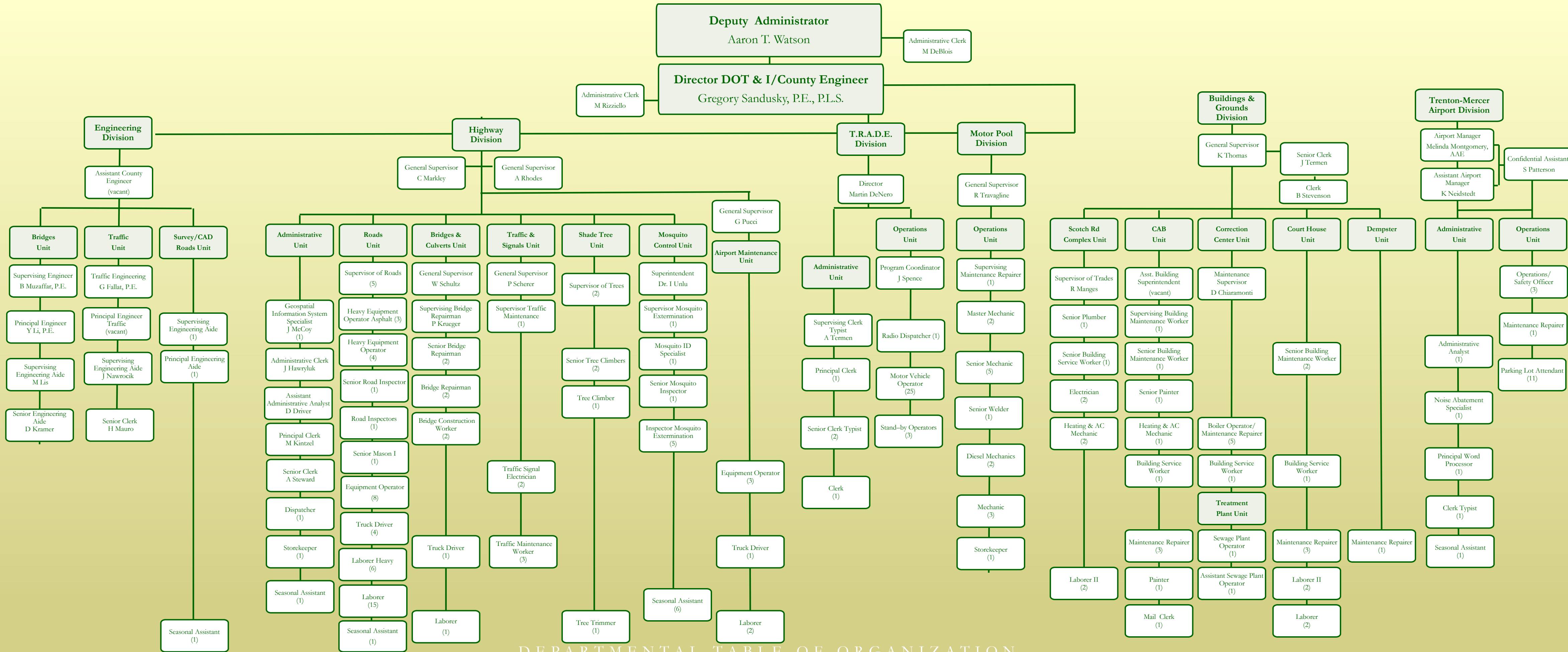
Main: (609) 530-1971

Marty DeNero, Director, TRADE Transportation	(609) 530-1970
Junior Spence, Program Coordinator	Ext. 116
Angela Termen, Supervising Clerk Typist	Ext. 111
Ayn Jackson, Radio Dispatcher	Ext. 113
Julio Silva, Principal Clerk	Ext. 112
Debra Mizzell, Senior Clerk	Ext. 118
Jacqueline Harrison, Senior Clerk	Ext. 112
Christina Raspatello, Clerk	Ext. 114

Trenton-Mercer Airport (TTN)

Main: (609) 882.1601

Melinda Montgomery, A.A.E., Airport Manager	Ext. 101
Kurt Neinstedt, Assistant Airport Manager	Ext. 102
Stanley Patterson, Confidential Assistant	Ext. 108
Nilda Garcia, Administrative Analyst	Ext. 109
Garret Hengeli, Noise, Safety & Environmental Specialist	Ext. 106
Dale Carman, Airport Operations & Safety Officer	Ext. 111
Donald Kintzel, Airport Operations & Safety Officer	Ext. 105
David Washington, Airport Operations & Safety Officer	Ext. 103
Gene Pucci, General Supervisor	882.3127
Susan Celentano, Principal Word Processing Operator	Ext. 107
John Walczak, Clerk Typist	Ext. 114



DEPARTMENTAL TABLE OF ORGANIZATION